A Sample Tutorial Dialogue
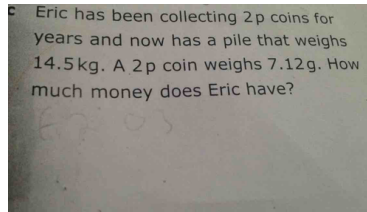

Fig. 1. The Image sent by student

Student: [Image Link] (as shown in Figure. 1)
Tutor: Hi [Anonymized], welcome!:)
Tutor: Please give me a minute to look over your problem.
Student: Ok thank you
Tutor: How much progress have you made so far? Or are you unsure of how to start?
Student: I know that I have to do 1450g divided by 7.12g but I'm a bit stuck after that
Tutor: You're nearly there! Looks like you just need some assistance with the unit conversion. I can certainly help you with that. Remember to participate as much as you can and we'll have this in no time.:)
Tutor: Tell me, how many grams are there in a kilogram?
Student: 1000
Tutor: Excellent! So, how many grams would be 14.5kgs?
Student: 14500
Tutor: Exactly! Now, you have got it right. Why do you think we would now divide 14500 by 7.12?
Student: Because one 2p coin weighs 7.12g and we want to find out how many 2p's are 14500g
Tutor: Very good! Alright, so how many 2p coins would be there?
Student: Well 14500 divided by 7.12 is 2036.52 so 2036?
Tutor: Absolutely correct! This is the number of coins that Eric would have.
Tutor: You can also find the equivalent amount of money in pounds, do you have any ideas on how we can do that?
Student: I'm not sure maybe multiplication???
Tutor: Yes, there can be multiplication. How many pounds do you think equal to 1p?
Student: Well there is 100 pennies on a pound so £20.36
Tutor: Awesome! Good job there.:)
Tutor: Thanks for participating. Is there anything else that I can help you with?
Student: Thank you for your help that's all for now but maybe later
Tutor: Sure, thanks for using our service! Have a good one.:)

B   Full Dialogue Act Scheme

Table 1. The Dialogue Acts (DAs) scheme used in [26]. The column **Role** indicates whether a DA is only specific to the category of tutors (**T**), students (**S**), or both (**T&S**). The DAs were sorted based on their frequency (i.e., the column of **Freq.**) in the full dataset for each role category.

Dialogue Acts (DAs)	Role	Sample Utterances	Freq.
General Positive Feedback (FP)		*"Well done!"*	9.46%
Information (I)		*"The last card also has to be a 7."*	8.42%
Probing Question (QP)		*"Can you quickly simplify 6/24?"*	8.07%
Factual Question (QF)		*"How did you find an irrational number?"*	3.37%
Operational Question (QO)		*"Do you have any other questions for me?"*	3.21%
Directive (DIR)		*"Take a look at what's circled in yellow."*	3.14%
Hint by Image (HI)	**T**	*[Image]*	2.34%
Reassurance (R)		*"No problem, we will do it together."*	2.26%
Elaborated Positive Feedback (FPE)		*"Yep, 5 is right!"*	2.08%
Lukewarm Feedback (LF)		*"You are almost there!"*	1.49%
Evaluation Question (QE)		*"Does that make sense?"*	1.44%
Negative Feedback (NF)		*"Hmmm, not quite."*	1.42%
Open Question (QO)		*"What is the next step?"*	0.97%
Ready Question (QR)		*"Ready for the Question 18?"*	0.09%
Confirmation Question (QC)		*"So that'd be 5?"*	4.93%
Request Feedback by Image (RFI)		*[Image]*	4.34%
Understanding (FU)	**S**	*"Oh, I get it"*	1.46%
Direction Question (QD)		*"Okay what do we do next?"*	1.20%
Information Question (QI)		*"Isn't there a formula to find the nth term?"*	1.06%
Not Understanding (FNU)		*"I don't know."*	0.24%
Ready Answer (AR)		*"Yep, ready to go."*	0.07%
Acknowledge (ACK)		*"Ok!"*	7.15%
Yes-No Answer (AYN)		*"No, I don't have any progress"*	6.02%
Extra Domain Other (OEX)		*"Ok, I'll load again."*	5.94%
WH Answer (AWH)		*"The 4 point questions"*	5.92%
Observation (O)		*"We initially had these 5 terms."*	4.36%
Greeting (GRE)	**T&S**	*"Hello!"*	3.54%
Explanation (E)		*"That's what we've been doing"*	3.16%
Extra Domain Question (QEX)		*"Did you cover this in your class?"*	1.20%
Correction (CO)		*"Oops sorry 100 degrees"*	0.85%
Extra Domain Answer (AEX)		*"I don't know how the payments work."*	0.75%

[26] Vail, A.K., & Boyer, K.E.: Identifying effective moves in tutoring: On the refinement of dialogue act annotation schemes. In: International conference on intelligent tutoring systems. pp. 199-209. Springer (2014)