

Supplementary Information

Exploring Preschool Teachers' Pedagogical Content Knowledge: The Effect of Professional Experience

Ali Yigit Kutluca¹

¹Primary School Teacher Education, Faculty of Education/Department of Elementary Education, Istanbul Aydin University, Istanbul, Turkey

*Corresponding Author. alikutluca@aydin.edu.tr

RESEARCH INSTRUMENTS

Appendix-A: Lesson Construction Task

Scientific Process Skills:
Topic:
Learning Outcome(s):
Big Idea-1:
Big Idea-2:
Sub Ideas of the Topic:
Q1 What do you want children to learn about these big ideas? Q2 Why is it important for children to learn these big ideas? Q3 What difficulties can children experience while learning these big ideas? Q4 What teaching strategy or special activities can be used to help children develop a qualified understanding of these big ideas? Q5 What kind of learning outcomes were there in the preschool education curriculum regarding your big ideas? Q6 What do you do to determine whether children understand these big ideas?

APPENDIX-B: INTERVIEW PROTOCOL

	Question Set	Data Source
Part-I	1 How do you perform any science teaching activities (in the subject area of your choice) in your class?	Teacher Efficacy
	2 Do you think you are sufficient to carry out science teaching in this subject area? Why?	
	Why do you think we should include children in a science education specific to this subject area? Could you explain your answers?	
	1 <i>• How did you set these goals?</i> <i>• How and where do you expect children to use what they have learned at the end of this process?</i> <i>• Do you think that at the end of this process, what children learn will be useful for their daily lives?</i>	OTS
	What do you think the child may need to learn this subject area qualified? Could you explain your answers? (Prior knowledge, skills)	
	2 <i>• What kind of difficulties do you think children may experience in this process? Why?</i> <i>• Do you think children need a preliminary preparation before science teaching? If so, can you elaborate?</i>	KSU
Part-II	What kind of learning outcomes are there in the preschool education curriculum for an effective science teaching specific to this subject area? Could you explain your answers?	
	3 <i>• Can you give an example of these learning outcomes?</i> <i>• Are there any instructions on how to implement effective science teaching in the preschool education curriculum? If yes, what are they?</i>	KSC
	What preparations do you make before including children in science teaching? Could you explain your answers?	
	4 <i>• How do you direct science activities?</i> <i>• What do you do to participate in science activities?</i> <i>• Do you need additional resources to encourage participation in science activities? If yes, what are they?</i>	KISR
	What exactly do you aim to measure about children's participation in preschool science teaching? Could you explain your answers?	
	5 <i>• How do you determine whether children learn?</i> <i>• What assessment techniques do you use to measure children's conceptual understanding?</i>	KAS

