

Association between Computer Activity and Features of Preschooler's Play

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The purpose of the study

- To identify the association between features of play activity and screen time of contemporary Russian preschoolers

The hypothesis of the study

- Contemporary 4-6 years-old-children show relatively low rates of development of play activity
- There is a relationship between the level of screen time and the characteristics of play activity in preschool age



Sample Description

- 13 preschoolers (4 girls and 9 boys), aged from 4 to 6 years

Empirical Study

- The longitudinal study was conducted from December 2019 to January 2021 and included 3 phases



Research Methods

"Method of diagnostics of role-playing games" by E.O. Smirnova, I.A. Ryabkova (2018)

"Diagnostics of the development of playing skills" by R.R. Kalinina (2003)

A questionnaire, elaborated by the author to evaluate different aspects of children's interaction with digital content (2021)

Research Design



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1st step

- Elaboration of a questionnaire aimed evaluating different aspects of children's interaction with digital content
- Analysis and choosing of methods for diagnostics of role-playing games

2nd step

- Collecting of videos of children's play activities (3 phases)
- Analysis videos
- Analysis of children's play activities using the methods by Kalinina R.R. and Smirnova E.O., Ryabkova I.A.
- Analysis of the empirical materials gained with the help of the questionnaire elaborated by the author

3rd step

- Processing of the empirical data in SPSS in order to identify the dynamics of development of play activity with the time
- Processing of the empirical data of the author's questionnaire in order to identify the relationship between screen time and the quality of play activity

Method by R.R. Kalinina: analysis of the empirical data



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Conformity of the level of formation of playing skills to age norms according to the method
"Diagnostics of the development of playing skills" by R.R. Kalinina

Section	The number of children who have revealed compliance with the age norms of play activity							
	For all scales	For 6 scales	For 5 scales	For 4 scales	For 3 scales	For 2 scales	For 1 scale	On no scale
1	-	-	2 (15%)	-	1 (8%)	1(8%)	3 (23%)	6 (46%)
2	-	-	1(8%)	1(8%)	1(8%)	1(8%)	1(8%)	8 (60%)
3	-	1(8%)	-	1(8%)	1(8%)	1(8%)	1(8%)	8 (60%)

Method by R.R. Kalinina: analysis of the empirical data



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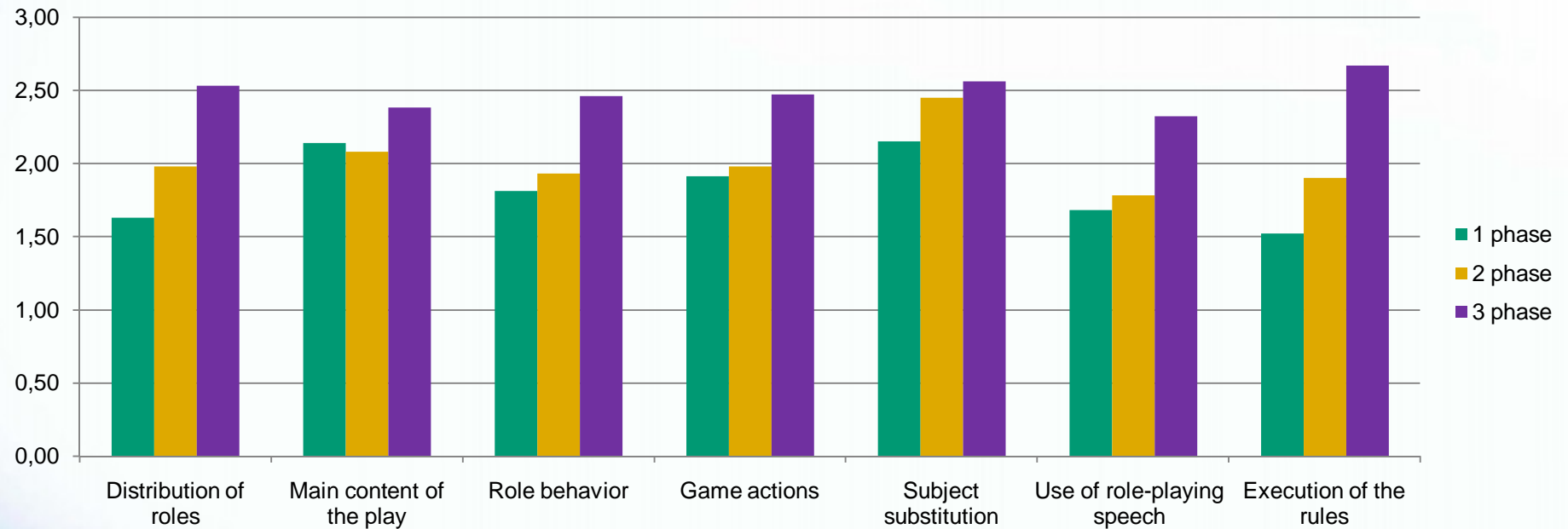


Figure 1: Visual representation of the development of play skills (method by R.R. Kalinina)

Method by E.O. Smirnova, I.A. Ryabkova: analysis of the empirical data



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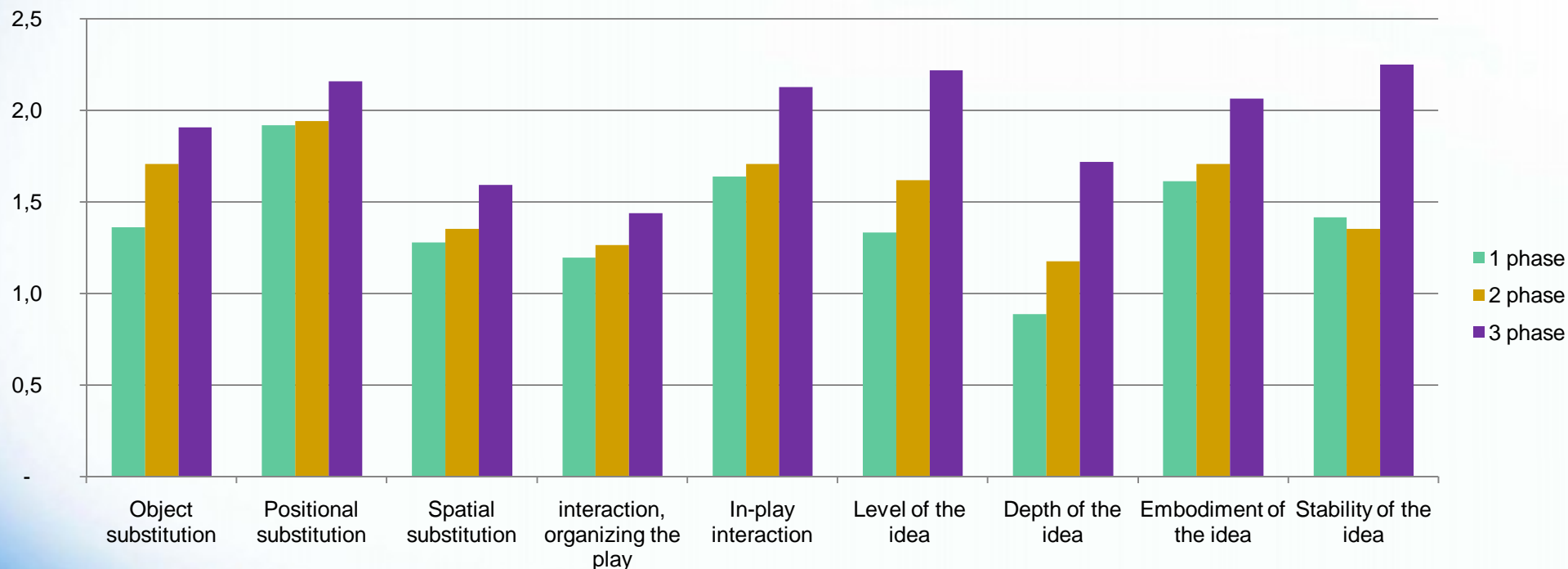
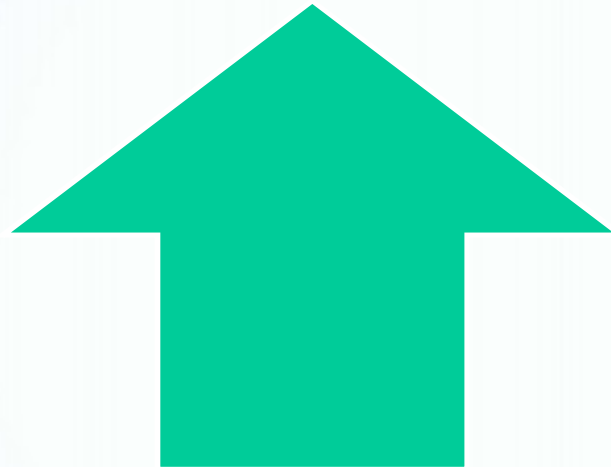


Figure 2: Visual representation of the development of play skills (method by E.O. Smirnova, I.A. Ryabkova)

Connection between computer activity and features of play (r - the value of the Spearman coefficient)



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Screen time more than 1 hour every day



- subject substitution ($r = -0,676^*$)
- interaction, organizing the play ($r = -0,73^{**}$)
- plot elaboration ($r = -0,766^{**}$)
- development of the idea ($r = -0,74^{**}$)
- role behavior ($r = -0,581^*$)
- play actions ($r = -0,744^{**}$)
- the use of attributes ($r = -0,763^{**}$)
- implementation of rules ($r = -0,791^{**}$)

Findings of the study



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The results obtained indicate the need to revise the concept of "norm" in relation to the play activity of preschoolers, as well as stress the importance of elaborating more objective sociological tools for assessing play activity of contemporary preschoolers

Contemporary Russian preschoolers aged from 4 to 6 demonstrate relatively low levels of development of play activity

The analysis of the collected data showed that screen time influences such characteristics of play as subject substitution; interaction, organizing the play; plot elaboration; development of the idea; role behavior; play actions; the use of attributes and implementation of rules. These characteristics have an inverse relationship with the child's screen time.



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Thank you for your attention!



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