Second Language Tutoring using Social Robots

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L2TOR

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D2.3 Specifications of interactions in storytelling domain

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PU	Public	**PU**
PP	Restricted to other programme participants (including the Commission Service)	
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CO	Confidential, only for members of the consortium (including the Commission Service)	

Contents

Executive Summary

This deliverable reports the activities from WP2 to finalize the design of the specifications as used in the evaluation study for WP7. We will first explain how the original idea of the storytelling domain is incorporated in the number and space domains. We will then describe how the storyboards presented in deliverables D2.1 and D2.2 have been modified to accommodate the different conditions as presented in the revised objectives. Finally, we will present a preliminary report on a small-scale experiment to test how iconic and deictic gestures produced by the robot can contribute to learning English adjectives.

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Revision History

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Description of changes.

1 Introduction

The original goal for this deliverable was to produce specifications of the interactions in the storytelling domain. However, we decided to remove the storytelling domain from the lesson series because, as reported in our period report and further elaborated in our revised objectives written in response to the first review, we have identified the opportunity to combine the storytelling domain with the space and number domains. Since we have reduced the number of lessons to be tested in the evaluation study (WP7), no specifications of interactions in the storytelling domain were necessary. Therefore, this deliverable reports work carried out as part of WP2, focusing on the design of interactions between child and robot during the tutoring lessons.

First, we will briefly explain how we addressed storytelling in the number and space domains. Second, we will discuss the final storyboards for the entire lesson series (six lessons in the number and space domains and one recap lesson) for all three conditions (robot with iconic and deictic gestures, robot with only deictic gestures, and tablet only). These storyboards were slightly altered from the previous deliverables of WP2, due to the adapted lesson plan as outlined in our revised objectives. In addition, we provide an outline of the no treatment condition. Third, we report on a study carried out to investigate how robots should provide feedback according to a group of student teachers. Finally, we provide a preliminary report on an ongoing small-scale study investigating the effects of gestures in L2 lessons that was designed to further evaluate the iconic gesture condition of the evaluation study.

(Note that the submission of this deliverable was delayed due to the huge effort our team had in carrying out the evaluation study as part of WP7.)

2 Storytelling in the number and space domains

All seven lessons in the evaluation study were designed as a story to the child that visually unfolds on the tablet. In the stories, the robot and child would explore a specific location in each lesson. For example, the story of the first and third lesson took place in a zoo. In the first lesson, the robot and child were introduced to different types of animals (named in English as support words, cf. WP1) in different quantities (used to display the number words as targets). These animals were ‘on the loose’ and the child (and robot) were asked to put them back in their cages in different numbers, and learned about addition and the concepts of ‘more’ and ‘most’ while doing so. After all animals were placed back in their cages, they needed to be fed and the child had to drag food of different quantities to the cages. In the third lesson, the child and the robot would revisit the zoo but this time they learned about adjectives such as ‘big’ and ‘small’ which were visualized with the various animals.

As another example, in lesson 6 the robot and child went to a playground where they had to place playing equipment such as a slide and a basketball hoop to build their own playground, while learning about target words such as ‘sliding’ and ‘throwing’ . After the equipment was placed, an animation of a boy and a girl would play with the equipment, demonstrating these target words.

Other stories were unfolding inside a bakery, a fruit shop, and a forest. In subsequent lessons, characters from previous lessons re-appeared to help explain novel target words. For example, the monkey from the zoo would tear up the fruit shop resulting in apples falling from the shelves to illustrate the target word *falling*.
The seventh lesson was a recap session, during which the child and robot looked back on all lessons with a picture book that contained stickers of all lessons while repeating all target words.

3 Final Specifications of the system

As described in the revised objectives and deliverable D2.2, our evaluation study has four conditions: (1) robot with iconic and deictic gestures, (2) robot with deictic gestures, (3) tablet-only, and (4) no treatment. The storyboards presented in deliverables D2.1 and D2.2 were originally designed with the setting of the first condition in mind. To accommodate all conditions such that the interactions would feel natural in all situations, the storyboards were slightly modified, especially to make sure interactions would also fit the tablet-only condition. Below we will elaborate on these modifications, and also provide specifications of the no treatment condition.

The final specifications of the first three conditions can be found in the storyboards in Appendix III. These storyboards specify the speech of the robot, the gestures and the head movements and expressions of the robot. For details on how to read these storyboards, we refer to deliverables D2.1 and D2.2.

Tablet-only condition

The tablet-only condition does not include a robot; instead, the tablet produces the speech normally produced by the robot. Consequently, non-verbal behavior specified in the storyboards would have to be ignored. In order to keep the interaction smooth, it was important that the storyboards of the lessons did not rely too heavily on an embodied agent that "performs" actions. Moreover, the speech produced in all three treatment conditions should remain the same in order to be able to reliably compare these conditions. We therefore revised all storyboards by adapting the speech of the robot/tablet such that it fitted both the robot conditions and the tablet condition without altering the contents of the lessons too much (as we did not want to lose interactions in which the robot's embodiment could be especially beneficial). To achieve this, we reviewed all storyboards together with the team responsible for WP7. If any of the speech seemed unrealistic without the presence of a robot, it was rewritten to work in both cases.

One example of a change to the storyboard is when the robot would propose to perform an act together: "Let's pretend to climb!", which sounded unrealistic coming from a tablet, so these were rewritten as "Can you show me how you climb?".

Another example is when the robot would teach the child the target words *left* and *right*. In deliverable 2.2 we described we wanted to use the robot's sensors to play a touch-my-arm-game. However, we decided to change this because not only were the sensors of some

robots not reliable enough, but this would also not be possible in the tablet condition. Instead of asking the child to touch the arm of the robot, we asked them to raise their own left or right hand.

Children in the tablet-only condition received a closing session with the robot after the post-test, similar as the activities in the no treatment condition and the introduction. This was to ensure all participating children spent some time with the robot. Instead of a one-on-one session, we grouped the children together and let them dance with the robot and talk to the robot for a brief time.

No treatment condition

In appendix I the setup of the no-treatment condition is described. Each week during the evaluation, children in this condition danced together with the robot, so that the child got used to playing with the robot and being taken out of the classroom by a researcher to play games in a one-on-one situation. If children in the no-treatment condition would have no experience with being taken out of the classroom by researchers, they could potentially perform worse during the post-tests due to shyness. By having them play with the robot several times, we have created a baseline condition where the child is exposed and interacts with the robot without being exposed to the L2 target words, and therefore does not have a disadvantage during the post-tests.

4 Feedback system

Intuitive communication with a child that comes naturally to or is internalized by teachers, such as using a certain type of feedback for different types of users and situations, may be difficult to realize in a robot tutoring system. In order to make the interactions as effective as possible we conducted two studies during which we asked student teachers to provide feedback from a robot's perspective in a child-robot tutoring session. We had student teachers watching video recordings from a previous study (de Wit et al. 2018) in which a robot taught children, around the age of five, various target words in a second language. Based on these recordings, the student teachers were asked to provide feedback suggestions: one group of students chose one of six feedback strategies (closed-ended, study one), and another group of students wrote feedback themselves (open-ended, study two).

To investigate whether participants would use different feedback strategies for children with different engagement levels, we showed fragments of children who were disengaged or engaged. In addition, to elicit the expert's feedback on either a correct or an incorrect response we manipulated the answers of the children: each of the video fragments was shown twice; each video fragment was projected with the child answering correctly, and once with the child answering incorrectly.

We found that the suggested use of feedback differed between the closed-ended and the open-ended questionnaire. In the closed ended, the majority of the student teachers chose to use an explicit positive phrasing in combination with the target words as a means of providing positive feedback, and a correction of the child's answer through repetition of the target words as a means of providing negative feedback. In the open-ended

questionnaire, the student teachers chose to only provide an explicit phrasing without repetition of the target words for both positive as well as negative feedback.

We incorporated the results of both questionnaires in the design of all lesson series. We decided to use the same strategy for positive and negative feedback, and to follow the strategy that came up most prominently from the closed-ended questionnaire (explicit positive/negative phrasing in combination with the target word). However, following the result of the open-ended questionnaire, the specific phrases were taken from the responses provided with a similar amount of variation as observed in this study. This created sentences such as: “Well done!” or “Too bad, you had to touch the elephant. Please try again”. See Appendix IV, for a more detailed report of this study, which also includes the results of a survey administered from the same student teachers about their perceptions of a robot tutor in future classrooms.

In an informal chat session a month after the experiment, we asked the student teachers if they had any suggestions for us. The main suggestion of the student teachers was that the robot should not be too repetitive and should use many variations of their feedback suggestions. Therefore, we decided to use multiple variations for the positive feedback and for the negative feedback. The robot provided negative feedback maximum twice, before showing the child how it should be done. See Appendix II for the feedback variations (in Dutch).

5 Gesture Type Study

We included the iconic gesture condition to the evaluation study in order to assess effects of gestures in L2 lessons with a robot tutor. The reason for this is because previous research has found that young language learners benefit from gestures. For example, iconic gestures can support L2 vocabulary acquisition in children (Tellier, 2008; Rowe et al., 2013). However, it is also important to understand (1) when and how gestures facilitate L2 word learning, (2) whether the role of gestures vary depending on who the gesturer is (e.g., a human vs. a humanoid robot), and (3) whether the role of hand gestures is different than that of other tools that attract children’s attention to the material to be learned and emphasize the new piece of information, such as a highlighted text or a flashing image. To answer these questions, we conducted a small-scale experiment examining children’s word learning with a human experimenter or with the NAO robot, each in three different conditions: 1) deictic gesture, 2) iconic gesture, and 3) no gesture/attention highlighter condition.

In this study, a human or NAO taught four pairs of English measurement adjectives (small and big, wide and narrow, high and low, and tall and short) to Turkish children. These adjectives were chosen because they are easy to gesture and those gestures can be easily performed both by a human experimenter and NAO. Deliverable 1.3 reported the results of the human version of the study, and here we summarize the preliminary results from the ongoing NAO version of the study.

Participants

Thirty-four 5-year-olds participated in the human version of the Gesture Study (*Mean age* = 67.07 months; *SD* = 4.68). Twenty-four 5-year-olds participated in the NAO version of the Gesture Study (*Mean age* = 69.6 ; *SD* = 3.84) . (For the stimuli and design see D1.3). In the human version of the study, the experimenter and the subject sat facing each other on two sides of a small table, and the tablet that presented the pictures of the objects was placed on top of this table. In the case of NAO, the subject and NAO sat facing each other on the floor and the tablet was placed on the floor.

Results

For each trial, participants' pointing responses were coded in terms of whether they pointed to the correct answer or not (1 = correct, 0 = incorrect). Because the data collection is still ongoing for the robot study, we will present differences in overall accuracy in the human versus NAO conditions, as well as Modality differences across experimenter types. We conducted a mixed effects ANOVA using Experimenter (Human, NAO) as a between-subjects variable, and Modality (Gesture vs. Highlight) as within-subject variable on the percentage of correct responses (see Figure 1). The results revealed a main effect of Modality, $F(1, 55) = 6.03$, $p = .02$, where Highlight condition led to better performance compared to Gesture conditions. The analyses also revealed a main effect of Experimenter, $F(1, 55) = 5.47$, $p = .02$, where children performed better with NAO compared to the human experimenter. The interaction between these two factors was not significant, $F(1, 55)=.08$, $p > .10$.

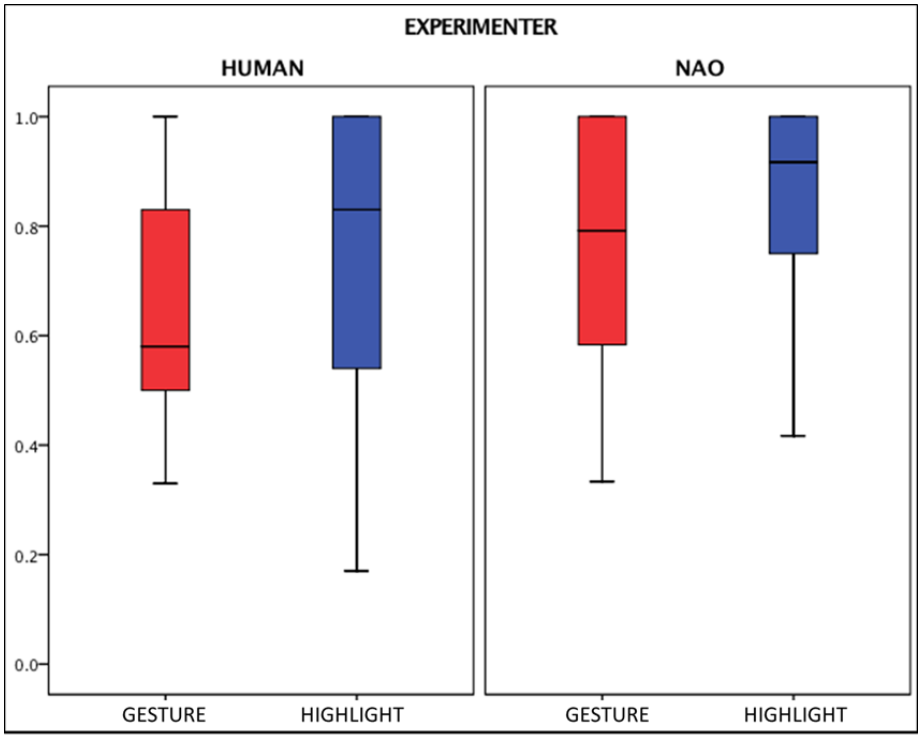

Figure 1. Boxplots representing the distribution of percent correct by Experimenter (Human vs. Robot) and by Modality (Gesture vs. Highlight).

Discussion

The data collection with NAO is still ongoing, and there is unequal distribution of subjects across different conditions. Thus, the results presented above should be interpreted with caution. However, these preliminary results suggest that NAO leads to a similar amount of learning to a human experimenter and learning with NAO might even be more beneficial. Further, the role of different facilitation modes, i.e. gesture versus attention highlighter, does not seem to vary across the experimenter types, suggesting that the learning processes might be overall similar. Finally, the results also suggest that for beginning learners, concrete attention highlighters might be more beneficial than abstract gestures, at least when words to be learned correspond to abstract spatial terms.

6 Conclusion

This deliverable reports the work carried out in WP2, which mostly focused on adapting and finalizing the specifications of all lessons for the main evaluation study, such that they would fit each condition and to ensure a consistent story across all conditions. In addition, we reported on two small-scale studies: one concerning the feedback that the robot would give and one studying how gestures would facilitate learning from a robot tutor. The results of the first study have been incorporated in the evaluation study, as are some of the gestures designed for the second study.

Appendix I. No-treatment activities

Activity week 1
Robot says: Hello (name child)
Robot says: Today we are going to dance together! I really like dancing and I also really like the movie Frozen. Let's dance together on "*Laat het los"!* Join me!

Robot and child dancing on "Laat het los"

Robot says: That was fun! That was it for today. Bye!

Activity week 2
Robot says: Hello (name child)
Robot says: Today we are going a different dance! Today we will do head shoulders, knee and toes.
Robot and child dancing on "Hoofd schouders knie en teen"

Robot says: That was fun! That was it for today. See you next time, bye!

Activity week 3
Robot says: Hello (name child). Today we are going another dance! Do you remember we danced Frozen and head shoulders, knee and toes last time? This time we will do something else.

Robot and child dancing on "Vogeltjesdans"

Robot says: This was fun. I really liked playing with you. What did you think?

Pause until child is finished speaking

Robot says: Is there anything else you would like to say to me?

Pause until child is finished speaking

Robot says: Okay, this was the last time we played together. Thank you for everything. Bye!

Appendix II Feedback

For each feedback moment, we randomized between the following options:

Positive feedback variations

Wauw wat knap!
Goed gedaan!
Heel goed!
Goedzo!
Wat knap!
Heel knap!
Helemaal goed!
Goed bezig!
Knap hoor!
Super!
Wauw wat goed!

Negative feedback variations

Goed geprobeerd, maar je moet <target word> aanraken/zetten. Probeer het nog maar een keer.
Bijna, maar je moet <target word> aanraken/zetten. Probeer het nog maar een keer.
Jammer, maar je moet <target word> aanraken/zetten. Probeer het nog maar een keer.
Helaas, maar je moet <target word> aanraken/zetten. Probeer het nog maar een keer.
Bijna, maar dat is niet helemaal goed. je moet <target word> aanraken/zetten. Probeer het nog maar een keer.
Jammer, dat klopt niet helemaal. je moet <target word> aanraken/zetten. Probeer het nog maar een keer.
Dat is niet helemaal goed. je moet <target word> aanraken/zetten. Probeer het nog maar een keer.
Jammer, dat is niet helemaal goed. je moet <target word> aanraken/zetten. Probeer het nog maar een keer.
Helaas, dat klopt niet helemaal. je moet <target word> aanraken/zetten. Probeer het nog maar een keer.
Helaas, dat is niet helemaal goed. je moet <target word> aanraken/zetten. Probeer het nog maar een keer.

Voice activation positive feedback variations

Dat heb je knap gezegd!
Knap gezegd!
Wat knap!
Goed bezig!
Knap hoor!
Super!
Wauw knap gezegd!

Voice activation negative feedback variations

Goed geprobeerd, maar je moet <target word> zeggen. Probeer het nog maar een keer.
Bijna, maar je moet <target word> zeggen. Probeer het nog maar een keer.
Jammer, maar je moet <target word> zeggen. Probeer het nog maar een keer.
Helaas, maar je moet <target word> zeggen. Probeer het nog maar een keer.
Bijna, maar dat is niet helemaal goed. Je moet <target word> zeggen. Probeer het nog maar een keer.

Jammer, dat klopt niet helemaal. Je moet <target word> zeggen. Probeer het nog maar een keer.
Dat is niet helemaal goed. Je moet <target word> zeggen. Probeer het nog maar een keer.
Jammer, dat is niet helemaal goed. Je moet <target word> zeggen. Probeer het nog maar een keer.
Helaas, dat klopt niet helemaal. Je moet <target word> zeggen. Probeer het nog maar een keer.
Helaas, dat is niet helemaal goed. Je moet <target word> zeggen. Probeer het nog maar een keer.

Appendix III Storyboards

	Robot Lesson 1			Tablet		
#	Text L1 English	Text L1 Dutch	Text L2	Scene	Objects	Say
	[Introduction: 2 minutes]					
1	<tablet(off)><Gaze(child)><Face(Neutral)>Hello <name>. Let's play together! Do you like games? <wait(2000)>	<tablet(off)><Gaze(child)><Face(Neutral)>Hoi <name>. Laten we samen spelletjes doen! Houd jij van spelletjes? <wait(2000)>				
2	I really like games! <Face(Happy)> <tablet(on)>Look <Gaze(tablet)> we will visit a new place today. <Face(Neutral)> Look where we're going today! <Gaze(child)> <Gesture(Pretends to touch tablet)>	Ik houd heel veel van spelletjes. <Face(Happy)> <tablet(on)>Kijk <Gaze(tablet)> we gaan vandaag naar een nieuwe plek toe. <Face(Neutral)> Kijk eens waar we naartoe gaan! <Gaze(child)> <Gesture(Pretends to touch tablet)>		zoo_1		
3	<Gaze(child)>Cool <Face(Happy)>, today we'll visit the zoo! I really like animals. Do you also like animals? <wait(2000)>	<Gaze(child)>Jippie <Face(Happy)>, vandaag gaan we naar de dierentuin! Ik houd heel veel van dieren. Houd jij ook van dieren? <wait(2000)>				
	[Modelling of words: about 10 minutes]					
6	Cool <Face(Happy)>, a monkey! Touch it <pointAt(tablet)> <Gaze(tablet)> and we'll <Gaze(child)> hear the English word <accept_answer> for monkey. <giveResponseToSelectObject (monkey_1)>	Kijk <Face(Happy)>, een aap! Raak hem <pointAt(tablet)> <Gaze(tablet)> maar aan, dan horen we <Gaze(child)> het Engelse woord<accept_answer> voor aap. <giveResponseToSelectObject (monkey_1)>			display monkey_1	monkey
8	<Gaze(child)>Ah, <tablet(off)>an monkey is in English a Can you also say	<Gaze(child)>Oh, <tablet(off)>een aap is in het Engels Zeg maar	monkey monkey			
9	<giveResponseOnSpeech(monkey)>	<giveResponseOnSpeech(monkey)>				
10	Now, I think there's a very important task for us! <tablet(on)>The monkey is loose and we have to put it in its cage! <accept_answer> Put <pointAt(tablet)> <Gaze(tablet)> the	Nu moeten we iets belangrijks doen. <tablet(on)>De aap is ontsnapt en we moeten hem in zijn kooi zetten.<accept_answer> <name>, zet <pointAt(tablet)> <Gaze(tablet)> de	monkey		highlight monkey_1 and cage_1	
	in its cage . <giveResponseToMoveObject(monkey_1, in, cage_1, 235.9843465223372, 5.684341886080802e-14, -62.218300282493146)>	maar in zijn kooi . <giveResponseToMoveObject(monkey_1, in, cage_1)>				<happy_sound>
12	<Gaze(child)>Now we have one	In <Gaze(child)> de kooi zit nu 1	monkey		remove highlights	
	Let's hear what one is in English. Can you touch the	Laten we kijken wat het Engelse woord is voor 1. Raak de	monkey			

	in the cage	<accept_answer>in de kooi maar aan				one
	<giveResponseToSelectObject (monkey_1, cage_1, ground_1)>	<giveResponseToSelectObject (monkey_1, cage_1)>				monkey
14	<Gaze(child)><tablet(off)>so one is	<tablet(off)>Dus, 1 is	one			
	say	Zeg maar	one			
15	<giveResponseOnSpeech(one)>	<giveResponseOnSpeech(one)>				
					display elephant_1 and elephant_2	
	<tablet(on)><Gaze(tablet)> Cool, elephants! Touch them <pointAt(tablet)> and we'll <Gaze(child)> hear the English word	<tablet(on)><Gaze(tablet)> Kijk, olifanten! Raak ze <pointAt(tablet)> maar aan,<accept_answer> dan horen we				
16	for elephant.	<Gaze(child)> het Engelse woord voor olifant.				
	<giveResponseToSelectObject(elephant)>	<giveResponseToSelectObject(elephant)>				elephant
18	<Gaze(child)><tablet(off)>Ah, an elephant is in English an	<Gaze(child)><tablet(off)>Aha, dus olifant is in het Engels	elephant			
	Can you also say	Zeg maar	elephant			
19	<giveResponseOnSpeech(elephant)>	<giveResponseOnSpeech(elephant)>				
20	<tablet(on)>let's see <Gaze(tablet)> what we have to do now.	<tablet(on)>Eens kijken <Gaze(tablet)> wat we nu moeten doen.				
	<Gaze(child)> The elephants are loose and we have to put them in their cage! Put	<Gaze(child)> De olifanten zijn ontsnapt en we moeten ze terugzetten in hun kooi. Zet	one elephant			
	in its cage. <pointAt(tablet)> <Gaze(tablet)> .	<accept_answer> maar in zijn kooi. <pointAt(tablet)> <Gaze(tablet)> .			highlight elephant_1 and cage_2	
	<giveResponseToMoveObject(elephant, in, cage_2, 73.7103617727126, 0, -212.51996992858972)>	<giveResponseToMoveObject(elephant, in, cage_2)>				<happy_sound>
					remove highlights and move previous_target(40.84839519451423:0:-186.15648952080494:0.5:false)	
	<Gaze(child)> there is still	<Gaze(child)> Er is nog steeds				
22			one elephant			
	outside of the cage. Add it to the cage <Gaze(tablet)> and we <Gaze(child)> will hear what "add" is	uit zijn kooi.<accept_answer> <name>, doe hem maar erbij in de kooi <Gaze(tablet)> dan kunnen we <Gaze(child)> horen wat erbij doen is in het Engels.				
	<giveResponseToMoveObject (elephant, in, cage_2, -51.29262890363403, 5.684341886080802e-14, -131.90623825422057)>	<giveResponseToMoveObject (elephant, in, cage_2)>				add

24	<tablet(off)>	<tablet(off)>	\\rspd=50\\add\\rspd=75\\			
	say	Zeg maar	\\rspd=50\\add\\rspd=75\\			
29	<giveResponseOnSpeech(add)>	<giveResponseOnSpeech(add)>				
26	<tablet(on)><Gaze(child)> Now there are two elephants in the cage! Touch <pointAt(tablet)><Gaze(tablet)> them, then we'll <Gaze(child)> hear what two is.	<tablet(on)><Gaze(child)> Dus erbij doen is Dat deed je goed, het erbij doen, dus het en nu zijn er twee olifanten in de kooi! Raak <pointAt(tablet)><Gaze(tablet)> ze maar aan<accept_answer> dan horen we <Gaze(child)> wat twee is in het Engels	\\rspd=50\\add\\rspd=75\\ \\rspd=50\\add\\rspd=75\\			
	<giveResponseToSelectObject(cage_2, elephant, ground_2)>	<giveResponseToSelectObject(cage_2, elephant)>				two
28	<tablet(off)>	<tablet(off)>	two			
	say	Zeg maar	two			
29	<giveResponseOnSpeech(two)>	<giveResponseOnSpeech(two)>				
30	<tablet(on)><Gaze(child)> Great, we have	<tablet(on)><Gaze(child)> we hebben	two two elephants			
	in the cage. One of the cages has more animals. Touch <pointAt(tablet)><Gaze(tablet)> the cage with more animals than the other, and we'll <Gaze(child)> hear the English word for more.	in de kooi. In een van de kooien zitten meer dieren. <name>, raak <pointAt(tablet)><Gaze(tablet)> de kooi aan <accept_answer>waarin meer dieren zitten dan in de andere kooi, dan horen we <Gaze(child)> het Engelse woord voor meer.				
	<giveResponseToSelectObject(cage with more animals, elephant, ground_2)>	<giveResponseToSelectObject(cage with more animals)>				more
31		<tablet(off)> Zeg maar	more more			
	<giveResponseOnSpeech(more)>					
32	<Gaze(child)> Now, lets go to the next cage.	<tablet(on)> In die kooi zitten dus dieren. <Gaze(child)> Kom, dan gaan we naar de volgende kooi.	more			
					display giraffe_1, giraffe_2 and giraffe_3	
	Cool	Leuk	more			
	animals! Now we have	dieren. Nu hebben we	one monkey, two elephants			

	and three giraffes. Let's see what that is in English. Touch <pointAt(tablet)> the giraffe <Gaze(tablet)> and let's find out.	en drie zjiraffen. Laten we eens horen wat zjiraf is in het Engels. Raak <pointAt(tablet)> de zjiraffen<accept_answer> maar aan <Gaze(tablet)> dan horen we het Engelse woord voor zjiraf.				
34	<giveResponseToSelectObject(giraffe)> <Gaze(child)><tablet(off)>	<giveResponseToSelectObject(giraffe)> <Gaze(child)><tablet(off)>	giraffe			giraffe
35	say <giveResponseOnSpeech(giraffe)>	Zeg maar <giveResponseOnSpeech(giraffe)>	giraffe			
36	<tablet(on)>Nice, there are than elephants and monkeys. Look at this, we have another important task. Let's put the	<tablet(on)>Kijk, er zijn dan olifanten en apen, want drie is dan twee en 1. Kijk hier eens. We moeten nog iets belangrijks doen. Laten we de	more giraffes more *giraffe*			
	in its cage!	<accept_answer>in zijn kooi zetten!			highlight giraffe_1 and cage_3	
37	<giveResponseToMoveObject(giraffe, in, cage_3, -335.70900654845275,-5.684341886080802e-14,-230.19707460831592)>	<giveResponseToMoveObject(giraffe, in, cage_3)>			remove highlights and move previous_target(-335.70900654845275:-5.684341886080802e-14:-230.19707460831592:0.5:false)	
	<Gaze(child)>There are still	<Gaze(child)>Er zijn nog steeds				
38	outside of the cage. There are	uit hun kooi. Er zijn	two giraffes more giraffes \\rspd=50\\add\\rspd=75\\. \\rspd=50\\add\\rspd=75\\ one giraffe			
	outside of the cage than inside of the cage. Can you	uit de kooi dan in de kooi. Die moeten we erbij doen, dus Kun jij				
39	to the cage? <giveResponseToMoveObject(giraffe,in,cage_3, -323.9528487213379,0,-144.18630608509073)>	<accept_answer> in de kooi? <giveResponseToMoveObject(giraffe,in,cage_3)>				

40	<Gaze(child)> now there are in the cage. Now there are inside the cage than outside the cage. Can you <giveResponseToMoveObject(giraffe,in,cage_3, -260.6427905021394,0,-18.81109768295761)>	<Gaze(child)> We moesten 1 zjiraf erbij doen, dus en nu zijn er in de kooi. Nu zijn er in hun kooi dan buiten hun kooi. <name>, kun jij <accept_answer> <giveResponseToMoveObject(giraffe,in,cage_3)>	\\rspd=50\\add\\rspd=75 \\ two giraffes *more giraffes* \\rspd=50\\add\\rspd=75 \\ one giraffe?		move previous_target(-323.9528487213379:0:-144.1863060850 9073:0.5:false)	<happy_so und>
42	Now <Gaze(tablet)>there are three giraffes! This cage has animals in it than the other cages. Touch them <pointAt(tablet)>, then we'll hear what three is? <giveResponseToSelectObject(cage_3, giraffe, ground_3)>	Nu <Gaze(tablet)> zijn we klaar met het erbij doen, dus want nu zijn er drie zjiraffen in de kooi! Deeze kooi heeft dieren dan de andere kooien. Raak <pointAt(tablet)>, <accept_answer>de zjiraffen maar aan, dan horen we wat drie is in het Engels. <giveResponseToSelectObject(cage_3, giraffe)>	\\rspd=50\\add\\rspd=75 \\ more		move previous_target(-260.6427905021394:0:-18.81109768295761:0.5:false)	three
44	<tablet(off)> say	<tablet(off)> Zeg maar	three three			
45	<giveResponseOnSpeech(three)>	<giveResponseOnSpeech(three)>				
46	<Gaze(child)> You did an awesome job, <tablet(on)> are back in their cage! One cage has most animals <Gaze(tablet)>. Touch <pointAt(tablet)> the cage with most animals, and we'll hear the English word for most. <giveResponseToSelectObject(cage with most animals, giraffe, ground_3)>	<Gaze(child)>Even tellen<tablet(on)> zijn terug in hun kooien. In een van de kooien zitten de meeste dieren. <Gaze(tablet)>. <accept_answer>Raak <pointAt(tablet)> de kooi met de meeste dieren maar aan dan horen we het Engelse woord voor 'meeste'. <giveResponseToSelectObject(cage with most animals)>	*one monkey, two elephants and three giraffes*			most
48	<tablet(off)> say	<tablet(off)> Zeg maar	most most			

49	<giveResponseOnSpeech(most)>	<giveResponseOnSpeech(most)>			
50	<Gaze(child)> Out of all the animals, I like giraffes	<Gaze(child)> In de kooi met de zjiraffen zit inderdaad de meeste dieren, dus	most		
		Ik vind zjiraffen het leukst, dus ik ben blij dat we er daarvan	most		
	Which animal do you like	hebben. Welk dier vind jij leuk?			
	Do you like elephants, monkeys or giraffes	Ben jij ook blij dat er van de zjiraffen het meeste zijn, dus	most		
51	<wait(2000)>	<wait(2000)>			
	Cool! <tablet(on)>The last thing we need to do is put food in the cage with the giraffes. <Gaze(tablet)>This cage has	<face(happy)><tablet(on)>Het laatste <face(neutral)> wat we moeten doen is eten brengen naar de kooi met de			display tree_1, tree_2 and
52	the	zjiraffen. <Gaze(tablet)>Deeze kooi heeft	most		tree_3
	animals so they need the	dieren. Dus deze hebben	most		
	food. Put these trees in the cage so the giraffes can eat from them. We <Gaze(child)> have	eten nodig. <name>, zet deze bomen maar in de kooi zodat de zjiraffen er van kunnen eten. We <Gaze(child)> hebben	three		
	giraffes so we need	zjiraffen, dus we hebben	three		
	trees. Can you put <pointAt(tablet)><Gaze(child)> the trees in the cage? Count them while dragging	bomen nodig. <accept_answer> Zet <pointAt(tablet)><Gaze(child)> de bomen maar in de kooi. En tel ze maar terwijl je ze neer zet.			
	<giveResponseToMoveObject(tree,in,cage_3, -256.4931484910298,0,-191.23239025815303)>	<giveResponseToMoveObject(tree,in,cage_3)>			
	<accept_answer>	<accept_answer>			move previous_target(-256.4931484910298:0:-191.23239025815303:0.5:false)
53			one		
		Doe er nog maar 1 bij			
	<giveResponseToMoveObject(tree,in,cage_3, -257.7752332771145,-5.684341886080802e-14,-105.85016171795235)>	<giveResponseToMoveObject(tree,in,cage_3)>			
					move previous_target(-257.7752332771145:-5.684341886080802e-14:-105.85016171795235:0.5:false)
54	<accept_answer>	<accept_answer>	two		

		En nu nog eentje				
55	<giveResponseToMoveObject(tree,in,cage_3, -195.0900311099583,-5.684341886080802e-14,8.590396271619625)>	<giveResponseToMoveObject(tree,in,cage_3)>	three			
56	Great! Now <Gaze(tablet)>each giraffe has their own tree, because there are	bomen in de kooi. Nu <Gaze(tablet)>heeft elke zjiraf een eigen boom, omdat er	three three		move previous_target(-195.0900311099583:-5.684341886080802e-14:8.590396271619625:0.5:false)	
	giraffes and trees! In the giraffe cage there are the most animals and also the most food. <tablet(off)>You <Gaze(child)> did great, now let's play another game!	zjiraffen zijn en bomen. De kooi is heel vol nu, want dieren zitten in de zjiraffenkooi en daar is ook eten. <tablet(off)><name>, je <Gaze(child)> hebt het supergoed gedaan. Nu doen we nog een spelletje!	three most most			
	[Test: about 3 minutes]					
71		Kijk, dit spelletje mag jij spelen! Ik denk dat je het goed kan.		zoo_1_task_1		

##					move monkey_take_away_2(-125.842107730220 93:20:30.442498819716093:2.5:true) and monkey_add_2(-107.196645321892 67:20:-232.860487212669 09:2.5:true) and animate monkey_jump_1(jump:true)
72	<giveResponseToSelectObject(cage_add,monkey_add_1,monkey_add_2,area_3)>	Waar zie je <accept_answer>	\\rspd=50\\add\\rspd=75\\		
73	<giveResponseToSelectObject(3giraffes_more,area_1)>	Waar zie je <accept_answer>	more	zoo_1_task_2	
74	<giveResponseToSelectObject(3monkeys,area_1)>	Waar zie je <accept_answer>	three	zoo_1_task_3	
75	<giveResponseToSelectObject(2giraffes,area_2)>	Waar zie je <accept_answer>	two	zoo_1_task_4	
76	<giveResponseToSelectObject(3elephants_most,area_3)>	Waar zie je <accept_answer>	most	zoo_1_task_5	
77	<giveResponseToSelectObject(1elephant,area_2)>	Waar zie je <accept_answer>	one	zoo_1_task_6	

78	<giveResponseToSelectObject(3monkeys_more,area_2)>	Waar zie je <accept_answer>	more	zoo_1_task_7		
79	<giveResponseToSelectObject(3elephants,area_1)>	Waar zie je <accept_answer>	three	zoo_1_task_8		
80	<giveResponseToSelectObject(3monkeys_most,area_3)>	Waar zie je <accept_answer>	most	zoo_1_task_9		
81	<giveResponseToSelectObject(2monkeys,area_1)>	Waar zie je <accept_answer>	two	zoo_1_task_10		
82				zoo_1_task_11	move elephant_take_away_2(-125.842107730220 93:20:30.442498819716093:2.5:true) and elephant_add_2(67.70075554530337:20:211.58767626559046:2.5:true) and animate elephant_jump_1(jump:true)	
83			\\rspd=50\\add\\rspd=75\\			
84	<giveResponseToSelectObject(cage_add,elephant_add_1,elephant_add_2,area_1)>	Waar zie je <accept_answer>				
85		Waar zie je <accept_answer>	one	zoo_1_task_12		

	<giveResponseToSelectObject(1giraffe,area_3)>					
	[End of lesson]	**[End of lesson]**				
71	<Gaze(child)>Yay we got a star! It was very nice to play with you! Bye!	<Gaze(child)>		black		
72		Jippie, we hebben een ster gekregen! Het was superleuk om met je te spelen. Tot de volgende keer!			display confetti	

Lesson 2

	Robot			Tablet		
#	Text L1 English	Text L1 Dutch	Text L2	Scene	Objects	Say
	[Introduction: 2 minutes]					
1	<tablet(off)><Gaze(child)><Face(Neutral)>Hello <name>. Last time we had a lot of fun! Are you also excited to see what we'll be doing today?	<tablet(off)><Gaze(child)><Face(Neutral)>Hoi <name>.				
	<wait(2000)>					
2	<gaze(tablet)> Look where we're going today! <Gaze(child)> <Gesture(Pretends to touch tablet)>	<gaze(tablet)>Kijk eens wat we vandaag gaan doen! <Gaze(child)> <Gesture(Pretends to touch tablet)>				
3	<gaze(child)> Cool, today we'll visit the bakery! They will have lots of nice breads and cakes. Do you also like cakes?	<gaze(child)>Cool, vandaag gaan we naar de bakkerij! Daar hebben ze lekkere broodjes en taartjes. Houd jij daar ook van?		bakery_1		
	<wait(2000)>					
	<Gaze(tablet)>Cool <Face(Happy)>, the bakery!	<Gaze(tablet)> <Face(Happy)> Wauw wat een hoop spullen!				
1	<Gaze(child)><face(neutral)> I hope we'll get to bake breads. That is fun! We have so many supplies. <gaze(tablet)> Let's count the number of buckets in English.<gaze(tablet)>	<Gaze(child)><face(neutral> Ik zie een oven, een tafel, vier zakken meel en een plank met emmers en pakken melk. Weet je nog dat we vorige week tot drie hebben leren tellen in het Engels?				
12		<pointAt(tablet)> <gaze(tablet)>Laten we tellen hoeveel emmers het zijn, in het Engels! <gaze(child)>				
	<wait(1000)>					
2			one			
	<wait(1000)>					
3			two			
	<wait(1000)>					
4			three			
5	<gaze(child)>Cool! <face(happy)> Now let's count how many bags of flour we have.<gaze(tablet)>	<gaze(child)>Cool! <face(happy)>En volgens mij hebben we vier zakken meel. Dat is meer, dus Raak ze maar aan, zodat we kunnen leren wat het woord, vier, is <accept_answer> in het Engels.<gaze(tablet)>	more			
	<giveResponseToSelectObject(bag)>					four
6		<gaze(child)>Vier en	four			
		klinken wel een beetje hetzelfde. Zeg ook maar:	four			
	<giveResponseOnSpeech(four)>					
7		<gaze(tablet)> <name> We hebben dus zakken meel.	four			
12	<gaze(child)> <face(happy)>Yay! Now let's count how many bowls we have.<gaze(tablet)>	<gaze(child)> <face(happy)>Kijk eens, op de planken staan niet maar wel vijf pakken melk. Daarvan zijn er het meest, dus Raak ze maar aan, dan horen we het Engelse woord voor vijf<accept_answer><gaze(tablet)>	four, most			
	<giveResponseToSelectObject(carton)>					five
13		Dus vijf is	five			
		Het lijkt wel een beetje hetzelfde, maar het is net iets anders. Vijf en	five			
		Zeg ook maar	five			
	<giveResponseOnSpeech(five)>					
20		Dus we hebben	five			
		pakken melk en	four			
					highlight carton_1 and carton_2 and carton_3 and carton_4 and carton_5 and bag_1 and bag_2 and bag_3 and bag_4	
		zakken meel. Wat is minder? Raak maar aan <accept_answer> op de \prn=t E: b l @ t \ wat minder is				
	<giveResponseToSelectObject(dummy_fewer,bag)>					fewer

21	<gaze(child)>Hm which do we have	Hoorde je dat? Volgens mij was dat:	fewer		remove highlights	
		Dus	fewer			
		is minder in het Engels. <name>, kun jij dat ook zeggen,	fewer			
	<giveResponseOnSpeech(fewer)>					
	of? Bowls or buckets? Touch <gaze(tablet)> <PointAt(tablet)>					
22	whichever we have fewer	Dus we hebben	fewer			
			four is fewer than			
	of.	zakken meel dan pakken melk, want	five			
					highlight carton_1 and carton_2 and carton_3 and carton_4 and carton_5 and bag_1 and bag_2 and bag_3 and bag_4 and bucket_1 and bucket_2 and bucket_3	
		En we hebben maar drie emmers. Wat is het minst? <accept_answer>				
		Raak dat maar aan.				
	<giveResponseToSelectObject(dummy_fewest,bucket)>					fewest
23	<gaze(child)>And on which shelf <gaze(tablet)> are the		fewest		remove highlights	
	bowls?	Dus minst, is in het Engels	fewest			
		Van de emmers zijn er inderdaad het minst, dus	fewest			
		Nu hebben we geleerd dat minder	fewer			
		is, en dat minst	fewest			
		is. Het lijkt op elkaar, maar	fewest			
		is wel ietsje anders. Zeg ook maar	fewest			
	<giveResponseOnSpeech(fewest)>					
24		We hebben dus	five			
		pakken melk,	four			
		zakken meel, dus dat is	fewer			
		en van de emmers zijn er maar drie, dus dat is het	fewest			
		Laten we een brood gaan bakken! Er staat al een kom met water op	\\rspd=50\\add\\rsp			
		tafel. Als we er meel bij doen, dus	d=75\\		highlight bag	
		hebben we deeg, voor het brood. <name> , pak maar één van de	four			
		<accept_answer> zakken met meel.				
	<giveResponseToObjectCollide(bag, bowl_1, 4.5835913413192895, 94, 42.65093742920607)>					
25		Raak de kom maar aan <accept_answer> om het te roeren!			remove highlights	
	<giveResponseToSelectObject(bowl_1,table_1)>					
		Doe de kom met het deeg, maar in de oven. <accept_answer> Dan				
26		kunnen we het brood gaan bakken.			animate bowl_1(shake:false)	
	<giveResponseToObjectCollide(bowl_1, oven, 201.93756774069686, 74, -18.6060769712808)>					
		Als het brood klaar is, moeten we het wel kunnen bewaren. Laten we ruimte maken op de plank. Er staan nu heel veel spullen op: drie emmers				
27		en	five			
		pakken melk. Dat zijn wel acht dingen! Laten we de emmers eraf halen.				
		<accept_answer>				
	<giveResponseToMoveObject(bucket, NOT_above, shelf, -166.97870549388327, 0, 27.047211459561197)>					
272		<accept_answer>				
	<giveResponseToMoveObject(bucket, NOT_above, shelf, -214.50061703974364, 0, 46.44601747465009)>					
273		<accept_answer>				take_away
	<giveResponseToMoveObject(bucket, NOT_above, shelf, -133.40874719142187, 0, 73.25956648843038)>					
28		Hoorde je dat?	take away			
		Eraf halen is dus	take away			

		Zeg ook maar	take away			
	<giveResponseOnSpeech(take away)>					
29		Dus eraf halen is	take away			
		Nu staan er veel minder, dus spullen op de plank.	fewer			
30		Kijk <name> , het brood is klaar!			display bread_1	oven_ding
302		Zet hem maar op de plank! <accept_answer>				
	<giveResponseToMoveObject(bread_1,above,shelf, -115.20647690034637, 109, -61.21438617277255>				highlight bread_1 and highlight shelf display bowl_2 and move bread_1(-115.20647690034637:109:-61.21438617277255:1:false) and remove highlights	
31		Dat was leuk! Laten we nog een brood gaan bakken! Nu wil ik het proberen!				
312		<move(bag, 4.5835913413192895,94,42.65093742920607,1,false)> Zo, een zak met meel, en nu in de kom.	take away			
	<wait(2000)>					
32		<gesture(touch)> Goed roeren!			remove previous_target and animate bowl_2(shake:false)	
	<wait(1000)>					
33		<move(bowl_2,172.06883087321947,49,-20.196045270895297,1,false)> En de oven in.				
	<wait(4000)>					
34		Zie je dat? Er zijn nu nog maar twee zakken meel over. Het waren er eerst	four		remove bowl_2	
		Nu hebben we meer pakken melk en emmers dan zakken meel. Eerst waren van de emmers het	fewest			
		maar nu zijn van de zakken meel het	fewest			
35		We moeten wel nog weer wat ruimte maken op de plank. Er staan nu spullen op de plank dan eerst, maar het is nog wel erg vol.	fewer			
		pakken melk, dus haal de pakken melk maar van de plank af.	take away five			
		pakken melk, <accept_answer> 1 voor 1	take away five			
	<giveResponseToMoveObject(carton, NOT_above, shelf, -94.91987988770676,13,133.7041629396589)					
342		<accept_answer>				
	<giveResponseToMoveObject(carton, NOT_above, shelf, -117.55561377246487,13,152.02331452040798)					
343		<accept_answer>				
	<giveResponseToMoveObject(carton, NOT_above, shelf, -148.08012770184249,13,132.43015270718445)					
344		<accept_answer>				
	<giveResponseToMoveObject(carton, NOT_above, shelf, -163.8455200533903,13,151.2938814242983)					
345		<accept_answer>				
	<giveResponseToMoveObject(carton, NOT_above, shelf, -203.1785221598113, 13, 127.53748213335689)					
35		Hij is klaar!			display bread_2	oven_ding
352		<move(bread_2,-155.20647690034637,109,-61.21438617277255,1,false)>Ik zal hem even op de plank zetten.				
	<wait(2000)>					

36		Zullen we nog één keer een brood bakken? Nu mag jij weer! Eerst het meel in de kom. <accept_answer> een zak met meel.	take away		display bowl_3	
	<giveResponseToObjectCollide(bag, bowl_3, 4.5835913413192895, 94, 42.65093742920607)>					
37		Nu goed roeren! <accept_answer>				
	<giveResponseToSelectObject(bowl_3,table_1)>					
38		En nu de oven <accept_answer> in.			animate bowl_3(shake:false)	
	<giveResponseToObjectCollide(bowl_3, oven, 201.93756774069686, 74, -18.6060769712808)>					
39		Nu gaan we niets van de plank weghalen, want er is genoeg ruimte.	take away			
40		<face(happy)> Hij is klaar!<face(neutral)>			display bread_3	oven_ding
402		<name>, zet hem maar <accept_answer> op de plank.			highlight bread_3 and highlight shelf	
	<giveResponseToMoveObject(bread_3,above,shelf, -195.20647690034637, 109, -61.21438617277255>					
41		Zo, dat hebben we <face(happy)>goed gedaan! Laten we nu een ander spelletje gaan spelen!<face(neutral)>			remove highlights	
	[Test: about 3 minutes]					
42		Kijk, dit spelletje mag jij spelen! Ik denk dat je het goed kan. Waar zie je <accept_answer>	four	bakery_task_1		
	<giveResponseToSelectObject(4bread,area_3)>					
43				bakery_task_2		
432					move bowl_takeaway_3(-300:3:300:2.5:true) and bowl_add_3(-6.900091842895108:3:4.140287945071407:2.5:true) and animate bowl_move_3(shake:true)	
433		Waar zie je <accept_answer>	take away			
	<giveResponseToSelectObject(bowl_takeaway,area_1)>					
45		Waar zie je <accept_answer>	fewest	bakery_task_3		
	<giveResponseToSelectObject(bowl_fewest,area_2)>					
46		Waar zie je <accept_answer>	five	bakery_task_4		
	<giveResponseToSelectObject(bucket5,area_3)>					
47		Waar zie je <accept_answer>	fewer	bakery_task_5		
	<giveResponseToSelectObject(bread1,area_2)>					
48				bakery_task_6		

481					move bread_takeaway_3(-300:3:0:2.5:true) and bread_add_3(-96.71908532703833:0:-213.17208975502925:2.5:true) and animate bread_move_3(shake:true)	
482	<giveResponseToSelectObject(bread_takeaway,area_2)>	Waar zie je <accept_answer>	*take away*			
49	<giveResponseToSelectObject(1flour,area_1)>	Waar zie je <accept_answer>	fewer	bakery_task_7		
50	<giveResponseToSelectObject(5flour,area_3)>	Waar zie je <accept_answer>	five	bakery_task_8		
51	<giveResponseToSelectObject(1flourfewest,area_1)>	Waar zie je <accept_answer>	fewest	bakery_task_9		
52	<giveResponseToSelectObject(4milk,area_1)>	Waar zie je <accept_answer>	four	bakery_task_10		
	End of lesson					
53		<gaze(child)>		black		
54		Heel goed gedaan!! Dat was het voor vandaag! Tot de volgende keer!			display confetti	

Lesson 3

	Robot			Tablet		
#	Text L1 English	Text L1 Dutch	Text L2	Scene	Objects	Say
	[Introduction: 2 minutes]					
1	Hello <name>. Last time we had a lot of fun! Are you also excited to see what we'll be doing today?	Hoi <name>. De vorige keer was het heel leuk! We waren in de bakkerij en hebben een hoop woorden geleerd. We hebben geleerd dat vier is en dat vijf is. We moesten spullen van de plank afhalen, dus zodat er minder, dus spullen opstonden. Van de emmers waren er het het minst, dus Ben jij ook benieuwd naar wat we vandaag gaan doen?	four five take away, fewer, fewest.			
2	<wait(2000)> Look where we're going today! <Gaze(child)> <Gesture(Pretends to touch tablet)>	<wait(2000)> Kijk eens waar we vandaag naartoe gaan! < Gaze(child) <Gesture(Pretends to touch tablet)>				
3	<Gaze(child)> Cool <Face(happy)>, today we'll visit the zoo again! I really liked the zoo last time. You too? <Face(neutral)> <wait(2000)>	<Gaze(child)> Leuk <Face(happy)>, vandaag gaan we weer naar de dierentuin! Ik vond het de vorige keer heel leuk in de dierentuin. Jij ook? <Face(neutral)> <wait(2000)>		zoo_2_1		
	[Modelling of words: about 10 minutes]					
7	I see elephants. Remember what we learnt an elephant in English is	Ik zie olifanten. Weet je nog wat we hebben geleerd, een olifant is in het Engels	elephant			
	Look <pointAt(tablet)> <Gaze(tablet)>, the animals are playing a game with us! <Gaze(child)> One	Kijk <name> <pointAt(tablet)> <Gaze(tablet)>, de dieren spelen een spelletje met ons! <Gaze(child)> 1	elephant			
	is bigger than the other. Touch <pointAt(tablet)> <Gaze(tablet)> the bigger elephant <Gaze(child)> and we'll learn the word for bigger. <giveResponseToSelectObject(big_elephant)>	is heel groot. Raak <pointAt(tablet)> <Gaze(tablet)> de grotere olifant maar aan <Gaze(child)>. Dan leren we het woord voor groot. <accept_answer>				big
8	<Gaze(child)> Did you hear that? <tablet(off)> Remember that big is <giveResponseOnSpeech(big)>	<Gaze(child)> <tablet(off)> Dus groot is Zeg mij maar na:	big big			
9	<tablet(on)> <Gaze(child)> Now, touch <pointAt(tablet)> <Gaze(tablet)> again the that is <giveResponseToSelectObject(big_elephant)>	<tablet(on)> <Gaze(child)> Raak nu maar weer de <pointAt(tablet)> <Gaze(tablet)> <accept_answer> aan	big elephant			
10		Dat was de	big elephant.			
14	<Gaze(child)> Look <pointAt(tablet)> <Gaze(tablet)>, more animals! <Gaze(child)> These are giraffes. Remember, giraffe in English is One	<Gaze(child)> Kijk <pointAt(tablet)> <Gaze(tablet)>, nog meer dieren! <Gaze(child)> Dit zijn zjiraffen. Weet je nog, zjiraf is in het Engels 1	giraffe giraffe	zoo_2_2		
	is smaller than the other. Touch <pointAt(tablet)> <Gaze(tablet)> the smaller giraffe <Gaze(child)> and we'll learn the word for smaller. <giveResponseToSelectObject(small_giraffe)>	is heel klein. Raak <pointAt(tablet)> <Gaze(tablet)> de kleine zjiraf maar aan <Gaze(child)>. Dan leren we het woord voor klein. <accept_answer>				small
16	<Gaze(child)> <tablet(off)> I remember that small is <giveResponseOnSpeech(small)>	<Gaze(child)> <tablet(off)> Dus klein is <name>, zeg maar:	small small			
18	<tablet(on)> Now, touch <pointAt(tablet)> <Gaze(tablet)> again the <Gaze(child)> that is <giveResponseToSelectObject(small_giraffe)>	<tablet(on)> Raak nu maar weer de <pointAt(tablet)> <Gaze(tablet)> <Gaze(child)> <accept_answer> aan	small giraffe			
20		Dat was de	small giraffe			
21	<Gaze(child)> Look <pointAt(tablet)> <Gaze(tablet)>, the elephants again! One	<Gaze(child)> Kijk <pointAt(tablet)> <Gaze(tablet)>, daar zijn de olifanten weer! 1	elephant	zoo_2_3		
	is heavier than the other. Touch <pointAt(tablet)> <Gaze(tablet)> the heavier elephant <Gaze(child)> and we'll learn the word for heavier. <giveResponseToSelectObject(heavy_elephant,hitbox_heavy)>	is heel zwaar. Raak <pointAt(tablet)> <Gaze(tablet)> de zware olifant aan <Gaze(child)>. Dan leren we het woord voor zwaar <accept_answer>				heavy
23	<Gaze(child)> Cool <Face(happy)>, <tablet(off)> heavy is	<Gaze(child)> Ja! <Face(happy)>, <tablet(off)> Zwaar is Zeg mij maar na	heavy heavy			

	<giveResponseOnSpeech(heavy)>					
	<tablet(on)> <Gaze(child)> Now, touch <pointAt(tablet)> <Gaze(tablet)>	<tablet(on)> <Gaze(child)> <name>, raak nu maar de				
25	again the	<pointAt(tablet)> <Gaze(tablet)>	heavy elephant			
	<Gaze(child)> that is	<Gaze(child)> <accept_answer> aan				
	<giveResponseToSelectObject(heavy_elephant,hitbox_heavy)>					
26		Dat was de	heavy elephant			
	<Gaze(child)> Look, <pointAt(tablet)> <Gaze(tablet)>	<Gaze(child)> Kijk <pointAt(tablet)> <Gaze(tablet)>	monkeys!	zoo_2_4		
27						
	<Gaze(child)> Remember, monkey is	<Gaze(child)>Weet je nog? Aap is	monkey			
	One	De ene	monkey			
	is lighter than the other. Touch <pointAt(tablet)> <Gaze(tablet)> the	is heel licht. Wat zou licht zijn in het Engels? Raak <pointAt(tablet)>				
	lighter monkey <Gaze(child)> and we'll learn the word for lighter.	<Gaze(tablet)> de lichte aap maar aan <accept_answer>				
		<Gaze(child)>				
	<giveResponseToSelectObject(light_monkey,hitbox_light)>					light
30	<Gaze(child)> I get this! <tablet(off)> Light is	<tablet(off)><Gaze(child)> Dus licht is	light			
		Zeg ook maar:	light			
	<giveResponseOnSpeech(light)>					
	<tablet(on)> <Gaze(child)> Now, touch <pointAt(tablet)> <Gaze(tablet)>	<tablet(on)> <Gaze(child)> Raak nu maar weer de <pointAt(tablet)>				
32	again the	<Gaze(tablet)>	light monkey			
	<Gaze(child)> that is	<Gaze(child)> <accept_answer> aan				
	<giveResponseToSelectObject(light_monkey,hitbox_light)>					
34		Daar was hij, de	light monkey			
35	<Gaze(child)> Cool <Face(happy)>, more	<Gaze(child)> Wow <Face(happy)>, nog meer	giraffes!	zoo_2_5		
	<Face(neutral)> One	<Face(neutral)> 1	giraffe			
		is heel hoog. Ik ben benieuwd wat hoog is! <name>, raak				
	is higher than the other. Touch <pointAt(tablet)> <Gaze(tablet)> the	<pointAt(tablet)> <Gaze(tablet)> de hoge zjiraf maar aan.				
	higher giraffe <Gaze(child)> and we'll learn the word for higher.	<accept_answer> <Gaze(child)>				
	<giveResponseToSelectObject(high_giraffe,hitbox_high)>					high
38		<tablet(off)><Gaze(child)> Dus hoog is	high			
		Zeg mij maar na:	high			
	<giveResponseOnSpeech(high)>					
40	<Gaze(child)> that is	<tablet(on)>Raak de <pointAt(tablet)> <Gaze(tablet)>	high giraffe			
	than the other giraffe.	<Gaze(child)> <accept_answer> maar weer aan.				
	<giveResponseToSelectObject(high_giraffe,hitbox_high)>					
42		Daar was de	high giraffe			
43	Look, <pointAt(tablet)> <Gaze(tablet)>	Kijk, <pointAt(tablet)> <Gaze(tablet)>	monkeys!	zoo_2_6		
	<Gaze(child)> One	<Gaze(child)> 1	monkey			
	is is lower than the other. Touch <pointAt(tablet)> <Gaze(tablet)> the	is laag. Raak <pointAt(tablet)> <Gaze(tablet)> de lage aap maar aan				
	lower monkey <Gaze(child)> and we'll learn the word for lower.	<accept_answer> <Gaze(child)>				
	<giveResponseToSelectObject(low_monkey)>					low
44	<Gaze(child)> I get this! <tablet(off)> Low is	<tablet(off)><Gaze(child)> Aha, laag is	low			
		Zeg mij maar na:	low			
	<giveResponseOnSpeech(low)>					
46	<tablet(on)> Now, touch <pointAt(tablet)> <Gaze(tablet)> again the	<tablet(on)> Raak nu maar weer de <pointAt(tablet)> <Gaze(tablet)>	low monkey			
	<Gaze(child)> that is	<Gaze(child)> <accept_answer> aan				
	<giveResponseToSelectObject(low_monkey)>					
48		Daar was de	low monkey.			
	<Gaze(child)> Cool <Face(happy)>, we're going to play tap the animal!	<Gaze(child)><Face(happy)>We gaan dierentikkertje spelen.				
49	<Face(neutral)> We'll start with	<Face(neutral)> We beginnen met	big	zoo_2_7		
	let's search for the	Kom <name>, we zoeken de	big giraffe			
		<accept_answer>				
	<giveResponseToSelectObject(big_giraffe)>					
52		Dat was de	big giraffe.			
53	<Gaze(child)> Now	<Gaze(child)> Nu	heavy	zoo_2_8		
	search for the	zoek, de	heavy monkey			
		<accept_answer>				
	<giveResponseToSelectObject(heavy_monkey,hitbox_heavy)>					

54		Dat was de	heavy monkey			
55	<Gaze(child)> Now let's search for the <giveResponseToSelectObject(low_elephant)>	<Gaze(child)>Nu Laten we zoeken naar de <accept_answer>	low low elephant	zoo_2_9		
56		We hebben hem gevonden, de	low elephant			
58	<Gaze(child)> Now search for the <giveResponseToSelectObject(light_giraffe,hitbox_light)>	<Gaze(child)> Nu <name>, zoek, de <accept_answer>	light light giraffe	zoo_2_10		
61		Daar was hij, de	light giraffe			
62	<Gaze(child)> Now search for the <giveResponseToSelectObject(high_monkey,tree_high_monkey)>	<Gaze(child)>Nu zoek, de <accept_answer>	high high monkey	zoo_2_11		
63		Dat was de	high monkey			
64	<Gaze(child)> Last turn: let's search for the elephant that is <giveResponseToSelectObject(small_elephant)>	<Gaze(child)>Nu de laatste: Laten we zoeken naar de <accept_answer>	small small elephant	zoo_2_12		
65		Daar was de	small elephant			
	<Gaze(child)> <Face(happy)> We did great! Let's play another game! <Face(neutral)>	<Gaze(child)> <Face(happy)> <name>, dat hebben we supergoed gedaan! Nu doen we een ander spelletje! <Face(neutral)>				
	[Task: about 5 minutes]					
69	<Gaze(child)> Cool <Face(happy)>, a new game! <Face(neutral)> Search for the <giveResponseToSelectObject(high_giraffe,hitbox_high)>	<Gaze(child)> Leuk <Face(happy)>, een nieuw spelletje. <Face(neutral)> zoek, de <accept_answer>	high giraffe	zoo_2_task		
70		Daar was de	high giraffe.			
	Now search for the <giveResponseToSelectObject(heavy_monkey,hitbox_heavy)>	Zoek nu de <accept_answer>	heavy monkey			
71		Dat was de	heavy monkey.			
	Now let's search for the <giveResponseToSelectObject(big_elephant)>	Nu gaan we zoeken naar de <accept_answer>	big elephant			
75		Daar was de	big elephant.			
	Now search for the <giveResponseToSelectObject(low_giraffe)>	Zoek nu de <accept_answer>	low giraffe			
76		Aha, daar was de	low giraffe.			
	Now search for the <giveResponseToSelectObject(light_monkey,hitbox_light)>	En zoek nu de <accept_answer>	light monkey			
79		Ja, daar was de	light monkey.			
	Last turn, let's search for the elephant that is <giveResponseToSelectObject(small_elephant)>	Laatste keer: zoek maar naar de <accept_answer>	small elephant			
##		Daar was de	small elephant.			
	[Test: about 3 minutes]					
80		Kijk, dit spelletje mag jij spelen! Ik denk dat je het goed kan. Waar zie je <accept_answer>	big	zoo_2_task_1		
	<giveResponseToSelectObject(big_monkey_test,area_1)>					
81		Waar zie je <accept_answer>	high	zoo_2_task_2		
	<giveResponseToSelectObject(high_elephant_test,high_rock,area_3)>					
82		Waar zie je <accept_answer>	small	zoo_2_task_3		

83	<giveResponseToSelectObject(small_giraffe_test,area_1)>	Waar zie je <accept_answer>	light	zoo_2_task_4		
84	<giveResponseToSelectObject(light_elephant_test,light_giraffe_test,rock_light,board_light,area_1)>	Waar zie je <accept_answer>	low	zoo_2_task_5		
85	<giveResponseToSelectObject(low_giraffe_test,area_2)>	Waar zie je <accept_answer>	heavy	zoo_2_task_6		
86	<giveResponseToSelectObject(heavy_giraffe_test,heavy_elephant_test,rock_heavy,board_heavy,area_2)>	Waar zie je <accept_answer>	big	zoo_2_task_7		
87	<giveResponseToSelectObject(big_giraffe_test,area_3)>	Waar zie je <accept_answer>	heavy	zoo_2_task_8		
88	<giveResponseToSelectObject(heavy_monkey_test,heavy_giraffe_test,rock_heavy,board_heavy,area_1)>	Waar zie je <accept_answer>	low	zoo_2_task_9		
89	<giveResponseToSelectObject(low_elephant_test,area_2)>	Waar zie je <accept_answer>	high	zoo_2_task_10		
90	<giveResponseToSelectObject(high_monkey_test,tree_high,area_1)>	Waar zie je <accept_answer>	light	zoo_2_task_11		
91	<giveResponseToSelectObject(light_giraffe_test,light_monkey_test,rock_light,board_light,area_3)>	Waar zie je <accept_answer>	small	zoo_2_task_12		
	<giveResponseToSelectObject(small_elephant_test,area_2)>					
	[End of the lesson]					
92		<Gaze(child)>		black		
93	Yay we got a star! It was very nice to play with you! Bye!	Jippie, we hebben een ster verdiend. Het was heel leuk om met je te spelen. Daag!			display confetti	

Lesson 4

#	Robot			Tablet		
	Text L1 English	Text L1 Dutch	Text L2	Scene	Objects	Say
1	**[Introduction: 2 minutes]**					
2	<tablet(off)><Gaze(child)><Face(Neutral)>Hello <name>. Last time we had a lot of fun! Are you also excited to see what we'll be doing today? <wait(2000)>	<tablet(off)><Gaze(child)><Face(Neutral)>Hallo <name>. De vorige keer was het heel leuk! Ben je ook benieuwd wat we vandaag gaan doen?				
4	<gaze(tablet)> Look where we're going today! <Gaze(child)> <Gesture(Pretends to touch tablet)>	<gaze(tablet)> Kijk waar we vandaag naartoe gaan! <Gaze(child)> <Gesture(Pretends to touch tablet)>		fruitshop_1		
	[Modelling of words: about 10 minutes]					
8	<Gaze(tablet)>Cool <Face(Happy)> It looks like a fruit shop. <face(neutral)><gaze(child)> I see many apples and oranges.	<Gaze(tablet)><Face(Happy)> Dit is een fruitwinkel. <face(neutral)><gaze(child)> Ik zie allemaal appels en sinaasappels. <gaze(tablet)>			move monkey_walking(-67.29835303678826:0:48.4429268517971:12:false)	
10	Oh, monkey. <gaze(child)>	Oh, een grote aap. <gaze(child)>				
		een	big monkey!			
	I wonder what she is doing here. Anyway, let's start our game! <name>, <accept_answer><gaze(tablet)><pointAt(tablet)> can you touch the screen? <gaze(child)>	Ik vraag me af wat die hier doet.				
11		Maar laten we met ons spelletje beginnen! <name>, <accept_answer><gaze(tablet)><pointAt(tablet)> Druk maar ergens op het scherm! <gaze(child)>			remove monkey_walking and display monkey_standing	
	<giveResponseToSelectObject(screen)>					
13	<gaze(tablet)>Look, there are some boxes around.<gaze(child)><tablet(off)> I learned the other day that a box is called	<gaze(tablet)> Kijk, daar staat een tafel.<gaze(child)><tablet(off)> Ik heb gisteren het Engelse woord voor tafel geleerd:		fruitshop_2		
			table			
	<face(happy)>Isn't that a fun word to say? <face(neutral)>	<face(happy)>Is dat geen leuk woord om te zeggen? <face(neutral)>				
			Table!			
	Let's repeat the word! <giveResponseOnSpeech(table)>	Laten we het nazeggen!				
15	<tablet(on)><gaze(tablet)>Wow, there are some apples too! <face(happy)>I love apples! <face(neutral)> <tablet(off)> I also learned that an apple is called	<tablet(on)><gaze(tablet)>Wow, daar zijn ook appels! <face(happy)>Ik hou heel veel van appels! <face(neutral)> <tablet(off)> Ik heb ook geleerd wat het Engelse woord is voor appel				
			apple .			
	Isn't that fun to say too?	Dat is ook een leuk woord.	Apple!			
	<giveResponseOnSpeech(apple)>	Zeg maar na:	*apple*			
16		Hij is heel klein, dus heel	*small*			
		Hij is ook heel licht, dus	*light*			
	<tablet(on)><gaze(tablet)>Let's see what's going on with these apples. <gaze(child)><name>, can you touch<gaze(tablet)><pointat(tablet)> somewhere on the screen?<gaze(child)> <gaze(tablet)><tablet(on)>	<tablet(on)><gaze(tablet)>Laten we eens kijken wat er met de appels moet gebeuren. <gaze(child)> <gaze(tablet)><tablet(on)>				
	can you press <accept_answer> on the apple? <giveResponseToSelectObject(apple,fruit_stand)>	<name>, druk maar <accept_answer> op een van de appels				*This is an apple*
21					move apple_1(-74.7319109310913:57:129.77690926649075:2:false)	*The apple is falling*
22	<wait(2200)>					*The apple is on the table*
25	<tablet(off)><gaze(child)>I think	<tablet(off)><gaze(child)> Ik denk dat				
			on			
	means on so	het Engelse woord is voor "op"				
			the apple is on the table			
	means the apple is on the box! Let's say the word!	Betekent "de appel is op de tafel". Laten we het Engelse woord voor "op" zeggen!				
			on			
	<giveResponseOnSpeech(on)>					
27	Let's say the word one more time!	Laten we het nu in een zin zeggen.				
			The apple is on the table.			
	<giveResponseOnSpeech(the apple is on the table)>					
28	Yes! The apple is on the table. <gaze(tablet)><tablet(on)>	Ja! De appel is op de tafel <gaze(tablet)><tablet(on)>				
29	can you press on the apple? <giveResponseToSelectObject(apple_2,apple_3,apple_4,fruit_stand)>	Druk maar <accept_answer> op de volgende appel				*This is an apple*
39					move apple_2(-74.7319109310913:102:129.77690926649075:2:false)	*The apple is falling*
41	<wait(2200)>					*The apple is above the table*
44	<tablet(off)><gaze(child)>I think	Kijk, wat een gekke appel, die blijft in de lucht hangen! Hij is nu heel hoog, dus heel <gaze(child)> <tablet(off)> Ik denk dat	high			
			above			
	means above so	het Engelse woord voor "boven" is. Dus				

			the apple is above the table			
	means the apple above the box!	betekent "de appel is boven de tafel".				
	Let's say the word!	Laten we het Engelse woord voor "boven" zeggen				
			above			
	<giveResponseOnSpeech(above)>					
46	Let's say the word one more time!	Laten we het nu in een zin zeggen.				
			The apple is above the table.			
	<giveResponseOnSpeech(the apple is above the table)>					
462	"Yes! The apple is above the table.	Ja! De appel is boven de tafel.				
	<gaze(tablet)><tablet(on)>	<gaze(tablet)><tablet(on)>				
47	can you press on the apple?	Druk maar <accept_answer> op de volgende appel				*This is an apple*
	<giveResponseToSelectObject(apple_3,apple_4,fruit_stand)>					
					move apple_3(-67.60040264398025:-3:152.86952586931153:2:false)	
48						*The apple is falling*
50						*The apple is below the table*
53	<tablet(off)><gaze(child)>I think	<tablet(off)><gaze(child)>Ik denk dat				
			below			
	means below so	het Engelse woord voor "onder" is				
			the apple is below the table			
	means the apple below the box!	betekent "de appel is onder de tafel".				
	Let's say the word!	Laten we het Engelse woord voor "onder" zeggen				
			below			
54	<giveResponseOnSpeech(below)>					
55	Let's say the word one more time!	Kom, laten we het nu in een zin zeggen.				
			The apple is below the table.			
	<giveResponseOnSpeech(the apple is below the table)>					
57	"Yes! The apple is below the table.	Ja! De appel is onder de tafel. Hij ligt heel laag, dus heel	*low*			
	<gaze(tablet)><tablet(on)>	<gaze(tablet)><tablet(on)>				
58	can you press on the apple?	Druk maar <accept_answer> op de laatste appel				*This is an apple*
	<giveResponseToSelectObject(apple_4,fruit_stand)>					
					move apple_4(35.15547918055267:-3:124.26659414996305:2:false)	
59						*The apple is falling*
61						*The apple is next to the table*
64	<tablet(off)><gaze(child)>I think	<tablet(off)><gaze(child)>Ik denk dat				
			next to			
	means next to so	het Engelse woord voor "naast" is.				
			the apple is next to the table			
	means the apple next to the box!	betekent "de appel is naast de tafel".				
	Let's say the word!	Zeg het Engelse woord voor "naast" maar				
			next to			
65	<giveResponseOnSpeech(next to)>					
66	Let's say the word one more time!	Zeg het nu maar in een zin.				
			The apple is next to the table.			
	<giveResponseOnSpeech(the apple is next to the table)>					
68	"Yes! The apple is next to the table.	Ja! De appel is naast de tafel.				
	<tablet(off)> The tablet was also saying something else while the apple was falling. <name>, do you remembe	<tablet(off)> Ik hoorde ook steeds iets terwijl de appel viel. <name>, weet jij wat dat was?				
	<wait(2000)>					
70	I think the tablet said	Ik hoorde:				
			The apple is falling.			
	That must mean "the apple is falling"! Don't you think?	Dat betekent vast "de appel valt", denk je niet?				
71	<wait(2000)>					
72	<gesture(nodding)>Yeah, I think	<gesture(nodding)>Ja, ik denk dat				
			The apple is falling.			
	means "the apple is falling".	betekent "de appel valt"				
			Falling !			
	Let's practice this word too!	Laten we het woord zeggen.				
			Falling!			
	<giveResponseOnSpeech(falling)>					
74	One more time!	En nu in een zin!				
			The apple is falling.			
	<giveResponseOnSpeech(the apple is falling)>					
76	Yes! The apple is falling.	Ja! De appel valt.				
	<face(happy)>Excellent!<tablet(on)><gaze(tablet)>Let's see what's next	<face(happy)>Super goed!<tablet(on)><gaze(tablet)>Laten we kijken wat er nu komt				
78	Oh! That monkey again! <gaze(child)> What does it want now? <gaze(tablet)>	Oh! Daar is de aap weer! <gaze(child)> Moet je eens kijken wat hij allemaal doet! <gaze(tablet)>		fruitshop_3		

					move monkey_1(30.4988602597059 3:45:220.5530080645253:1:fa lse)	
782	<wait(1000)>					
					move monkey_1(-25.760515368277265:40:233.76466909485958:1:false)	
79	<wait(1000)>	Aha, ik denk dat hij ons laat zien wat we net met de appels hebben gedaan.				
792	<wait(1000)>					The monkey is on the table
					move monkey_1(-25.760515368277265:62:233.76466909485958:1:false)	
81	<wait(1000)>					
812	<wait(1000)>					The monkey is above the table
					move monkey_1(-23.88896031380803:14:278.56828027902714:1:false)	
82	<wait(1000)>					
					move monkey_1(-28.405597303947985:0:227.19358311043433:1:false)	
821	<wait(1000)>					
822	<wait(1000)>					The monkey is below the table
					move monkey_1(-102.93358177938569:0:218.3233177962576:1:false)	
83	<wait(1000)>					
832	<wait(1000)>					The monkey is next to the table
85	Alright, what's next?	Ok, wat komt er nu?		fruitshop_4		
86	<wait(1000)>					*The apples are falling*
88	Nooooo, they all fell... <gaze(child)>We have to put them back! But let's first put the monkey in one of the b	Oh nee, ze zijn allemaal gevallen! De aap tilde zomaar de hele kast op, terwijl die heel zwaar is, dus heel	heavy			
					remove monkey_shaking_stand, display monkey_standing and	
89		Ik zal de <move(monkey_standing, 131.5419464942099,0,194.80418022941956,1,false)> in de doos zetten	monkey		banana_1	
	<wait(1500)>					
90	<gaze(child)>Now I am going to give the monkey a banana <gesture(pretendToDragDropMonkey)>	<gaze(child)>Nu ga ik <move(banana_1,119.54023649301546,22,211.79956551830224,1,false)> de aap een banaan geven				
	<wait(2000)>					
	<face(happy)>	<face(happy)>			remove monkey_standing and banana_1 and display	
902					monkey_with_banana	
	<wait(3000)>					
	[Task: about 5 minutes]	**[Task: about 5 minutes]**				
92		<gaze(child)>Ok, we moeten deze opdracht doen. We moeten goed luisteren en dan de appel op de goede plaat slegge. Dan is het straks weer mooi op		fruitshop_5		
						Put the apple on the table
93						
94	<gaze(child)>Alright, we need to follow the instruction. So we need to move the apple to where it says in order to reorganize this place <name>					
		<pointat(tablet)><gaze(tablet)>	Put the apple on the table			
		<gaze(child)>				
		Volgens mei moeten we het vakje aanraken wat	on			
		<accept_answer> is				
	<giveResponseToSelectObject(area_on)>					
					move apple_1(5.803840331666754:43:216.74341380382126:2:false)	
95	<wait(2000)>					
96						the apple is on the table

97	<face(happy)><gaze(child)>Alright, we got it! <face(neutral)> let's do something else!	<face(happy)><gaze(child)>Ja, we hebben hem goed! <face(neutral)> Laten we er nog 1 doen!				
						Put the apple above the table
103						
104		<pointat(tablet)><gaze(tablet)> <gaze(child)> Volgens mei moeten we het vakje aanraken wat <accept_answer> is	Put the apple above the table above			
	<giveResponseToSelectObject(area_above)>					
					move apple_2(5.8585568305547495:101:222.42518944999162:2:false)	
105	<wait(2000)>					
106						the apple is above the table
107	<face(happy)><gaze(child)>Alright, we got it! <face(neutral)> let's do something else!	<face(happy)><gaze(child)>Ja, we hebben hem goed! <face(neutral)> Kom, dan doen we er nog 1!				
						Put the apple below the table
108						
109		<pointat(tablet)><gaze(tablet)> <gaze(child)> Volgens mei moeten we het vakje aanraken wat <accept_answer> is	Put the apple below the table below			
	<giveResponseToSelectObject(area_below)>					
					move apple_3(5.364355986233068:7:222.42283344297041:2:false)	
110	<wait(2000)>					
111						the apple is below the table
112	<face(happy)><gaze(child)>Alright, we got it! <face(neutral)> let's do something else!	<face(happy)><gaze(child)>Ja, we hebben hem goed! <face(neutral)> We doen er nog eentje!				
						Put the apple next to the table
113						
114		<pointat(tablet)><gaze(tablet)> <gaze(child)> Volgens mei moeten we het vakje aanraken wat <accept_answer> is	Put the apple next to the table next to			
	<giveResponseToSelectObject(area_next_to)>					
					move apple_4(98.8186571968368:32:223.87197453999138:2:false)	
115	<wait(2000)>					
116						the apple is next to the table
117	<face(happy)><gaze(child)>Alright, we got it! <face(neutral)> <face(happy)>Phew, now it is all good!<face(neutral)>	<face(happy)><gaze(child)>Ja, we hebben hem goed! <face(neutral)> <face(happy)>Zo, nu is het helemaal netjes!<face(neutral)>				
	[Test: about 3 minutes]					
1		Kijk, dit spelletje mag jij spelen! Ik denk dat je het goed kan. Waar zie je	below	fruitshop_task_1		
12	<giveResponseToSelectObject(apple_below,table_below,area_2)>	de tafel <accept_answer>				
2		Waar zie je	next to	fruitshop_task_2		
22	<giveResponseToSelectObject(apple_next_to,fruitbox_next_to,lid_next_to,area_1)>	\prn=d 2\ doos <accept_answer>				
3		Waar zie je	on	fruitshop_task_3		
32	<giveResponseToSelectObject(apple_on,fruitbox_on,lid_on,area_2)>	\prn=d 2\ doos <accept_answer>				
4				fruitshop_task_4		

					move apple_falling(126.425398190114 89:-4:234.0347947440302:1:true) and animate apple_rolling(roll:true)	
41						
42	<giveResponseToSelectObject(apple_falling,area_1)>	Waar zie je <accept_answer>	falling			
5		Waar zie je	above	fruitshop_task_5		
52	<giveResponseToSelectObject(apple_above,table_above,area_3)>	de tafel <accept_answer>				
6		Waar zie je	next to	fruitshop_task_6		
62	<giveResponseToSelectObject(monkey_next_to,fruitbox_next_to,lid_next_to,area_3)>	\prn=d 2\ doos <accept_answer>				
7		Waar zie je	on	fruitshop_task_7		
72	<giveResponseToSelectObject(monkey_on,fruitbox_on,lid_on,area_1)>	\prn=d 2\ doos <accept_answer>				
8		Waar zie je	below	fruitshop_task_8		
82	<giveResponseToSelectObject(monkey_below,table_below,area_2)>	de tafel <accept_answer>				
9				fruitshop_task_9	move monkey_falling(-60.84357845242005:-11:-254.5972643584994:1:true) and animate monkey_rolling(roll:true)	
91						
92	<giveResponseToSelectObject(monkey_falling,area_3)>	Waar zie je <accept_answer>	falling			
10	<giveResponseToSelectObject(monkey_above,table_above,area_1)>	Waar zie je de tafel <accept_answer>	above	fruitshop_task_10		
	[End of the lesson]	**[End of the lesson]**				
118		**<gaze(child)>**		black		
119	<tablet(off)><gaze(child)>I think we finished the game! <face(happy)> That was fun! Shall we play together s	Ik denk dat we klaar zijn!! <face(happy)> Dat was leuk! Zullen we snel weer samen spelen? <face(neutral)>			display confetti	Great job you are all done
120	<wait(3000)>	<wait(3000)>				
121	Let's play again! <gesture(waving)> Bye bye!	Ja, laten we de volgende keer weer spelen! <gesture(waving)> Daag!				

Lesson 5

#	Robot			Tablet		
	Text L1 English	Text L1 Dutch	Text L2	Scene	Objects	Say
	[Introduction: 2 minutes]					
1	<face(happy)><gaze(child)>Hey <name> It's time to play another game! Are you ready?	<face(happy)><gaze(child)>Hallo, <name>. Het is tijd voor een nieuw spelletje! Ben je er klaar voor?				
2	<wait(500)>	<wait(500)>				
6	<gaze(tablet)><pointAt(tablet)>Look, there are many footsteps! <gaze(child)> I bet there are many animals. Let's go find them! <name>, let's march together! <gesture(marching)>	<gaze(tablet)><pointAt(tablet)>Kijk, daar zijn allemaal voet afdrukken! <gaze(child)> Ik denk dat die van dieren zijn. Laten we die gaan zoeken, <name>!		forestWithFootsteps		
8	<gaze(tablet)>Okay, this looks like a good spot to find animals. <gaze(child)>What should we look for. Oh I know!	<gaze(tablet)>Ok, dit lijkt me een goede plek om dieren te vinden. <gaze(child)>Wat moeten we zoeken. Oh ik weet het!		forest_1		
9						*Monkey*
10	I think it is telling us where a monkey is.	Hoorde je dat?	monkey			
11						*The monkey is behind the tree*
12			*The monkey is behind the tree*			
	I think it is telling us where a monkey is... Can you find and touch a <giveResponseToSelectObject(monkey_behind,tree_2)>	Ik denk dat hij ons vertelt waar een aap is. Kan jij de aap zoeken <accept_answer> en aanraken?				
14						*Behind. The monkey is behind the tree.*
15			*Behind.*			
152			*The monkey is behind the tree.*			
	Ohhh<tablet(off)> <gaze(child)>behind	Oh<tablet(off)> <gaze(child)>	*behind*			
16	must mean "behind"! <name>, what do you think it means. <wait(2000)>	betekent vast "achter"! <name>, wat denk jij dat het betekent?				
		Ik denk dat	Behind			
17	Let's practice saying the word <giveResponseOnSpeech(behind)>	achter betekent. Laten we even oefenen met het nazeggen	*Behind*			
18		Laten we nu de zin nazeggen.	*The monkey is behind the tree.*			
19	<giveResponseOnSpeech(the monkey is behind the tree)> <tablet(on)>	<tablet(on)>				*The monkey is behind the tree .*
20	<gaze(tablet)>	<gaze(tablet)>			remove monkey_behind, display monkey_in_front_1	
203	<wait(2000)>	Kijk, de aap loopt ergens anders naartoe!			move monkey_in_front_1(94.5:0:93:5:false)	
204					remove monkey_in_front_1, display monkey_in_front_2	
205	<wait(2500)>	Hij gaat vóór de boom staan			move monkey_in_front_2(29:0:175:5:false)	
206					remove monkey_in_front_2, display monkey_in_front_3	
22						*In front of . The monkey is in front of the tree.*
23			*In front of?*			
	<gaze(child)>I see.	<gaze(child)>Ik snap het.	*In front of*			

	means “in front of”! Let’s practice too!	betekent "voor". Laten we het nazeggen	*in front of*			
24	<giveResponseOnSpeech(in front of)>					
25	Now in a sentence.	Nu in een zin:	*The monkey is in front of the tree*			
26	<giveResponseOnSpeech(the monkey is in front of the tree)>					
28	<tablet(on)>	<tablet(on)>		forest_2		
29	<gaze(tablet)><pointat(tablet)>Look! <gaze(child)> There are other animals behind the trees. Can you find all of them? Touch <pointat(tablet)><gaze(tablet)> the animals.	<gaze(tablet)><pointat(tablet)>Kijk! <gaze(child)> Daar zijn nog meer dieren achter de bomen Kun je ze allemaal vinden? Raak <accept_answer> <pointat(tablet)><gaze(tablet)> de zjiraf maar aan.	*The animals, are behind the trees* !			
30	<giveResponseToSelectObject(giraffe_behind,tree_3)>					
31	<gaze(child)>I remember! "Giraffe" is in English!	<gaze(child)>Ik weet het weer! "Zjiraf" is in het Engels Kijk, de zjiraf is aan het lopen.	giraffe		move giraffe_behind(-24:0:103:5:false)	*Giraffe. The giraffe is next to the flower*
312	<wait(2500)>					
313					display giraffe_in_front, remove giraffe_behind	
314		Waar gaat hij naartoe?			move giraffe_in_front(-82:0:133:5:false)	
	<wait(3000)>					
32	<gaze(tablet)>Oh it moved! The giraffe is in front of the tree!	<gaze(tablet)>Oh, hij is bewogen! De zjiraf is nu voor de boom!	*The giraffe is in front of the tree!*			the giraffe is in front of the tree
	<wait(2000)>					
322	<giveResponseToSelectObject(monkey_in_tree,tree_2)>	Raak <accept_answer> <pointat(tablet)><gaze(tablet)> de aap maar aan.				
33					remove monkey_in_tree and display monkey_falling move monkey_falling(90.97879309646007:0:113.59077889034276:5:false)	Monkey. The monkey is on the tree. The monkey is falling
331	<wait(5000)>					
34	Ouch, <gaze(child)>I hope the monkey is fine!	Oei, <gaze(child)>Ik hoop dat het goed gaat met de aap!				*The monkey is below the house.*
35	<giveResponseToSelectObject(bird_1,tree_1)>	Raak <accept_answer> <pointat(tablet)><gaze(tablet)> de vogel maar aan.				
352	<gaze(tablet)>	<gaze(tablet)>			move bird_1(-181.73548514032768:155:81.20643192022413:5:false)	Bird.
	<wait(5000)>					
36	So "bird" is in English	Dus vogel is in het Engels.	bird			*The bird is above the flower.*
37	<gaze(child)>It looks like we found all animals! <name>, how many animals are there? Say the number in English!	<gaze(child)>Ik denk dat we alle dieren gevonden hebben! <name>, hoeveel dieren zijn er?				
	<wait(2000)>					
38	<name>, do you like animals?	<name>, hou jij van dieren?				*One monkey, one giraffe, one bird* .
	<wait(1000)>	<wait(1000)>				
40	<face(happy)>I really love animals, and I wish I could join them.	<face(happy)>Ik hou heel veel van dieren. Ik zou willen dat ik bij ze was.				
41	<gaze(tablet)>Now they are moving! <gaze(child)> Let’s pretend we are actually animals by imitating what these animals are doing. Can you touch <pointat(tablet)><gaze(tablet)> one of them?	<gaze(tablet)>Nu bewegen ze weer!		forest_3		

		<gaze(child)> Laten we doen alsof we dieren zijn door ze na te doen. Raak de aap die aan het rennen is <accept_answer> maar <pointat(tablet)><gaze(tablet)> aan.		animate giraffe_jumping_1(jump:true), move monkey_walking_1(-11.797439540283747:0:200:15:true) and monkey_running_1(60:0:200:7:true) and bird_flying_1(311.397258643192 34:130:61.50240183206279:10:true)	
412					*The monkey is running.*
42	<giveResponseToSelectObject(monkey_running_1)>				
43	<gaze(child)>Can you say running <giveResponseOnSpeech(running)>	<gaze(child)>Zeg maar:	running	zoom monkeyRunning	
44					
	That is how we say “running” in English, huh? Let’s say the sentence! Can you say <giveResponseOnSpeech(the monkey is running)>	Zo zeggen we, rennen, in het Engels. Nu zeggen we de hele zin! Zeg maar:	the monkey is running		
45	Now let’s run together! I cannot quite run, but I will pretend!	Kun jij laten zien hoe je kunt rennen? Je mag opstaan als je wilt.	*Running \pau=250\ running \pau=250\ running*	zoom out	
452		Raak nu de aap die aan het lopen is <accept_answer> maar <pointat(tablet)><gaze(tablet)> aan.			*The monkey is walking*
	<giveResponseToSelectObject(monkey_walking_1)>				
46	<gaze(child)>Can you say walking <giveResponseOnSpeech(walking)>	<gaze(child)> Zeg maar:	walking	zoom monkeyWalking	
47					
	That is how we say walking in English, huh? Let’s say the sentence! Can you say <giveResponseOnSpeech(the monkey is walking)>	Zo zeggen we, lopen, in het Engels. Nu zeggen we weer de hele zin. Zeg maar	the monkey is walking		
48	Now let’s walk together! I cannot quite walk. but I will pretend!	Kun jij laten zien hoe je kunt lopen? Je mag weer gaan staan als je wilt.	*walking \pau=250\ walking \pau=250\ walking*	zoom out	
482		Raak nu de vogel die aan het vliegen is <accept_answer> maar <pointat(tablet)><gaze(tablet)> aan.			*The bird is flying*
	<giveResponseToSelectObject(bird_flying_1)>				
49	<gaze(child)>Can you say flying <giveResponseOnSpeech(flying)>	<gaze(child)>Zeg maar:	flying	zoom bird	
50					
	That is how we say flying in English, huh? Let’s say the sentence! Can you say <giveResponseOnSpeech(the bird is flying)>	Dat is het Engelse woord voor, vliegen. Nu gaan we weer de zin zeggen. Zeg maar	the bird is flying		
51	Now let’s fly together! I cannot quite fly. but I will pretend!	Kun jij laten zien hoe je kunt vliegen? Je mag gaan staan als je wilt.	*flying \pau=250\ flying \pau=250\ flying*	zoom out	
512		Raak nu de zjiraf die aan het springen is <accept_answer> maar <pointat(tablet)><gaze(tablet)> aan.			*The giraffe is jumping*
	<giveResponseToSelectObject(giraffe_jumping_1)>				
52	<gaze(child)>Can you say jumping <giveResponseOnSpeech(jumping)>	<gaze(child)>Zeg maar:	jumping	zoom giraffe	
53					
	That is how we say jumping in English, huh? Let’s say the sentence! Can you say <giveResponseOnSpeech(the giraffe is jumping)>	Dat is, springen, in het Engels. Nu zeggen we weer de zin. Zeg maar	the giraffe is jumping		
54	Now let’s jump together! I cannot quite jump. but I will pretend!	Nu mag jij springen! Ga maar staan als je wilt!	*jumping \pau=250\ jumping \pau=250\ jumping*	zoom out	

55	<gaze(child)>We learned many words! Now, let's move on to today's game. Today's game is a guessing game. You hear an English sentence talking about what one of the animals is doing, and you have to find the animal. <name>, are you ready?	<gaze(child)>We hebben echt veel woorden geleerd. Nu gaan we een spelletje doen. Het spelletje van vandaag is een raadspelletje. Je hoort steeds een Engelse zin over wat een van de dieren aan het doen is en dan mag jij dat dier zoeken. <name>, ben je er klaar voor?		forest_4	animate animal_jumping_1(jump:true), move animal_walking_1(-11.797439540283747:0:200:15:true) and animal_running_1(60:0:200:7:true) and animal_flying_1(311.39725864319234:130:61.50240183206279:10:true)	
552	<wait(1000)>	<wait(1000)>				
56	Hmmm,		it is running.			*It is running*
561	Which one is Can you touch the animal? <giveResponseToSelectObject(animal_running_1)>	Welke is <accept_answer> Raak dat dier maar aan.	running?			*Correct. It is running*
60	Hmmm,		it is walking.			*It is walking*
61	Which one is Can you touch the animal? <giveResponseToSelectObject(animal_walking_1)>	Welke is <accept_answer> Raak dat dier maar aan.	walking?			*Correct. It is walking*
63	Hmmm,		it is flying.			*It is flying*
64	Which one is Can you touch the animal? <giveResponseToSelectObject(animal_flying_1)>	Welke is <accept_answer> Raak dat dier maar aan	flying?			*Correct. It is flying*
66	Hmmm,		it is jumping.			*It is jumping in front of the tree*
67	Which one is Can you touch the animal? <giveResponseToSelectObject(animal_jumping_1)>	Welke is <accept_answer> Raak dat dier maar aan	jumping?			*Correct. It is jumping in front of the tree*
	[Test: about 3 minutes]					
1		Kijk, dit spelletje mag jij spelen! Ik denk dat je het goed kan.		forest_task_1		
12					animate bird_jumping_test(jump:true) and move bird_sliding_test(41.6955736929282 9:38:234.52788205465663:2:true) and bird_flying_test(-38.260627339726966:57:76.16221746301565:4:true)	
13	<giveResponseToSelectObject(bird_flying_test,area_2)>	Waar zie je <accept_answer>	flying			
2				forest_task_2		

					move bird_walking_test(69.0108744 5462849:14:304.18233205695 003:4:true) and bird_running_test(- 13.790337652005064:14:78.6 0444969759658:2:true) and bird_climbing_test(- 75.48669342591555:100:- 213.74881492427303:4:true)
21					
22		Waar zie je <accept_answer>	walking		
	<giveResponseToSelectObject(bird_walking_test,area_1)>				
3		Waar zie je de boom <accept answer>	in front of	forest_task_3	
	<giveResponseToSelectObject(bird_front_test,tree_1,area_1)>				
4		Waar zie je	*behind*	forest_task_4	
42		de boom <accept answer>			
	<giveResponseToSelectObject(giraffe_behind_test,tree_3,area_3)>				
5				forest_task_5	
					animate giraffe_jump_test(jump:true) and move giraffe_walk_test(- 11.647324285715797:0:61.62 09467183596 6:4:true) and giraffe_fall_test(- 122.74911869228973:2:- 199.73908829112705:2:true)
51					
52		Waar zie je <accept answer>	jumping		
	<giveResponseToSelectObject(giraffe_jump_test,area_1)>				
6				forest_task_6	
					animate bird_jump_test(jump:true) and move bird_run_test(69.0108744546 2849:14:304.18233205695003 :2:true) and ball_1(69.44175318163599:79 :- 94.17739976610963:1.5:true)
61					
62		Waar zie je <accept_answer>	running		
	<giveResponseToSelectObject(bird_run_test,area_1)>				
7		Waar zie je	in front of	forest_task_7	
72		de boom <accept_answer>			

	<giveResponseToSelectObject(giraffe_front_test,tree_2,area_2)>				
8				forest_task_8	animate monkey_jump_test(jump:true) and move monkey_walk_test(-110.41067123979275:0:-155.16341128611083:4:true) and monkey_fall_test(28.28135960617675:-9:28.86649952134009:1.5:true)
81					
82		Waar zie je <accept_answer>	jumping		
	<giveResponseToSelectObject(monkey_jump_test,area_1)>				
9				forest_task_9	move monkey_walk_test(67.90464193834504:0:319.1433531774152:4:true) and monkey_run_test(-118.10728422110051:0:-139.68118321265626:2:true) and monkey_climb_test(19.28559795222543:72:17.648780625941654:2:true)
91					
92		Waar zie je	walking		
92		<accept_answer>			
	<giveResponseToSelectObject(monkey_walk_test,area_1)>				
10				forest_task_10	animate monkey_jump_test(jump:true) and move monkey_run_test(-118.10728422110051:0:-139.68118321265626:2:true) and ball_1(128.31336959958855:28:218.75279700115198:1.5:true)
101					
102		Waar zie je <accept_answer>	running		
	<giveResponseToSelectObject(monkey_run_test,area_3)>				
11		Waar zie je	behind	forest_task_11	
112		de boom <accept_answer>			
	<giveResponseToSelectObject(monkey_behind_test,tree_1,area_1)>				
12				forest_task_12	

121					move bird_run_test(76.181212558733 7:0:323.3089272011591:2:true) and bird_flying_test(-38.260627339726966:57:76.16221746301565:4:true) and ball_1(-189.60243586881668:14:-84.14849820864345:1.5:true)	
122	<giveResponseToSelectObject(bird_flying_test,area_2)>	Waar zie je <accept_answer>	flying			
	[End of the lesson]	**[End of the lesson]**				
1	<face(happy)>We have another a star! So exciting! Alright	<gaze(child)> <face(happy)>We hebben weer een ster gekregen! Jippie! Oké		black		
2	<name>, see you soon again!	<name>, tot de volgende keer!			display confetti	

Lesson 6

#	Robot			Tablet		
	Text L1 English	Text L1 Dutch	Text L2	Scene	Objects	Say
1	**[Introduction: 2 minutes]**					
2	<gaze(child)><face(happy)>Hi again <name>! Are you ready to play today's game?	<gaze(child)><face(happy)>Hoi <name>! Ben je klaar voor de spelletjes van vandaag?				
3	<wait(1000)>					
4	playground! Can you touch <accept_answer)><pointat(tablet)><gaze(tablet)> the	Ok, laten we beginnen! Vandaag gaan we naar de speeltuin.				
6	We arrived at the playground,<gaze(child)> but there is nothing to play with. That is weird.	We zijn in de speeltuin,<gaze(child)> maar er is niets om mee te spelen. Dat is gek, ..		playground_1		
7	tree!	<gaze(Tablet)>Aha, er is een glijbaan verschenen, voor de boom!	*In front of the tree!*		display slide_1 and slide_location	
	I thought this is a boring playground with nothing, but I now know what is going on. We get to design our own playground! Can you <pointat(tablet)><gaze(tablet)> <acceptanswer> put the slide somewhere in the playground? <gaze(child)>	Ik dacht dat dit een hele saaie speeltuin is, helemaal zonder toestellen, maar nu begrijp ik wat er aan de hand is. Ik denk dat we onze eigen speeltuin kunnen maken!				
8		Zet de <pointat(tablet)><gaze(tablet)> <accept_answer> glijbaan maar in de speeltuin <gaze(child)>			highlight slide_location	
	<giveResponseToObjectCollide(slide_1, slide_location, 81.08651022567315, 0, -22.66273766731578, false)>					
11	<gaze(tablet)>Yay<face(happy)>, now we are done placing the slide!<gaze(child)>	<gaze(tablet)> Ja<face(happy)>, nu hebben we de glijbaan in de speeltuin gezet!<gaze(child)>			remove slide_location	
	<wait(2000)>					
12	<gaze(tablet)>Oh, look!	<gaze(tablet)>Oh, kijk!			move girl_running_1(-2.5553528071621825:0:-20.280421108787806:4:false)	*Girl. The girl is running.*
122	See? <tablet(off)>I think	Zie je dat? <tablet(off)>Ik denk dat	*girl*			
	means "girl." Can you say	"meisje" betekent. Zeg maar	*girl*			
	<giveResponseOnSpeech(girl)>					
121		Dus ik denk dat de zin van net betekende "het meisje is aan het rennen".				
14	<tablet(on)><gaze(Tablet)>Look, she stopped	<tablet(on)><gaze(Tablet)>Kijk, ze is weer klaar met rennen.			remove girl_running_1 and display girl_standing_1	
15	Oh, look! Now I see a boy. <gaze(child)>The English word for boy is	Oh, kijk! Nu zie ik een jongen. <gaze(child)>Het Engelse woord voor jongen is	boy		move boy_running_1(24.720108577040513:0:2.1925337207470648:4:false)	
16	Can you say	Zeg ook maar	boy			
	<giveResponseOnSpeech(boy)>					
17	<gaze(tablet)>Oh he stopped on the left of the girl!	<gaze(tablet)>Oh, hij is links naast het meisje gaan staan.			remove boy_running_1 and display boy_standing_1	*Left. The boy is to the left of the girl .*
	<gaze(child)>Hm,	<gaze(child)>	*boy*			
	means "boy", and	betekent "jongen" en	*girl*			
	means "girl"... The boy is next to the girl.	betekent "meisje"... De jongen is naast het meisje.				
	<name>, do you know what	<name>, Weet je wat	*The boy is to the left of the girl*			
	means?	betekent?				
	<wait(1000)>					
19	Oh, the word order changed.	Oh, de zin is nu veranderd.				*Right. The girl is to the right of the*
192	Ohhh! I know what they mean!	Ik weet wat de woorden betekenen!	*Left*			*.*
	means "left" and	betekent "links" en	*right*			
		betekent "rechts"! Laten we nu eerst het Engelse woord voor links oefenen. Zeg ook				
	means "right"!	maar	left.			
	<giveResponseOnSpeech(left)>					
20		En dan nu de hele zin.	*The boy is to the left of the girl .*			
	<giveResponseOnSpeech(the boy is to the left of the girl)>					
		Zo zeg je in het Engels "De jongen is links van het meisje!". En laten we nu het				
21	That is how we say "The boy is on the left of the girl"!	Engelse woord voor rechts na zeggen.	*Right*			
	<giveResponseOnSpeech(right)>					
		Laten we nu de hele zin nazeggen.	*The girl is to the right of the boy*			
	<giveResponseOnSpeech(the girl is to the right of the boy)>					
22	means "the girl is on the right of the boy"! <name>,	Dat betekent "het meisje is rechts van de jongen!".				
192					remove girl_standing_1 and display girl_running_1	
20					move girl_running_1(45.55382434550648:0:-65.07352558291578:2:false)	

21	<gaze(tablet)><pointat(tablet)>Oh look! <wait(1000)>	<gaze(tablet)><pointat(tablet)>Oh, kijk!	*The girl* !			
212					remove girl_running_1 and display girl_climbing_1	
213					move girl_climbing_1(70.91824007619913:84:-48.97952752935615:3:false)	
	<wait(3000)>					
22	<gaze(child)>Whoa, that was a new word!	<gaze(child)>Wow, dat was een nieuw woord!				*The girl is climbing.*
222			*Climbing*			
	together.	moet "klimmen" betekenen! <tablet(off)> Laten we het samen nazeggen.	*Climbing*			
24	<giveResponseOnSpeech(climbing)>					
	<giveResponseOnSpeech(the girl is climbing)>	En laten we nu de hele zin zeggen	The girl is climbing.			
25	<name> can we pretend to be climbing? You can stand up if you would like to. <wait(5000)>	<name>, kun jij laten zien hoe je kunt klimmen? Je mag opstaan als je wilt.	*Climbing \pau=250\ climbing \pau=250\ climbing*			
26	<tablet(on)><gaze(tablet)>Oh, the girl stopped!	<tablet(on)><gaze(tablet)>Oh, het meisje is weer gestopt met klimmen			remove girl_climbing_1 and display girl_sliding_1	
262						
263					move girl_sliding_1(140.11421339239487:19:55.883610222 27494:2:false)	
	<wait(2000)>					
263						*The girl is sliding.*
27	<gaze(child)>Another new word!	<gaze(child)> Een nieuw woord!	*Sliding*			
	sentence.<name> can you say	dat moet "glijden" betekenen! Laten we het nazeggen.	Sliding			
	<giveResponseOnSpeech(sliding)>					
272		En laten we nu oefenen met een zinnetje. <name>, zeg maar	*The girl is sliding*			
	<giveResponseOnSpeech(the girl is sliding)>					
28					remove girl_sliding_1 and display girl_running_2	
29	Let's pretend we are sliding! You can stand up if you would like to. <wait(5000)>	Kun jij laten zien hoe je kunt glijden? Je mag opstaan als je wilt <gesture(sliding)>	*Sliding \pau=250\ sliding \pau=250\ sliding*		move girl_running_2(51.12156463715602:0:21.550763207 572658:3:false)	
30	<gaze(tablet)><pointat(tablet)>Oh look!	<gaze(tablet)><pointat(tablet)>Oh, kijk!			remove girl_running_2 and display girl_standing_2	*The girl is to the left of the boy . The boy is to the right of the girl.*
	difficult. Let's play a game! I am going to say "left" or "right" in English and you have to touch one of my	<tablet(off)><gaze(child)> Ik vind "links" en "rechts" echt moeilijk. Laten we een spelletje doen! Ik zeg "links" of "rechts" in het Engels en dan mag jij die hand omhoog				
31	hands. If I say,	doen. Als ik zeg	*left* ,			
	say	dan doe jij jouw linker hand omhoog. Als ik zeg	*right* ,			
	you touch this hand <gesture(raiseRightHand)> Ready?	dan doe jij jouw rechter hand omhoog. OK?				
	<wait(2000)>					
33	the first one is	De eerste is Doe die hand maar omhoog.	right			
34	<wait(4000)>					
35	yup	Dit was rechts.				
33	You got it right. the second one is	De tweede is Doe die hand maar omhoog.	left			
34	<wait(4000)>					
35	yup	Dit was links, dus	left			
33	You got it right. the last one is	De laatste is Doe die hand maar omhoog.	right			
34	<wait(4000)>					
35	yup	Dit was rechts, dus	right			
	You got it right. I think we are ready!	<tablet(on)> <gaze(tablet)> Laten we verder spelen met de \prn=t E: b I @ t \!				
382	<wait(1000)>				remove girl_standing_2 and boy_standing_1	
39	tree!	Er is een ander toestel <gaze(child)> achter de boom! Zet de <pointat(tablet)><gaze(tablet)> <accept_answer> hoepel maar in de speeltuin	*Behind the tree!*		display hoop_1 and hoop_location	
392	<giveResponseToObjectCollide(hoop_1, hoop_location, -49.85644106658065, 3, 50.93311083553195, false)>	<gaze(child)>			highlight hoop_location	
40	<gaze(tablet)>Woo hoo!	<gaze(tablet)>Joehoe!			remove hoop_location	

41					move girl_walking_1(31.960583185996526:0:133.52572660822358:4:false) and boy_walking_1(-21.879602047651037:0:77.66463661523471:8:false)	
42	<gaze(child)>Ah yes, they are walking.	<gaze(child)>Oh ja, ze zijn aan het lopen	*They are walking .*			
44					remove girl_walking_1 and boy_walking_1 and display ball_1 and girl_throwing_1 and boy_catching_1	
442	<tablet(on)><gaze(tablet)>Hm, what's now?	<tablet(on)><gaze(tablet)>Wat doen ze nu?				
45	<gaze(child)><tablet(off)>Oh, that is a new word! Maybe	<gaze(child)><tablet(off)>Oh, dat is weer een nieuw woord. Misschien betekent	*throwing*		move ball_1(-33.42048166508597:101:75.92292483438851:1:true)	*Throwing. The girl is throwing the*
46	means "throwing"? So must mean "ball"! <giveResponseOnSpeech(throwing)>	"gooien". Dus moet "bal" betekenen. Zeg ook maar	*ball throwing.*			*ball.*
462	<name> say <giveResponseOnSpeech(the girl is throwing the ball)>	<name>, zeg nu maar de hele zin	*the girl is throwing the ball !*			
47					remove ball_1 and display ball_2	
48	<tablet(on)><gaze(tablet)>	<tablet(on)><gaze(tablet)>			move ball_2(-11.886674468044205:17:92.86033072972194:1:true)	*The girl is throwing the ball.*
49						*The boy is catching the ball.*
52						*Catching. The boy is catching the ball.*
53	another word. <giveResponseOnSpeech(catching)>	<gaze(child)><tablet(off)>Dat betekent vast "vangen". Zeg ook maar	*Catching*			
532	must mean "catching." Can you say	Laten we nu de hele zin zeggen.	*the boy is catching the ball*			
54	<giveResponseOnSpeech(the boy is catching the ball)>		*I am throwing the ball! You are catching the ball!*			
55	Let's imitate what they are doing. I throw, and you catch.	Als wij een bal zouden overgooien, zou ik zeggen:				
56	<wait(1000)>					
57	Now, let's switch! This is fun!	En dan omgekeerd: dat is leuk!	*You are throwing the ball. I am catching the ball*			
572	<wait(2000)> <tablet(on)><gaze(tablet)><pointat(tablet)>Look! A				remove ball_2 and girl_throwing_1 and boy_catching_1	
58	trampoline appeared behind the tree!	<tablet(on)><gaze(tablet)><pointat(tablet)>Kijk! Er staat een trampoline. Zet de <pointat(tablet)><gaze(tablet)> <accept_answer> trampoline maar in de			display trampoline_1 and trampoline_location	
582	<giveResponseToObjectCollide(trampoline_1, trampoline_location, -15.948278845709911, 0, -	speeltuin <gaze(child)>			highlight trampoline_location	
59	<wait(1000)>				remove trampoline_location	
592					display boy_jumping_1	
60	Oh, <gaze(child)>Wait, that means flying. <name>, what	Oh, <gaze(child)>O nee, dat betekent "vliegen". <name>, Wat was ook alweer het	*the boy is flying!*		animate boy_jumping_1(jump:true)	
61	was the English word for "jumping? <wait(1000)>	Engelse woord voor springen?				
62	Great. I think we are done designing the playground,	O ja,	Jumping!			
65	and we learned many new words too! Let's see if we remember all English words! We are going to quiz each	Ik denk dat we klaar zijn met het maken van de speeltuin. En we hebben ook nog allemaal nieuwe woorden geleerd. Laten we eens kijken of we alle Engelse woorden nog weten! We gaan samen een quiz doen!			remove boy_jumping_1 and move girl_sliding_1(88.25541995369039:85:-22.4789195607824:0.5:false)	
66	Alright, you quiz me! Can you touch one of the children? I will tell you what the child is doing!	Jij mag alles aan mij vragen! Raak het kind dat aan het glijden is maar aan, <accept_answer> en dan vertel ik je wat het kind aan het doen is!			move girl_sliding_1(140.11421339239487:19:55.88361022227494:2:true)	
662	<giveResponseToSelectObject(girl_sliding_1, slide_1)>					
67	is that right? <wait(1000)>	Klopt dat?	the girl is sliding			

	<face(happy)>I got it right!	<face(happy)>Ik had hem goed!			move ball_2(24.06543788120329:17:119.63795204316995:0.5:false)	
69			the girl is sliding			
		Ze is aan het glijden, dus	sliding.			
		<face(neutral)>			display girl_throwing_1 and ball_2	
		Raak nu het <accept_answer> kind dat aan het gooien is maar aan.				
					move ball_2(-11.886674468044205:17:92.86033072972194:1:true)	
70						
	<giveResponseToSelectObject(girl_throwing_1,					
702			the girl is swimming			
	is it right?	Klopt dat?				
	<wait(1000)>					
72	Oh shoot, I got it wrong, huh?	Oh, ik had hem fout..	she is throwing			
		Het meisje is de bal aan het gooien, dus	throwing.			
		<face(happy)>				
73		Nu de jongen <accept_answer> die de bal aan het vangen is			display boy_catching_1	
	<giveResponseToSelectObject(boy_catching_1,					
732			the boy is catching			
	is that right?	Is dat goed?				
	<wait(1000)>					
74	<face(happy)>I got it right!	<face(happy)>Ik had hem goed!	the boy is catching			
742		De jongen is de bal aan het vangen, dus	catching			
		<face(neutral)>			display girl_climbing_1	
					move girl_climbing_1(41.65699506668287:0:-67.57387449169045:0.5:false)	
743						
		<wait(500)>				
		En de laatste, <accept_answer> het meisje dat aan het klimmen is				
					move girl_climbing_1(70.91824007619913:84:-48.97952752935615:3:true)	
75						
	<giveResponseToSelectObject(girl_climbing_1,					
76			the girl is skipping			
	is it right?	Klopt dat?				
	<wait(1000)>					
78	Oh shoot, I got it wrong, huh?	Oh, ik had hem fout	she is climbing			
		<face(happy)>				
		Ze is aan het klimmen, dus	climbing.			
	[Test: about 3 minutes]					
42		Kijk, dit spelletje mag jij spelen! Ik denk dat je het goed kan.		playground_task_1		
		Waar zie je	to the right of			
		een meisje? <accept_answer>				
	<giveResponseToSelectObject(ball_right,girl_right,area_3)>					
43				playground_task_2		
					move boy_walk(76.4476985051839:0:306.6329191752314:5:4:true) and ball_catch(4.3298130627200635:26:-4.574812303438847:2.5:true) and ball_throw(-298.16031860421475:20:-179.6699480237385:2.5:true)	
44						
442		Waar zie je	catching			
		<accept_answer>				
	<giveResponseToSelectObject(ball_catch, boy_catching, area_2)>					
45		Waar zie je	to the left of	playground_task_3		
		een jongen? <accept_answer>				
	<giveResponseToSelectObject(ball_left, boy_left, area_2)>					
46				playground_task_4		

47					animate girl_jumping(jump:true) and move ball_throw(-224.03032667064235:20:93.87897723378543:2.5:true) and ball_catch(-88.1954035135264:20:-241.12332770451366:2.5:true)
472	<giveResponseToSelectObject(ball_throw, girl_throwing,	Waar zie je <accept_answer>	throwing		
48				playground_task_5	
49					animate girl_jumping(jump:true) and move girl_sliding(77.75464860761338:0:264.19865876818267:2:true) and girl_climbing(53.98304893933363:33:-54.60132777641479:2:true)
491	<giveResponseToSelectObject(slide_sliding, girl_sliding,	Waar zie je <accept_answer>	sliding		
50				playground_task_6	
51					move girl_sliding(77.75464860761338:0:264.19865876818267:2:true) and girl_climbing(-58.7206937943684:52:-282.7215444987984:2:true) and girl_running(-21.097838899654562:0:89.52534856615434:2:true)
512	<giveResponseToSelectObject(slide_climbing, girl_climbing,	Waar zie je <accept_answer>	climbing		
52				playground_task_7	
53					animate girl_jumping(jump:true) and move girl_sliding(-3.0887147443787057:-6:36.090231193007284:2:true) and girl_climbing(124.49516326882883:69:184.86109847944073:2:true)
532	<giveResponseToSelectObject(slide_sliding, girl_sliding,	Waar zie je <accept_answer>	sliding		
54	<giveResponseToSelectObject(tree_left, boy_left, area_2)>	Waar zie je een boom? <accept_answer>	to the left of	playground_task_8	
55	<giveResponseToSelectObject(tree_right, girl_right,	Waar zie je een boom? <accept_answer>	to the right of	playground_task_9	
56				playground_task_10	
57					move girl_sliding(77.75464860761338:0:264.19865876818267:2:true) and girl_climbing(-58.7206937943684:52:-282.7215444987984:2:true) and girl_running(-21.097838899654562:0:89.52534856615434:2:true)
572	<giveResponseToSelectObject(slide_climbing, girl_climbing,	Waar zie je <accept_answer>	climbing		
58				playground_task_11	

59					animate boy_jumping(jump:true) and move ball_catch(104.3186111164988:20:232.74944672768072:2.5:true) and ball_throw(-350:20:-50:2.5:true)	
592		Waar zie je <accept_answer>	throwing			
60	<giveResponseToSelectObject(ball_throw, boy_throwing,			playground_task_12		
61					move boy_walk(76.4476985051839:0:306.6329191752314 5:4:true) and ball_catch(-86.0342287851407:20:-238.4513143388538:2.5:true) and ball_throw(-224.03032667064235:26:93.87897723378543:2.5:true)	
612	<giveResponseToSelectObject(ball_catch, boy_catching,	Waar zie je <accept_answer>	catching			
	[End of the lesson]					
1		<gaze(child)>		black		
2	<face(happy)>Yay we got a star! I am looking forward to playing with you again. Good bye!	<face(happy)>Jippie, we hebben een ster verdiend! Ik heb zin in de volgende keer dat we weer samen gaan spelen. Daag!			display confetti	

Lesson 7

	Robot			Tablet		
#	Text L1 English	Text L1 Dutch	Text L2	Scene	Objects	Say
	[Introduction: 2 minutes]					
1	<wait(2000)>	<gaze(child)>Hoi <name>. Vond je het ook leuk afgelopen weken om spelletjes te \prn=s p e1 l1 @2 n\?				
2		We hebben zoveel gedaan! Vandaag gaan we nog eens kijken naar alles wat we hebben gedaan en gaan we de Engelse woorden nog een keer oefenen!				
3	<giveResponseToSelectObject(cover)>	Cool. Een fotoalbum! Er zitten waarschijnlijk allemaal foto's in van wat we samen hebben gedaan. Raak hem maar aan, <accept_answer> zodat we er in kunnen kijken!		recap		
4		Kijk, weet je nog dat we naar de dierentuin gingen? Dat was leuk! Laten we de stickers in het album plakken!			display page_1	
		Weet je nog dat we tot drie leerden tellen in het Engels? Dat was	One, two, three			
		Tel maar mee terwijl we de stickers plakken. Laten we beginnen met de sticker <accept_answer> van de aap.				
5	<giveResponseToMoveObject(sticker11,above,photo_zoo,0.01857008951924769,0.39081221901326685,0)>		One			
		En nu <accept_answer> die met de olifanten.				
6	<giveResponseToMoveObject(sticker12,above,photo_zoo,0.3288329390620111,0.2561924314718642,0)>		Two			
		En als laatste <accept_answer> die met de zjiraffen.				
7	<giveResponseToMoveObject(sticker13,above,photo_zoo,0.6456195702391662,0.3703629102575065,0)>		Three			
8	<giveResponseOnSpeech(more)>	In de kooi van de olifanten zaten meer, dus dieren dan in die van de aap, want er waren twee olifanten en één aap. Zeg ook maar	more more			

9		Weet je nog dat de dieren los waren en dat we ze in hun kooien moesten zetten? Er waren zoveel zjiraffen, in die kooi waren dus de meeste dieren! Zeg ook maar	most most			
	<giveResponseOnSpeech(most)>					
10		Eerst moesten we één zjiraf in de kooi zetten, en daarna de andere zjiraffen erbij doen, dus Zeg ook maar	\\rspd=50\\add\\rspd=75\\ \\rspd=50\\add\\rspd=75\\			
	<giveResponseOnSpeech(add)>					
11		Wauw, het ziet er zo mooi uit! <Gesture(Pretends to touch tablet)> Laten we naar de volgende pagina gaan van het album				
26		We waren ook in de bakkerij. We hebben brood gebakken.				display page_2
	<giveResponseToMoveObject(sticker21,above,photo_bakery,0.7926314142678348,0.04288595173216086,0)>	Er waren heel veel spullen in de bakkerij. Laten we de stickers in het album plakken! Eerst <accept_answer> de zakken meel.				
27		Laten we tellen hoeveel zakken meel we hadden. Tel maar met me mee. 1, 2, 3, 4! 4 was in het Engels	Four			
28		Zeg ook maar	Four			
29	<giveResponseOnSpeech(four)>					
30	<giveResponseToMoveObject(sticker22,above,photo_bakery,0.09136420525657071,0.5481567031227499,0)>	Laten we nu <accept_answer> de sticker met de pakken melk in het album plakken.				
31		Er waren vijf pakken melk. Vijf was in het Engels	Five			
	<giveResponseOnSpeech(five)>	Zeg ook maar	Five			
33		Kijk, er waren dus minder, zakken meel dan pakken melk!	fewer			
34	<giveResponseOnSpeech(fewer)>	Zeg ook maar	fewer			
342	<giveResponseToMoveObject(sticker23,above,photo_bakery,0.5997027992754616,0.012010389758694557,0)>	Laten we nu <accept_answer> de sticker met de emmers in het album plakken.				

35		Van de emmers waren er dus het minst.	fewest			
36	<giveResponseOnSpeech(fewest)>	Zeg ook maar	fewest			
37		We moesten ruimte maken op de plank voor alle broden die we hadden gebakken. We moesten de emmers en de pakken melk weghalen, dus zeg ook maar	take away take away			
	<giveResponseOnSpeech(take away)>					
38	<giveResponseToMoveObject(sticker24,above,photo_bakery,0.1772841165898291,0.3110887026457193,0)>	en toen <accept_answer> was het brood klaar in de oven. Plak de sticker met het brood maar in het album.				
39		Laten we naar de volgende bladzijde gaan				
12		Weet je nog dat we nog een keer in de dierentuin zijn geweest? We gingen heel veel dieren zoeken.			display page_3	
13		Laten we de pagina met stickers versieren Ik weet nog dat we een hoge, dus een zjiraf <accept_answer> vonden. Plak de sticker met de hoge zjiraf maar in het album.	high			
	<giveResponseToMoveObject(sticker31,above,photo_zoo2,0.6971214017521903,0.37986751855243733,0)>					
14	<giveResponseOnSpeech(high)>	Zeg ook maar	high			
15		We vonden ook een grootte, dus een <accept_answer> olifant. Plak de sticker met de grootte olifant maar in het album.	big			
	<giveResponseToMoveObject(sticker32,above,photo_zoo2,0.5206508135168961,0.5735887448359195,0)>					
16	<giveResponseOnSpeech(big)>	Zeg ook maar	big			
17		Weet je nog dat er een zware, dus een aap <accept_answer> was? Plak de sticker met de apen maar in het album.	heavy			
	<giveResponseToMoveObject(sticker33,above,photo_zoo2,0.1662703455613462,0.3317396805583057,0)>					
18	<wait(5000)>	Kun jij voordoen hoe het eruit ziet als iets zwaar is?				

19	<giveResponseOnSpeech(heavy)>	Zeg ook maar	heavy			
20	<giveResponseOnSpeech(light)>	Op de wip zat ook nog een lichte, dus een aap. Zeg ook maar	light light			
21	<giveResponseToMoveObject(sticker34,above,photo_zoo2,0.3504380475594493,0.6336693478070097,0)>	Ik weet nog wel dat we nog meer dieren moesten zoeken. We vonden ook nog een lage, dus een zjiraf, <accept_answer> want die stond gewoon op de grond. Plak de sticker met de lage zjiraf maar in het album.	low			
22	<giveResponseOnSpeech(low)>	Zeg ook maar	low			
23	<giveResponseToMoveObject(sticker35,above,photo_zoo2,0.11300063342117099,0.6567108224613876,0)>	We vonden ook nog een kleine, dus een <accept_answer> olifant. Plak de sticker met de kleine olifant maar in het album.	small			
24	<giveResponseOnSpeech(small)>	Zeg ook maar	small			
25		Dat deden we super goed! We gaan nu naar de volgende bladzijde				
4		Weet je nog dat we een keer in de fruitwinkel zijn geweest? We zagen allemaal fruit. Weet je nog dat er een aap langs kwam en al het fruit rondgooide? Het fruit zat op allerlei plekken rond de tafel. Laten we de stickers in het album plakken!			display page_4	
401	<giveResponseToMoveObject(sticker,above,droppable_above,0.4266123994269594,0.1215979507288982,0)>	1 appel zat boven de tafel, dus <accept_answer> Plak maar een appel op het vakje wat "boven" de tafel is.	above			
40	<giveResponseOnSpeech(above)>	zeg maar	above			
41		1 appel zat onder de tafel, dus	below			

		<accept_answer> Plak maar een appel op het vakje wat "onder" de tafel is.				
	<giveResponseToMoveObject(sticker,above,droppable_below,0.4266123994269594,0.6414175446500483,0)>					
42		zeg ook maar	below			
	<giveResponseOnSpeech(below)>					
43		er zat ook 1 appel naast de tafel, dus <accept_answer> Plak maar een appel op het vakje wat "naast" de tafel is.	next to			
	<giveResponseToMoveObject(sticker,above,droppable_next_to,0.13914313070311302,0.5055928023820071,0)>					
44		zeg maar	next to			
	<giveResponseOnSpeech(next to)>					
441		1 appel viel ook op de tafel, dus <accept_answer> Plak maar een appel op het vakje wat "op" de tafel is.	on			
	<giveResponseToMoveObject(sticker,above,droppable_on,0.4290694018839618,0.40069589516551224,0)>					
442		zeg ook maar	on			
	<giveResponseOnSpeech(on)>					
45		De appels vielen ook nog eens neer. Weet je nog? Vallen is	falling			
	<giveResponseOnSpeech(falling)>	Zeg maar	falling			
47		Dat deden we super goed! We gaan nu naar de volgende bladzijde				
472		Weet je nog dat we een keer in het bos zijn geweest? Daar waren allemaal dieren. Laten we de stickers in het album plakken!				display page_5
		De aap verstopte zich eerst achter de boom, dus	behind			
	<giveResponseOnSpeech(behind)>	de boom. Zeg ook maar	behind			
473		Toen kwam hij voor de boom staan, dus	in front of			
	<giveResponseOnSpeech(in front of)>	de boom. Zeg ook maar	in front of			
474		Toen zagen we de aap die aan het rennen was. Dus <accept_answer> Plak de sticker met de aap die aan het rennen is maar in het album.	running			

	<giveResponseToMoveObject(sticker51,above,photo_forest,0.4585534313679913,0.37198451720562176,0)>					
48	<giveResponseOnSpeech(running)>	zeg maar	running			
49		Rennen kan jij ook heel goed hè? En de andere aap was aan het lopen, dus <accept_answer> Plak de sticker met de aap die aan het lopen is maar in het album.	walking			
	<giveResponseToMoveObject(sticker52,above,photo_forest,0.7165387268441316,0.41546394898719397,0)>					
50	<giveResponseOnSpeech(walking)>	zeg maar	walking			
51		en de vogel was aan het vliegen, dus <accept_answer> Plak de sticker met de vogel die aan het vliegen is maar in het album.	flying			
	<giveResponseToMoveObject(sticker53,above,photo_forest,0.3884828225400583,0.03347938773558312,0)>					
52	<giveResponseOnSpeech(flying)>	zeg maar	flying			
53		en er was ook een zjiraf. Die was aan het springen, dus <accept_answer> Plak de sticker met de zjiraf die aan het springen is maar in het album.	jumping			
	<giveResponseToMoveObject(sticker54,above,photo_forest,0.062285013222284344,0.25164949082836663,0)>					
54	<giveResponseOnSpeech(jumping)>	zeg maar	jumping			
55		Dat deden we super goed! We gaan nu naar de volgende bladzijde.				
56		Weet je nog dat we een keer in de speeltuin zijn geweest? Daar zagen we twee kinderen allerlei spelletjes doen. eerst deden we een spelletje met de handen. Ik zei links en jij deed jouw linker hand omhoog, dus	left			display page_6
57	<giveResponseOnSpeech(left)>	zeg maar	left			
58	<giveResponseOnSpeech(right)>	en je moest ook jouw rechter hand omhoog doen, dus zeg maar	right right			

59		Laten we de stickers in het album plakken!				
		er ging een meisje van de glijbaan af glijden, dus <accept_answer> Plak de sticker met het meisje dat aan het glijden is maar in het album.	sliding			
	<giveResponseToMoveObject(sticker61,above,photo_playground,0.10720209876208106,0.2303608058654156,0)>					
61		zeg maar	sliding			
	<giveResponseOnSpeech(sliding)>					
62		en dat meisje gooide ook een bal, dus <accept_answer> Plak de sticker met het meisje dat een bal aan het gooien is maar in het album.	throwing			
	<giveResponseToMoveObject(sticker62,above,photo_playground,0.3467598195743795,0.6841494530746617,0)>					
63		zeg ook maar	throwing			
	<giveResponseOnSpeech(throwing)>					
64		en de jongen ving toen de bal op, dus <accept_answer> Plak de sticker met de jongen die een bal aan het vangen is maar in het album.	catching			
	<giveResponseToMoveObject(sticker63,above,photo_playground,0.48066645348101344,0.4348453797015947,0)>					
65		zeg maar	catching			
	<giveResponseOnSpeech(catching)>					
66		en toen ging het meisje ook nog omhoog klimmen, dus <accept_answer> Plak de sticker met het meisje dat aan het klimmen is maar in het album.	climbing			
	<giveResponseToMoveObject(sticker64,above,photo_playground,0.25830773112229105,-0.047448447315963274,0)>					
67		zeg ook maar	climbing			
	<giveResponseOnSpeech(climbing)>					
39		Super! Moet je zien hoe mooi ons album is! Nu is die klaar!				
391		Laten we er nog een keer doorheen bladeren			display cover	
40		De dierentuin			display page_1	
	<wait(5000)>					
41		En de bakkerij!			display page_2	
	<wait(5000)>					
42		En nog een keer de dierentuin			display page_3	
	<wait(3000)>					

	<wait(2000)>				
72		De fruitwinkel			display page_4
	<wait(3000)>				
73		en het bos			display page_5
	<wait(3000)>				
732		en dan als laatste de speeltuin!			display page_6
	<wait(3000)>				
74		Wauw <face(happy)> dat was leuk. We hebben een heel mooi album gemaakt en ik vond het leuk om samen met jou te leren!			
	<wait(1000)>				
75		Hoe vond je het?			
	<wait(3000)>				
76		<face(neutral)>Is er nog iets wat je tegen mij wilt zeggen?			
	<wait(10000)>				
77		Oke. Dit was de laatste keer dat wij samen hebben gespeeld. Dankjewel voor alles. Doei!			

Appendix IV Feedback study manuscript

Note: this manuscript is a draft version to be submitted for publication and included in the dissertation of Mirjam de Haas.

How a Robot Tutor Should Provide Feedback to (Dis)engaged Children According to Future Teachers

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Abstract

In this paper, we describe research that was conducted to investigate how student teachers would let a social robot provide feedback to children in a second language tutoring interaction between child and robot. Our intention was to find out whether the student teachers' feedback differed for correct and incorrect answers as well as for different levels of engagement. In addition, we were interested in their attitude towards robots in education. To this end, we conducted three studies for which we had student teachers watch video recordings of child-robot tutoring sessions in which a robot taught children, around the age of five, various target words in a second language. Based on these recordings, the student teachers were asked to provide feedback suggestions: they chose one of six feedback strategies (closed-ended, study one), and wrote feedback themselves (open-ended, study two); in addition, they gave their opinion on the use of robots in education (study three). We found that the suggested use of feedback differed between the first two studies: in the first study, the majority of the student teachers chose to use an explicit positive phrasing in combination with the target words as a means of providing positive feedback, and a correction of the child's answer through repetition of the target words as a means of providing negative feedback; in the second study, they chose to only provide an explicit phrasing without repetition of the target words for both positive as well as negative feedback. Regarding robots in education, the student teachers were eager to use the robot in their future lessons. However, they were concerned with the role that the robot would have and how the robot would be able to adapt its behavior to each child. Our findings demonstrate how (future) teachers can contribute to the development of robots in education, both regarding the design of the interaction and the role of robots.

1 Introduction

The use of technological tools in education has increased substantially; not only the use of tablets or computers, but also the use of robots in the classroom has increased [25]. Educational robots are used to teach different topics, such as mathematics [13] or programming [22], but also to help children with ASD improve their social skills [1]. In recent years, the interest to teach children a second language with a robot has increased [2, 25]. Studies in this area have focused specifically on how to design the interaction between child and robot, and on how to maximize learning gains.

Learning a new language is a social process during which the child typically receives support from their social environment (e.g., teachers, peers, and family). One feature that specifically contributes to language learning is feedback [20, 24, 15]. Feedback can be given in different forms, both positive and negative: for instance, positive feedback ("Well done!") may motivate children to continue a task and through negative feedback children's language mistakes may be corrected ("He ran, not he runned"). There are many ways to provide feedback, which may have different effects on language development. This paper describes an experiment how feedback for educational robots teaching children a second language should be designed, according to student teachers.

There is, as of yet, no known optimal feedback strategy for robot tutors for second language learning. Over the years, the effects of different feedback strategies have been examined. Mazzioni and Benvenuti [18], for example, used a robot to teach preschool children the English names for various fruits and vegetables. As negative feedback, the robot asked a question when the children made a mistake ("Are you sure?"). They found children learned more words together with the robot than when they did the same with another child. However, they did not compare this type of feedback with other feedback strategies. The robot used by Westlund et al. [26] adjusted the type of feedback based on the children's performance and compared it to an alternative without this personalization. The children showed a higher positive valence in the condition with the personalized feedback than without. In a study by de Haas et al. [5], a robot provided preschoolers (ages three to four) with different types of feedback in a second language learning task. They compared the engagement and the learning gain of the children when the robot provided peer-like (explicit negative), adult-like (implicit negative and explicit positive) and no feedback. However, they did not find any differences in the feedback conditions regarding the engagement and the learning gain. The authors argue that this is due to the large individual differences between children. However, these large individual differences do not necessarily mean that the robot can never have an optimal feedback strategy in second language learning.

Perhaps, we may be able to learn more by studying how human teachers provide feedback. Human teachers may adapt their feedback strategy to account for children's engagement levels. They use their experience and knowledge to act upon the children's level of engagement and direct the children's attention back to the learning task or provide feedback more effectively.

In addition, the increased use of robots in education gives rise to the question which addresses how teachers envision these tools in their field and whether they are willing to use these robots. Two recent studies [14, 21] asked educational experts about their attitude towards robots. They generally accept a robot in education if the robot is an assistant of the teacher, but not as a full teacher. However, they showed concern for the use of a robot with young children. They prefer to use the robots in domains like informatics, mathematics, physics and reject domains like art, physical education, and religion. The experts also preferred the robot for individual learning over learning in small groups. However, in these studies, the participants only knew the robot from pictures and not from interaction material (like a video) or in real life which could have resulted in false expectations about robots.

In this paper, we are interested in how student teacher would provide children with feedback from a robot's point of view and whether they, after seeing video fragments with children and a robot tutor and the robot in real life, share the same concerns or see the same potential as reported by previous studies that investigated educational experts' attitude. In addition, we were wondering whether the student teacher would give different answers if they had to choose from predefined, fixed forms of feedback (closed-ended), compared to when they were allowed to write down feedback utterances themselves (open-ended). In order to answer these questions, we conducted three studies in which we provided student teachers with video fragments of child-robot interactions and asked them to provide feedback through either a closed-ended questionnaire (study one) or an open-ended questionnaire (study two)) and we asked their view of the robot in education (study three).

2 Background

2.1 Social robots in education

The general attitude positively changed, especially with respect to STEM-related fields [21]. Nevertheless, when we consider other domains, such as language learning, robots have been shown to contribute in language learning as well [2]. One of the advantages of using robots is that children can interact with them socially in their physical, referential world. As noted by, among others, Mubin et al. [19], the social aspect of teaching language with a robot may prove to be an important factor in

second language learning.

In contrast to more traditional educational tools, social humanoid robots can use their appearance to act out behaviors similar to those of human teachers, while simultaneously helping to keep up the children's motivation [4]. Appropriate robot behavior for educational purposes, however, may be difficult to design and implement; not only due to technical limitations, but also because the intuitive communication with a child that comes naturally to teachers, such as using the correct type of feedback for different types of users and situations, may be difficult to realize in a robot tutoring system.

Interviews with human experts are used more often in child-robot interactions. In the EMOTE project [3], teachers were asked to control the robot's actions in a child-robot interaction to indicate how the robot should adapt itself to the children and at the same time the robot also learned from the teacher's decisions. They used this as input for their own adaptive teaching robot. Schodde et al. [23] interviewed preschool teachers to determine whether certain non-verbal cues could be an indication of a child's engagement or disengagement. These cues (e.g., smiles, gaze, posture) can be used in a decision model to automatically adapt the interaction to the level of engagement of the child. For example, if a child is disengaged the robot can change the interaction by introducing a break or starting a different task to regain the child's attention. Engaged children are more motivated to continue the task and finish it. In addition, they are more eager to return to the task and this motivation increases their learning gain [9].

The robot may adapt its feedback strategy to influence the child's engagement. Schodde and colleagues' interviews with teachers identified cues of disengagement, which may help them to design models to automatically identify a student's (dis)engagement. This begs the question whether teachers adapt their feedback for engaged or disengaged children, through, for example, the use of either explicit or implicit feedback.

2.2 Feedback

Feedback has the potential to engage or disengage children [8]. For example, positive feedback can increase children's motivation to learn [17]. Children that are motivated learn faster and continue longer with the task [9]. In addition, negative feedback can help the children to understand what they are trying to learn and to correct their mistakes [11]. However, feedback should be provided in a balanced manner: too much positive feedback can decrease the child's own curiosity [12]; too much negative feedback can decrease the self-efficacy of children or decrease the children's active participation or engagement in the learning task [27].

Both positive and negative feedback can be provided explicitly or implicitly. Explicit positive feedback (also known as praise) provides a clear expression to show the child that they did well (e.g., "Well done!"), whereas implicit positive feedback acknowledges success without explicitly mentioning so (e.g., by only repeating a correctly used target word in language learning).

This is similar for negative feedback: explicit negative feedback will clearly indicate that the child is wrong (e.g., "No, that is wrong!"), while implicit negative feedback may only correct a target word ("You ran instead of you runned"). In general, teachers mostly use praise [11] to express their approval towards the children, thus to encourage and motivate them [12]. Teachers also provide negative feedback implicitly, but still make sure that the child reaches their learning goal [16, 15].

However, individual users perceive feedback differently. De Keyser [6] conducted a longitudinal study in two classrooms in which one of the teachers used negative feedback with error corrections as much as possible and another teacher as little as possible. They found that children with high intrinsic motivation performed better without correction, but children with low extrinsic motivation performed better with correction. Another study [11] found that less efficient learners might also benefit more from feedback, because they rely more on the teacher and the task for feedback than on their own knowledge. The knowledge that teachers use to adapt their lessons to the individual children can help a robot to increase engagement of the children and therefore their learning gain.

3 Method

We conducted three studies to find out how student teachers would provide feedback in a child-robot interaction and how they would use the robot in education. In study one, the student teachers received a questionnaire with multiple choice questions to investigate how they would respond using predefined forms of feedback. In study two, student teachers received a questionnaire with open-ended questions where they could write down their own preferred way of providing feedback to investigate the style of feedback they would prefer and how much variation they would use. In study three, we asked all student teachers about their opinion of the role and use of the robot in education. We used these three studies to test the following hypotheses:

H1a: The student teachers will provide the children with positive feedback when the children answered the question correctly.

H1b: The student teachers will provide the children with negative feedback when the children answered the question incorrectly.

H2: The student teachers will correct the behavior of disengaged children more often than that of engaged children.

H3: The student teachers will use similar feedback strategies for similar situations, regardless of the type of questionnaire administered.

H4: The student teachers will have a positive attitude towards the use of robots in education.

3.1 Study one: Multiple choice questionnaire

3.1.1 Participants

A total of 27 third-year students of the Teacher Education for Primary Schools (23 women, 4 men) with a mean age of 21 years (SD = 2.1 years) participated in this study. Exact age data is missing for three participants. All participants followed at least one internship as early years teacher (children between the ages of four and six), thus had experience with the age of the children in the video fragments. One participant was excluded for not following the instructions.

3.1.2 Stimuli

The stimuli consisted of 40 video fragments of a child-robot interaction taken from a previous study [7]. In this study, Dutch children engaged in a tutoring session in which a NAO robot taught the children six English animal names ("monkey", "hippo", "chicken", "horse", "ladybug", "bird"). For each word the robot asked the children to select the animal on a tablet in front of them by saying "I spy with my little eye a <animal-name>. Click on the <animal-name>" (see Figure 1).

We selected a total of 20 short fragments starting from the moment when the robot finished the instruction and ending after the child responded by clicking an animal on the tablet. The length of the fragments was between four and eight seconds, depending on how fast the children answered.

To investigate whether participants would use different feedback strategies for children with different engagement levels, we selected 10 fragments with engaged children and 10 with disengaged children. To make sure that these fragments showed clear examples of engagement or disengagement, we asked 18 independent observers to rate the engagement of the children on a five-point Likert scale and choose the fragments that were rated as the most engaged and disengaged [7].

In addition, we were interested in the different feedback strategies for correct and incorrect answers for all 20 children. Therefore, we showed each of the 20 video fragments twice, once projected with the correct response, and once with the incorrect response. We projected the requested answer below the video, together with either the child's original response or with a fake response. This to elicit the expert's feedback on either a correct or incorrect response. This resulted in 40 video fragments consisting of 20 different children (10 disengaged and 10 engaged), which were presented once in a correct and once in an incorrect context.

Figure 1: Setup of the child-robot interaction. Figure taken from de Wit et al. [7], with permission.

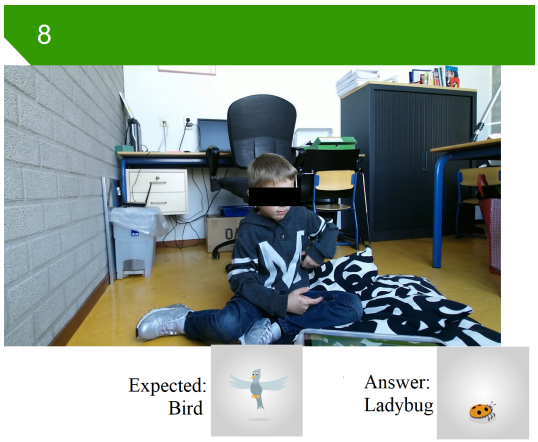

Figure 2: An example of one of the questions that was shown to the participants; the number eight stands for the eighth participant.

The videos only showed a front view of the child (see Figure 2 for an example). We anonymized the child for publication; participants, however, were able to see the child's facial expressions. The participants saw the video fragments in the same quasi-random order, where we made sure that there were at least five video fragments between the correct and incorrect fragment of the same child.

3.1.3 Questionnaire

The questionnaire consisted of 40 multiple choice questions (one for each video fragment) asking the participants to select one of six different feedback strategies (the text in italics was in English, the rest was in Dutch):

Positive

Positive Explicit: "Well done!"

Positive Explicit with repetition: "Well done, a *hippo* is a hippo"

Repetition: "A *hippo* is indeed a hippo"

Negative

Negative Explicit: "That is wrong"

Negative Explicit with correction: "That is wrong, a *hippo* is a hippo."

Correction: "A *hippo* is a hippo. You should touch the hippo"

The questions were grouped into positive and negative feedback strategies and were adapted for each individual video fragment (for example, in the case that a child had to select a monkey instead of a hippo, the feedback strategy used monkey instead of hippo). Participants could always choose from all six options, meaning that the participants could still choose the positive feedback options if the child answered incorrectly.

3.1.4 Procedure

The experiment was conducted in a single session in a classroom where the video fragments were projected on the classroom wall using a data projector. Participants were told they would see stimuli of children playing with the robot on a tablet and were asked to select the feedback they would provide.

After the instruction, all participants practiced one round with a video that was not used in the analysis. The main experiment started when everything was clear to the participants. Participants were given a 5 minute break after 25 fragments.

Each fragment was played twice and preceded by a number displayed on the screen indicating the number of the upcoming stimulus and followed by a 15 seconds period for the participants to write down their answer.

The total duration of the experiment was 20 minutes. This included the introduction, practice round, and the questionnaire.

3.1.5 Data analysis

We counted the frequency of each of the six feedback strategies that participants chose for each of the four different video categories: (1) Correct answer and engaged child, (2) Correct answer and disengaged child, (3) Incorrect answer and engaged child, and (4) Incorrect answer and disengaged child. We then compared those in the results section.

3.2 Study two: Open-ended questionnaire

3.2.1 Participants

Consistent with study one, 26 third-year students of Teacher Education for Primary Schools (23 women, 2 men, and 1 gender neutral) participated in the study with a mean age of 20 years (SD = 1.3 years). All participants followed at least one internship as early years teacher (children between four and six) and thus had experience with the age of the children in the videos. The participants in this study were different participants than those in study one, however, they attended the same Teacher Education program and followed the same courses.

3.2.2 Stimuli

These were the same as in study one.

3.2.3 Questionnaire

The questionnaire consisted of 40 empty text boxes that only contained the video number. In these text boxes participants were asked to write down how they would provide feedback to the child.

3.2.4 Procedure

The procedure was the same as in study one, except that the period following each video fragment lasted 30 seconds instead of 15 seconds to allow more time for the participants to write down their answer. Thus, the total duration of the experiment was 25 minutes instead of 20 minutes.

3.2.5 Coding

We grouped each answer into the same feedback strategies that were used in study one and added the category "other", in which we included all answers that did not fit in the six feedback strategies.

Answers that contained an affective and positive expression, but no repetition of the target words were coded into the "Positive explicit" category. This included short phrases such as "Well done!" and longer sentences such as "You did this so incredibly well, continue like this!", but also other vocalizations, such as a <chicken sound> or a <whistle> together with a (positive) verbal response were coded into this category. In the case that the answer contained both an affective expression and a repetition of the target word (either in English, Dutch or both), it was added to the second category "Positive explicit with a repetition". Positive answers without a clear affective expression, but that repeated the target word were coded as the "Repetition" category.

We included all negative feedback that overtly and clearly indicated that there was a specific error in the child's answer, but contained no correction in the "Negative explicit" category. Just as with the positive answers,

this included short and long answers ("No", "Too bad, but you still did well"). Answers that corrected the child and indicated a specific error were coded as the "Negative explicit with a repetition" category and answers without a clear error indication but with a correction were added to the "Correction" category [10].

All other answers that could not be coded into these categories were included in the "other" category. This includes both the positive and the negative feedback answers, such as "Try again" and "Pay attention".

3.2.6 Data analysis

This was the same as in study one, except that there was an extra feedback strategy category, namely the "other" category.

3.3 Study three: Questionnaire about robot acceptance

3.3.1 Participants

For this study, we used the participants that participated in study one and study two.

3.3.2 Questionnaire

The questionnaire about robot acceptance was partly based on the questionnaire of Kennedy et al. [14] and measured the participants' attitude towards the use of the robot in their future classes. We were particularly interested if students would see the robot as a teaching tool or assistant. The questionnaire was divided into two subparts. The first part showed opinions and asked participants to rate on a five-point Likert scale how much they agreed (*Strongly disagree, disagree, undecided, agree, strongly agree*) with the following statements:

1. [**Positive attitude**] I have a positive attitude towards robots
2. [**Use school robot**] I would use a robot if it was available at school
3. [**Positive influence**] Robots have a positive influence on children
4. [**Responsibility for courses**] I would have no problem with making a robot responsible for some of my courses
5. [**Social bond**] The robot should be able to create a social bond with children

The second part were questions about the use of the robot in education and whether participants were already used to robots.

Q1 Have you ever used or do you know someone who uses a robot at home or at work?
Yes at home, Yes at work, Yes, somewhere else, No

Q2 Would you use a robot?
Yes at home, Yes at work, Yes, somewhere else, No

Q3 I would use a robot for the following courses
Dutch, English, Mathematics, Orientation on yourself and the world, Art, Physical education, Science, other ...

Q4 When do you think it will become normal for social robots to be in schools?
0-1 years, 1-2 years, 2-5 years, 5-10 years, 10+ years

Q5 The main obstacle that should be solved before a robot can be used in education is: ...

3.3.3 Procedure

After all fragments of study one or study two were shown, we demonstrated some capabilities (e.g. the speech, camera functionality, movements) of the robot in the classroom and participants could ask questions. Finally, the participants were asked to answer the ten questions discussed before about their opinion on robots in education. This part lasted about ten minutes. Thus, the total duration for participants was 30 minutes (study one and three) or 35 minutes (study two and three).

3.3.4 Data analysis

No distinction was made in the results between study one and study two for the questionnaire about robot acceptance, because the questionnaire and exposure to the robot and child-robot interaction was the same. We calculated the frequency of the answers on the questionnaire about robot acceptance and compared those in the discussion section.

4 Results

4.1 Study one: Multiple choice questionnaire

Figure 3 shows the feedback strategies selected by the participants. The most frequently selected form of positive feedback was explicit positive feedback with repetition of the correct answer ("Well done! A hippo is a *hippo*"). The most frequently used negative feedback strategy was only a correction ("Hippo is a *hippo*"), followed by explicit negative feedback with correction ("That is wrong, a hippo is a *hippo*). The participants did not

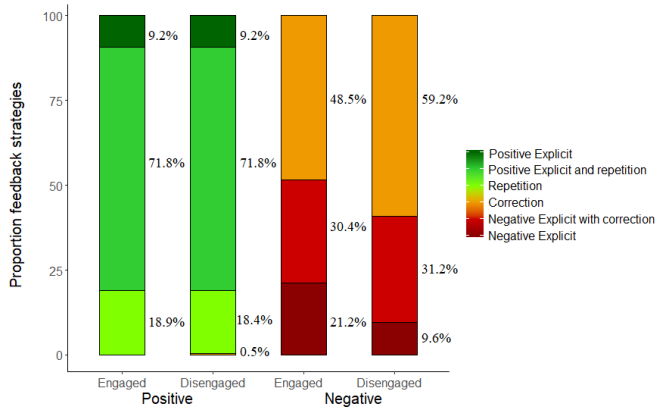

Figure 3: The multiple choice answers of the participants for correct and incorrect answers and engaged and disengaged children.

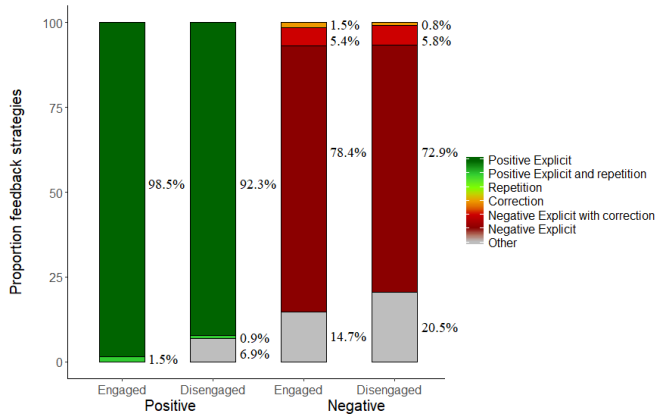

Figure 4: The open-ended answers of the participants for correct and incorrect answers and engaged and disengaged children.

adapt their positive feedback strategy for engaged or disengaged children. However, they selected explicit negative feedback more often for engaged children (21.2%) than for disengaged children (9.6%). Moreover, they chose to provide more corrections to disengaged children (59.0%) than to engaged children (48.5%).

4.2 Study two: Open-ended questionnaire

Participants provided the children most frequently with explicit feedback for both negative and positive answers as Figure 4 shows. They used positive explicit feedback more often for engaged children (98.5%) than for disengaged children (92.3%).

Students used different popular variations of the word "Well done" ("Super!", "Wow!", "Great!") (59%). Other variations of explicit positive feedback had an affective connotation, as shown in Table 1; these types of feedback reflected affect about the child. In addition, 1% of all explicit positive responses suggested to use other vocalizations such as a chicken sound or a whistle together with a verbal response (e.g., "<chicken sound>, yes!" or "<whistle> bingo!").

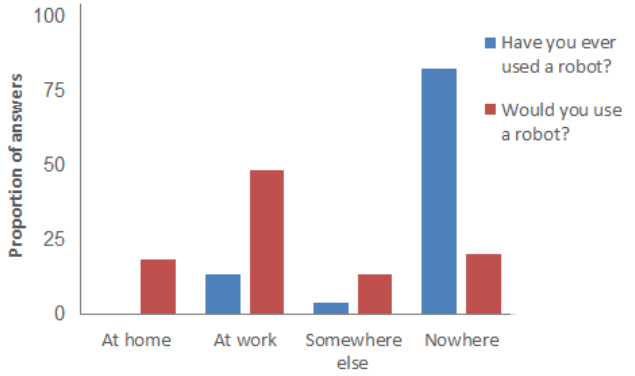

Figure 5: The answers of the participants whether and where they have even used or want to use a robot

Participants used, similar to the positive feedback, explicit negative feedback most often when the children answered incorrectly (see different variations in Table 2).

We also looked at the word use of participants. We found that participants used more words to describe their negative feedback for the children ($M = 5.9$, $SD = 2.3$) than when they describe positive feedback ($M = 3.5$, $SD = 2.8$). Participants used only the word "Great!" to indicate positive feedback, but used "Too bad, but next time you will do better" for the explicit negative feedback.

Moreover, the participants used more feedback that could not be coded in the different categories with disengaged children (6,9% and 20.5%) than with engaged children (0% and 14.7%). For positive feedback and disengaged children, this "other" category only consisted of feedback regarding the behavior of the children (e.g., "Sit straight", "Stop touching your dress and pay attention") (6.9%), but for negative feedback the category contained feedback regarding the behavior of the children (41% for disengaged children and 21% for engaged children) or motivational speech (e.g., "keep trying").

Table 1: The different forms of explicit positive feedback used by the participants.

Explicit positive	%
Well done	59
You answered really fast	13
I'm really proud *or*	
You thought about your answer very well, impressive!	28
<chicken sound>, yes! *or* <whistle sound> bingo!	1

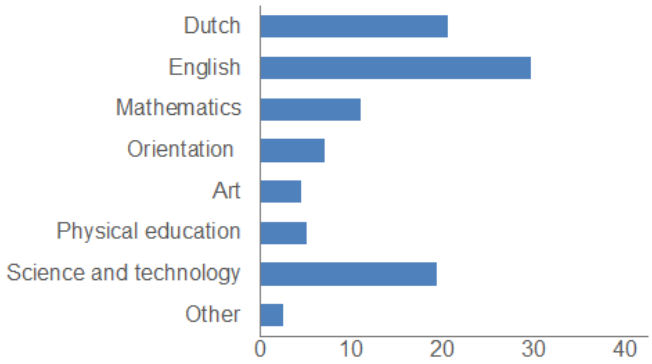

Figure 6: Answers of the participants about which subjects they think social robots can be used.

4.3 Questionnaire about robot acceptance

Finally, we asked the participants of both studies to give their opinion about educational robots. As Figure 7 shows, participants are mainly positive about robots in education (72%). They are eager to use the robot (92% agrees or strongly agrees) and agree that the robot has a positive influence on children (56%). However, students are not sure whether or not they want to delegate lessons to the robot (38% disagrees or strongly disagrees). The majority of the participants does not have a robot at home yet, but would like to use one at work (see Figure 5), especially in the language domain (Dutch and English) and in the science domain (see Figure 6). However, they do not expect that the robot will be used in schools in the near future as the majority of the participants expects that it will take 5-10 years or even longer before robots are used in schools (see Figure 8). The largest obstacle that the participants noted, is the lack of responsiveness of the robot to the children (85%).

4.4 Discussion

This paper describes three studies which asked student teachers to provide feedback to children from a robot's perspective and how they envision the use of robots in education. Their insights can help the design of robot tutoring systems, keep the lessons challenging for the child, allow the children to acquire language skills with, for example, the use of feedback and how these systems should be improved before they can be used in education.

We were interested in the type of negative and positive feedback students would provide: explicit, explicit with a repetition of the target words, or only a repetition of the target words. We were also interested whether the participants would change their feedback for engaged or disengaged children. In addition, we were curious about the teachers' attitude towards and opinion about robots.

As expected, our results showed that the participants use positive feedback for correct answers (H1a) and negative feedback for incorrect answers (H1b). Only one participant provided negative feedback when a child answered a question correctly.

It was intriguing to observe that our student teachers in the open questionnaire tended to opt for explicit feedback strategies without repetition or correction, which is not what we expected based on the education literature. For correct answers, we expected in accordance with the literature [11] that participants would provide children with positive explicit feedback and repetition of the target words ("Well done, a *hippo* is a hippo"). The majority of the participants in study one, the multiple choice questionnaire, used this feedback strategy. However, the overwhelming majority of participants in study two used a different strategy; they only used explicit feedback ("Well done"). Participants in the open-ended questionnaire were free to write down how they would respond and did not rely on feedback templates that were ready to use. The participants did not choose to use shorter answers when asked to write freely, because they still used more than three words for positive answers. Their feedback strategy choices show their spontaneous reactions that came to their mind after observing a correctly answered question.

The feedback strategy for incorrect answers was different from the correct answers. In study one, participants used the correction strategy as the most frequent strategy. The correction strategy can be considered as a form of implicit feedback, which is described in the literature as the most used form of feedback in education [16]. However, other views on language learning state that children learn most from explicit negative feedback [15], which is in line with what the participants of study two chose as their main feedback strategy: explicit without correction of the child. However, if we look in more detail at the phrases they used, the most common phrase was explicit feedback in combination with the question if children could try again to give the children a chance

Table 2: Different examples of explicit negative feedback used by the participants.

Explicit negative	%
No, you're wrong	13
That was wrong, try again	48
Too bad, but you still did well	39

Table 3: The main problem that needs to be solved before the participants want to use the robot.

	%
The robot should react appropriately to the child	85
The robot should be able to recognize facial expressions	5
The robot should be able to produce emotions	8
The robot is too expensive	3

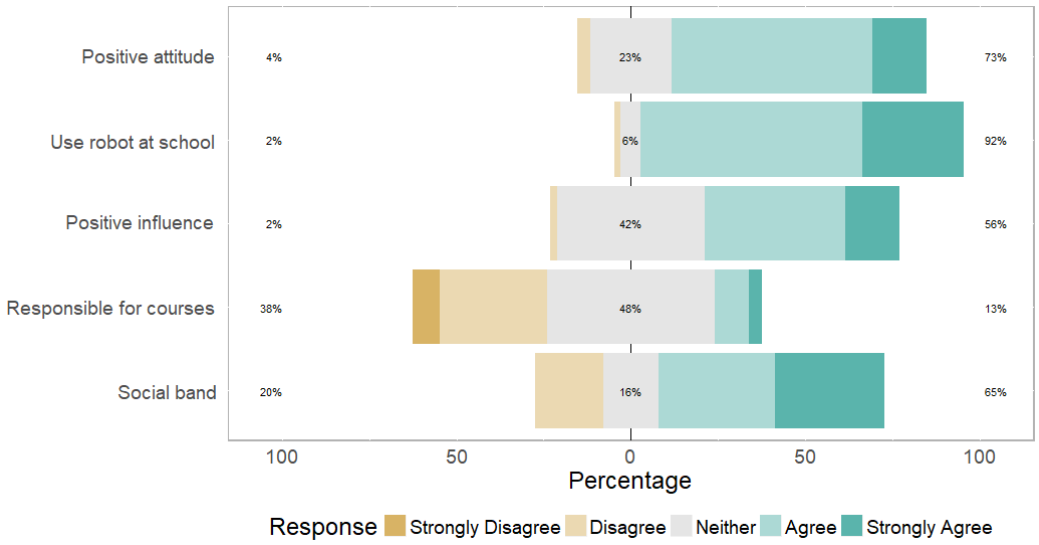

Figure 7: The answers of the participants' attitude questions.

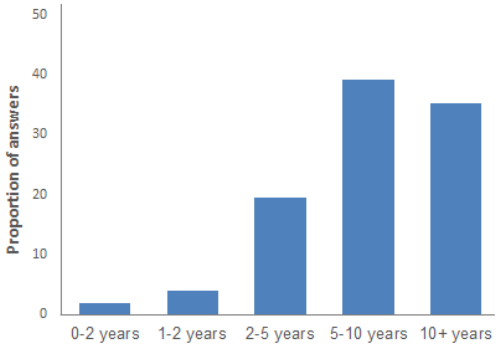

Figure 8: The answers of the participants when they envision robots to be used at schools.

to correct their errors by themselves.

This suggests that despite their experience with teaching children in the age group, and despite their state-of-the-art knowledge of the education field, providing repetitions and corrections does not come natural to our participants. Of course, in the closed questionnaire they did select these repetitions/corrections much more frequently, confirming that these strategies are indeed good response strategies for engaged and disengaged children alike.

We also looked at the differences in feedback strategies between engaged children and disengaged children (H2). We expected that we would see differences in the open-ended questionnaire and no differences in the closed-ended questionnaire because the participants could freely write their answers and did not have to choose between three options. Interestingly, seven percent of all positive phrases and eight percent of all negative phrases for disengaged children were meant to direct the child's attention to the robot. We don't know why the participants used this in only 8% of their answers, it is possible that the participants would have used intonation or gestures to redirect the children's attention and our experiment, that only used written answers, was too limited for those answers.

The feedback strategies differed for both studies: in study one we gave the participants templates to choose from and in study two we did not specify any feedback in advance (H3). This probably explains the differences between the studies: in study one, participants were probably more focused on providing the most correct and efficient type of feedback; in study two, participants probably relied more on their intuition.

Study two showed many variations of feedback. Participants mentioned during the experiment that variation is the key in interaction and they were concerned that the robot would not be adaptive enough for children to respond to the children's behavior.

This particular concern was the participants' largest obstacle that should be changed before a robot can be used in education (see Table 3). These results have implications for the design of tutor robots in future studies. First, it would be good to use more variation in feedback sentences (unlike our multiple choice questionnaire). Second, positive feedback can benefit when you repeat the target words (the strategy our participants used in the multiple choice questionnaire). Third, negative feedback can be very explicit (as we saw in both questionnaires) but, most importantly, the robot should ask children to attempt to complete the task once more.

Finally, it is important to redirect the children's attention back to the robot when they are disengaged, however we should not do this in all cases. Future research could focus on comparing an implementation of feedback based on the best theoretical method (study one) with

a version based on the natural interaction methods that our participants in study two proposed.

The participants' concern about adaptivity did not affect their view of the potential of the use of an educational robot (H4). Participants mentioned that they would like to use a robot at work, especially for language learning (Dutch and English) or Science and Technology education. This is consistent with findings of Kennedy et al. [14], where teachers mentioned Science and Computer and Foreign languages as possible courses in which the robot can provide aid. Future research should be targeted at the participants' concerns about adaptivity, such as introducing variations in feedback or reacting to children's unresponsiveness, taking into account the strategies the strategies that participants proposed in this study.

5 Conclusion

The purpose of this study is to show how student teachers would provide feedback to (dis)engaged children in a child-robot tutoring session and to propose design guidelines for the feedback strategy of educational robots. We carried out two studies during which we showed video fragments of a child-robot interaction to student teachers, and asked them to choose (study one) one of six feedback strategies (positive explicit, positive explicit + repetition of target words, repetition of target words, correction, correction with explicit negative feedback or explicit negative feedback) or to write the feedback themselves (study two). Interestingly, we saw that the student teachers in study one used more repetition and corrective feedback than in study two, in which the experts mostly used explicit feedback. The experts did not change the feedback strategy between engaged and disengaged children. Even though there were large differences between these two studies, it still provides new insights with respect to the design of social robots (more variation for positive feedback, repeat the target words, let children repeat the corrected answers and correct the children's behavior but not always). Future research should investigate whether these insights would come to benefit learning. From their role as educational experts, teachers should be involved in the design of a robot tutor. Fortunately, our student teachers have indicated to be interested in robots and are willing to use robots for educational purposes.

6 Selection and Participation of Children

No children participated in this work.

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