

Assessing social studies competencies of 5-year-olds across different early childhood education programs in Slovenia

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Abstract: The main objective of the research was to analyse the differences in children's competencies in social studies among the various kindergarten programs in Slovenia. The assessment of competencies of five-year-old children enrolled in full-day, half-day, and shorter (240-hour) early childhood education programs were compared. The study included teachers' assessments of 955 five-year-old children, with a balanced distribution by gender and homogeneous age group, with a special focus on evaluating children's competencies in shorter programs. The results regarding the differences at the beginning and end of the shorter programs for the social studies competencies show statistically significant improvements in competencies, even though the duration of the program is only 240 hours. Comparisons between programs revealed significant differences on all items for the social studies between children in shorter programs and those in full-day or half-day programs, with children in shorter programs scoring lower compared to children in full-day or half-day programs. No significant differences in social studies competencies were found between children in full-day and half-day programs. The study results are crucial for developing teaching and learning strategies in early childhood education as they highlight the need for an approach that considers both the quality and duration of early childhood education programs.

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Introduction

Social Studies as a Learning Domain in Curriculum in Early Childhood Education

The aim of social studies as a learning domain in (Early Childhood Education) ECE is to strengthen the development of toddlers and children to participate competently in society. Given the constant changes in society, children must be empowered at an early age with competencies that will enable them to live well in their local and broader social environment and culture. It is only through cooperation that we can live in a community, and therefore, the development of children's identity, social and emotional skills, and the establishment and maintenance of relationships are fundamental. Social studies as a learning domain are also an opportunity for ECE teachers to provide a friendly and safe environment for children to develop their communication skills (e.g. learning courtesy expressions, problem-solving, negotiation, verbal and non-verbal communication skills) (Bierman et al., 2008; Moses, 2024; Seefeldt & Galper, 2006;)

Within social studies, children also learn and develop values that are important for successful functioning in a group and social environment. In kindergarten, children should gain experience of the importance of responsible and safe behaviour, ethical thinking, cultural norms, independence, awareness, and the development of healthy lifestyles and self-care. ECE teachers should create an inclusive environment where everyone has equal opportunities, regardless of gender, race, nationality, social and cultural background, religion, abilities and needs, without stereotypes and prejudices. Children can develop respect for diversity and care for others through learning and everyday activities. Social studies also include learning about themes related to cultural heritage, intergenerational education, citizenship education, and democratic participation. Children gradually develop their understanding and critical

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thinking about the importance of sustainable development, where they learn about social responsibility, children's rights, consumer and media literacy, and how to use digital technology safely and sensibly (Falkner & Rodriguez, 2024a; Neill, 2015; Seefeldt et al., 2014).

ECE addresses the holistic development of children, bringing positive experiences and enhancing academic and social competencies (Cheema et al., 2020), which are also implemented in kindergartens in Slovenia by the national Kindergarten Curriculum (Kindergarten Curriculum, 1999). Nurturing the growth of young children's social competencies has also been a long-standing goal of early childhood education (Coppie & Bredekam, 2009; Kostelnik et al., 2022; Mashburn et al., 2008;). The role of ECE teachers is crucial in promoting social and emotional competencies in young children and other social skills and knowledge related to how to use social skills in society, public institutions, understanding different cultures etc. (Beamish & Bryer, 2024; Seefeldt et al., 2014). Social competencies development is seen as one of foundational elements of social studies in early childhood education, highlighting the shared goals and strategies for social competencies. It is also an integral component of learning and development in the learning domain of social studies (Kemple, 2017).

Social studies competencies of children encompass foundational skills and understandings that enable effective participation and interaction within their social and cultural contexts. These competencies include developing a positive self-identity, interpersonal and communication skills, basic understanding of community roles and rules, and early abilities related to citizenship, cooperation, and respect for diversity (Kemple, 2017). From a developmental perspective, social studies at this age align closely with frameworks such as the Head Start Early Learning Outcomes Framework (U.S. Department of Health and Human Services, 2015), the OECD's Starting Strong Curricula (Organisation for Economic Co-operation and Development, [OECD], 2017), Curriculum for Kindergartens in Slovenia (2025) and other national curriculums (e.g. Finish National Core Curriculum [Finish National Agency for Education], 2018; New Zealand Early Childhood Curriculum [Ministry of Education], 2017; Swedish Curriculum from the Preschool [Skolverket], 2019; The Irish Early Childhood Curriculum Framework [National Council for Curriculum Assessment], 2009), emphasizing the importance of social-emotional development, cultural awareness, and foundational civic understanding as core components of early childhood education. Explicitly aligning with these global standards underscores the universal significance and developmental appropriateness of fostering social studies competencies in early childhood.

Social competencies encompass children's social, emotional, and cognitive knowledge and skills to achieve their goals and interact effectively with others (Kostelnik et al., 2022). From a developmental perspective, early childhood education primarily resides in child development's social and emotional domains. Social competencies are defined by positive self-identity, interpersonal skills, planning and decision-making, cultural competence, emotional intelligence, social values, and self-regulation (Kemple, 2017), which are indirectly included in our research of competencies in social studies as a learning domain.

Social competencies are also a strong predictor of children's readiness to learn in further education. Young children with difficulties in social competencies are at risk for maladjustment and social problems into adolescence and adulthood (Thompson & Thompson, 2015; Thompson, 2002). Children participating in programs designed to enhance their social and emotional competencies show improved academic performance and social behaviour, reduced behaviour problems, and less emotional stress (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2020; Durlak et al., 2011; Mindes, 2015). Before children can understand concepts and ideals such as fairness, the common good, and the rule of law, they need to experience real-life personal situations where these concepts come into play and practice the requisite social skills (Kemple, 2017). Preschool settings play a crucial role in offering children opportunities to interact with peers and adults in diverse situations. In addition to preschool settings, children can also practice social skills in various settings outside of school, although these opportunities may be influenced by cultural or family contexts.

These perspectives emphasise the importance of social studies in early education and are particularly relevant to our research study, during which we have analysed how children in various ECE programs in

Slovenia develop their competencies related to social studies in a key period a year before they enter primary education. By focusing on different ECE programs, our study aims to understand better how early experiences in social studies can lay a strong foundation for later schooling.

ECE Programs in Slovenia

The organisational structure and types of programs provided in kindergartens in Slovenia are regulated by the Kindergarten Act (1996). This Act outlines various program options to meet the diverse needs of children and their families. It includes full-day programs (lasting between six to nine hours, scheduled for the morning, afternoon or rotating schedules, full day); half-day programs (spanning four to six hours, available in the morning, afternoon, or on a rotating schedule); and shorter programs, specifically designed for children from remote and demographically endangered areas, ranging from 240 to 600 hours annually. Full-day and half-day programs cater to children from their first year until school entry, integrating aspects of education, care, and nutrition. Shorter programs in kindergartens in Slovenia focus on children from three years of age up to school entry. The Act requires that both full-day and half-day programs be conducted by a team of ECE teachers and ECE teacher assistants, whereas ECE teachers exclusively lead shorter programs. Kindergartens provide opportunities for reducing unfavourable environment factors and ensure that all children can integrate into the school system, regardless of their parents' education, socioeconomic status, or their affiliation with any national minority, ethnic group, or group without permanent or temporary residence in the Republic of Slovenia (White Book on Education in RS, 2011).

In Slovenia, as in other countries of the European Union, the proportion of children of all ages enrolled in kindergartens has been increasing in recent decades (White Book on Education in RS, 2011). At the beginning of the school year 2023/24, 85.5% of children aged 1–5 years were enrolled in ECE (SiStat, 2024a), with the vast majority of children (94.2%) attending public kindergartens (SiStat, 2024b). In the school year 2019/20, 92.1% children aged four and five attended Kindergarten, in 2020/21 91.4%, in 2021/22 91.1%, in 2022/23 90.8%, and in 2023/24 91.2% of children aged four and five years attended pre-school education (SiStat, 2024c).

In a national evaluation study (Licardo, Laure et al., 2024), educators reported that 93,9 % ($N=896$) of Children were enrolled in full-day programs, 2,5% ($N=24$) in half-day programs, and 3,6 % ($N=34$) in shorter programs, indicating that the majority of children are enrolled in full-day programs, with very few attending half-day and shorter programs.

Research Problem

This research aims to explore children's competencies in social studies who are enrolled in different ECE programs of public kindergartens in Slovenia. Studies on children's competencies in social studies are scarce (Barblett & Maloney, 2010; Lillvist et al., 2009, National Council for the Social Studies, 2019; Rosenberg, 2020; Willis & Schiller, 2011), so we want to fill the gap with this research. In the analysis, we compare assessments of ECE teachers on essential competencies of 5-year-old children related to social studies in full-day, half-day, and shorter programs and at the beginning and end of shorter programs, which lasted for 240 hours. This analysis is a part of a national evaluation study entitled "Analysis of the Needs, Conditions, and Possibilities for Mandatory Inclusion of Children in One of the ECE Programs from the Perspective of Reducing Social, Economic, and Cultural Inequalities" (Licardo, Laure et al., 2024). This study is carried out on two key research questions: a) What are the differences in ECE teachers' assessment of competencies of children in social studies across full-day, half-day, and shorter ECE programs? and b) How do ECE teachers assess the development of children's competencies in social studies at the start and end of the shorter programs? In this study, we aimed to explore how the length and structure of a program affect the development of early social studies skills, contributing valuable insights to research in early childhood education.

Method

Sample

The sample for the study was selected from public Kindergartens in Slovenia, which had previously confirmed their participation in a national evaluation study (Licardo, Laure et al., 2024). 105 kindergartens responded to an invitation to participate in the assessment of children in shorter, half-day, and full-day programs. The focus within this study was specifically on children transitioning to the 1st grade of primary school in September 2023. ECE teachers randomly selected three children to participate in each class and assessed their competencies.

Table 1

Number (f) and Structural Percentages (f%) of Children Who Were Included in the Social Studies Competencies Assessment

Variable	Category	f	f%
Gender	Girl	496	52.2
	Boy	455	47.8
	Other	0	0,0
Age	M = 5.89; SD = 0.34		
Slovene as Mother Tongue	Yes	895	94.2
	No	55	5.8
Type of Program	Full-day Program	896	93.9
	Half-day Program	24	2.5
	Shorter Program	34	3.6
	Total	955	100.0

Table 1 shows that the sample included a relatively balanced gender distribution of 52.2% girls and 47.8% boys. A total of 955 ECE children were included in the study. The average age of the children in the study was 5.89 years, with a standard deviation of 0.34 years, indicating a homogeneous age structure within the sample. Most children (94.2%) spoke Slovene as their first language. The majority of the children ($N = 896$, 93.9%) were enrolled in full-day programs, with a smaller number attending half-day ($N = 24$, 2.5%) and shorter programs ($N = 35$, 3.7%). Approximately 300 ECE teachers participated by completing the Competencies Assessment Tool for Preschool Children: KOM5 (Licardo, Ograjšek et al., 2024) for each child in this part of the study. The sample is representative for children included in shorter programs and in the structure comparable to the population of children in Slovenian kindergartens.

Data Collection

The data collection for our study was conducted as a part of a more extensive national evaluation study (Licardo, Laure et al., 2024). The objective of national evaluation study was to assess the current state of implementation of shorter preschool programs in Slovenia (240 hours). Data collection methods included an online survey, focus groups, document analysis, observations of program implementation, and gathering information on competence development as well as social, cultural, and economic disparities among three groups of children (participating in shorter, half-day, and full-day programs prior to school entry).

Public preschools that had previously confirmed their participation in the evaluation study were invited to take part. Educators in Kindergartens were instructed to randomly select three children for whom they completed the KOM5 assessment (Licardo, Ograjšek et al., 2024). Teachers were trained to use KOM5 by coordinators in their kindergarten, who received detailed training by researchers. Each kindergarten had one coordinator of the research study, who supported the research process and data collection with instructions, training and other support needed. Parental consent and children consent was obtained prior to the assessments. Coordinators were also provided with an electronic link to the KOM5 instrument, with a recommendation that educators print the instrument initially and later input the data into its online version. Data collection took place from November 2022 to May 2023, with the majority of data gathered in November and December 2022.

This study received ethical approval from the Research Ethics Committee at the University of Maribor, Faculty of Arts (approval date: 10. 03. 2023; approval number: 038-04-139/2023/16/FFUM). Written informed consent was obtained from parents, and verbal assent was secured from all participating children. Data collection and handling processes complied fully with ethical standards, including anonymization and group-level data analysis to ensure participant confidentiality. Participants were informed explicitly of their right to withdraw at any stage without consequence. The study procedures adhered rigorously to international ethical standards outlined in the Declaration of Helsinki (World Medical Association, 2013), the ethical guidelines from the European Union Agency for Fundamental Rights (2014), and regulations outlined by the General Data Protection Regulation (GDPR; European Parliament & Council of the European Union, 2016).

The Instrument

Instrument Competence Assessment Tool for Early Childhood Education Children: KOM5 (Licardo, Ograjšek et al., 2024) was developed for the purpose of this study because, in Slovenia, there are currently no other instruments designed for ECE educators to assess the competencies of children before they enter primary school. The instrument is composed of diverse competencies related to curricular domains in Slovenian public kindergartens that ECE teachers can observe in children before their school entry, such as Social and Emotional Domain, Cognition, Language, Mathematics, Social Studies, Nature, Art, Physical Development and Motor Skills.

Each domain within the instrument has comprehensive descriptors and detailed explanations, which provide a more precise and accurate evaluation of a child's competencies. Each child was observed for a minimum of three days during various segments of daily routine or structural activities. These selected timeframes provided opportunities for the child to exhibit the relevant competencies. ECE teachers rated each child on a scale from 1 to 7 (1 - not applicable and 7 - fully applicable).

The reliability or internal consistency of the scale for each content section of the instrument was determined using Cronbach's alpha coefficient (α). Our analysis confirmed the reliability of the scales across all learning domains, with alpha coefficients exceeding 0.7.

Data Analysis Procedures

The data collected from survey questionnaires and children's competencies assessments were processed using the statistical software IBM SPSS Statistics (version 27.0). We utilised the descriptive statistical methods, including the calculation of frequencies, mean values, and standard deviations, the Kruskal-Wallis test and Wilcoxon test for calculating differences in competencies between children in ECE programs and at the beginning and the end of the shorter program.

Results

The results presented in this chapter are focused on comparing ECE teachers' assessment regarding the social studies competencies of children in various ECE programs, before entering primary school. The tables below present two parts of the results, the first one is the analysis of these assessments at the beginning and end of the shorter programs, the second one is the comparison of teachers' assessment of children's social studies competencies across different ECE programs and the second.

Comparison of ECE Teachers' Assessments of Children's Competencies at the Beginning and End of the Shorter Program

The results of comparing preschool teachers' assessment on children's social studies competencies at the beginning and end of the shorter programs were analysed using the non-parametric Wilcoxon test. This test was used because the variables did not satisfy the requirements for a paired samples t-test. We also analysed the reliability measure (Cronbach's alpha coefficient) on the data sample for the shorter programs in the subgroup of social studies items.

Table 2

Differences in ECE Teachers' Assessment of Children's Competencies for the Social Studies Domain in the Shorter Program at the Beginning and End of the Program

Competencies	N	M1	SD1	Sum of pos. Ranks	M2	SD2	Sum of neg. Ranks	Z	P
The child knows the local and wider environment.	21	3.9	2.32	176.0	5.57	1.43	0.0	-4.01	0.003
The child knows and follows basic traffic rules.	15	3.8	1.9	92.0	4.87	1.25	0.0	-3.41	0.011
The child has knowledge about public institutions, occupations and working environments.	16	3.38	1.86	115.0	5.31	1.25	0.0	-3.52	0.005
The child can orientate himself.	15	4.13	1.92	89.5	4.80	1.57	9.50	-3.21	0.020
The child knows space and time categories.	15	3.27	1.67	75.0	4.27	1.33	0.00	-3.41	0.026
The child can eat independently.	35	5.46	1.72	346.5	6.23	1.03	52.5	-4.99	0.008
The child independently demonstrates concern for others and the environment.	35	4.74	1.87	424.5	5.60	1.42	114.5	-4.35	0.011
The child can take care of him/herself.	35	5.26	1.77	316.0	5.91	1.25	104.0	-4.77	0.039
The child demonstrates positive values.	34	4.76	2.09	381.0	5.44	1.64	24.0	-5.0	0.001
The child accepts different cultures.	31	5.35	1.92	243.0	5.97	1.45	0.00	-4.86	0.005

The results regarding the differences in assessment of children's competencies at the beginning and the end of the shorter program for the social studies learning domain ($\alpha = 0.92$) indicate that in 10 out of 10 measured competencies, statistically significant differences occur. These differences suggest higher ratings by ECE teachers concerning the child's knowledge at the end of the shorter programs of the local and wider environment ($z = -4.01$; $p = 0.003$), understanding and adherence to basic traffic rules ($z = -3.41$; $p = 0.011$), knowledge of public institutions, professions, and work environments ($z = -3.52$; $p = 0.005$), understanding of time and space categories ($z = -3.41$; $p = 0.026$), independent eating ($z = -4.99$; $p = 0.008$), independent demonstration of care for others and the environment ($z = -4.35$; $p = 0.011$), demonstration of self-care ($z = -4.77$; $p = 0.039$), demonstration of positive values ($z = -5.00$; $p = 0.001$), and acceptance of different cultures ($z = -4.86$; $p = 0.005$).

Regarding the differences in mean values, the greatest improvements during the shorter program in children's competencies, according to ECE teacher's assessment, occur in their knowledge about public institutions, professions and work environments, knowledge about local and wider environment, self-care competencies and knowledge about traffic rules. Less improvement occurred in accepting different cultures, orientation competencies, positive values and independent eating, which are probably competencies that need more time to learn and practice as is available in shorter programs, which last only 240 hours in a year before entering primary school. Although the results of the standard deviation indicate differences in competencies between children, some of them performed far better than others, especially in demonstrating positive values and orientation competencies.

Comparison of ECE Teachers' Assessment of Children's Competencies in Full-Day, Half-Day and Shorter Programs

To compare the competencies of children in full-day, half-day and shorter programs we used data from the KOM5 questionnaire (Licardo, Ograjšek et al., 2024), which was administered to ECE teachers in randomly selected groups.

Table 3

Differences in ECE Teachers' Assessment for Children in Full-Day, Half-Day, and Shorter Programs for the Social Studies Learning Domain

Competencies	Program	N	M	SD	\bar{R}	Kruskal-Wallis U
The child knows the local and wider environment.	Full-day	893	6.56	0.81	476.27	20.87**
	Half-day	24	6.88	0.34	563.56	
	Shorter	28	5.46	1.75	302.88	
The child knows and follows basic traffic rules.	Full-day	895	6.50	0.94	475.40	29.52**
	Half-day	23	6.78	0.42	529.07	
	Shorter	21	4.95	1.50	215.62	

Competencies	Program	N	M	SD	\bar{R}	Kruskal-Wallis U
The child has knowledge about public institutions, occupations and working environments.	Full-day	893	6.58	0.77	477.08	41.03**
	Half-day	23	6.83	0.39	544.80	
	Shorter	24	5.17	1.34	192.60	
The child can orientate himself.	Full-day	882	5.92	1.22	469.95	19.72**
	Half-day	22	6.27	0.77	527.05	
	Shorter	24	4.58	1.59	243.88	
The child is familiar with space and time categories.	Full-day	885	5.89	1.27	473.08	40.01**
	Half-day	22	6.32	0.95	554.77	
	Shorter	25	3.60	1.80	155.80	
The child can eat independently.	Full-day	897	6.77	0.60	484.64	25.31**
	Half-day	24	6.75	0.53	467.48	
	Shorter	34	6.21	1.04	321.66	
The child independently demonstrates concern for others and the environment.	Full-day	897	6.55	0.85	485.96	26.74**
	Half-day	24	6.50	0.93	469.33	
	Shorter	34	5.56	1.42	283.75	
The child can take care of himself.	Full-day	898	6.82	0.53	486.65	54.85**
	Half-day	24	6.83	0.48	488.77	
	Shorter	34	5.88	1.25	267.88	
The child demonstrates positive values.	Full-day	896	6.49	0.87	483.99	30.18**
	Half-day	24	6.67	0.76	545.62	
	Shorter	34	5.32	1.66	267.49	
The child accepts different cultures.	Full-day	845	6.65	0.70	453.11	10.80*
	Half-day	24	6.67	1.05	494.98	
	Shorter	30	5.93	1.46	337.28	

Note: * $p < 0.05$; ** $p < 0.001$

The results presented in Table 3 indicate significant differences in the assessments of early childhood education (ECE) teachers regarding children's competencies in the social studies learning domain across full-day, half-day, and shorter programs. The scale shows internal validity ($\alpha = 0.88$), standard deviation values for children enrolled in full day programs are lower compared to children in half-day and shorter programs. Besides the Kruskal-Wallis test we also conducted a pairwise comparison and included results in the interpretation below.

Environmental Knowledge: Children in full-day programs had lower mean scores ($M = 6.56$, $SD = 0.81$) compared to those in half-day programs ($M = 6.88$, $SD = 0.34$), while children in shorter programs scored significantly lower ($M = 5.46$, $SD = 1.75$). The Kruskal-Wallis test indicated significant differences among the groups ($U = 20.87$, $p < 0.001$), suggesting that program length impacts children's knowledge of their local and wider environment. Pairwise Comparison indicates that children in shorter programs significantly underperform compared to both full-day and half-day programs, as evidenced by standardized test statistics (4.25 and 4.26 respectively, both $p < 0.001$). However, there is a marginal non-significant difference between full-day and half-day programs ($t = -1.79$, $adj. p = 0.222$), suggesting that the additional hours in full-day programs may not significantly enhance this specific competency beyond the half-day program's impact.

Traffic Rules Awareness: Similarly, full-day program participants scored lower ($M = 6.50$, $SD = 0.94$) than their half-day counterparts ($M = 6.78$, $SD = 0.42$), and significantly higher than those in shorter programs ($M = 4.95$, $SD = 1.50$). Statistical analysis confirmed significant differences ($U = 29.52$, $p < 0.001$). Significant differences in pairwised comparison were again observed, with children in shorter programs scoring lower than those in full-day and half-day programs ($t = 5.53$ and 4.71 respectively, both $p < 0.001$). The differences between full-day and half-day programs were minimal and not statistically significant ($t = -0.96$, $adj. p = 1.000$), indicating a potentially similar level of efficacy in teaching traffic rules.

Knowledge about public Institutions and occupations: Children in full-day programs showed lower average scores ($M = 6.58$, $SD = 0.77$) compared to half-day programs ($M = 6.83$, $SD = 0.39$), with children in shorter programs performing the lowest ($M = 5.17$, $SD = 1.34$). The differences were statistically significant ($U = 41.03$, $p < 0.001$). In pairwise comparison significant differences were again observed, with

children in shorter programs scoring lower than those in full-day and half-day programs ($t = 5.53$ and 4.71 respectively, both $p < 0.001$). The differences between full-day and half-day programs were minimal and not statistically significant ($t = -0.96$, *adj. p* = 1.000), indicating a potentially similar level of efficacy in teaching traffic rules.

Self-Orientation Skills: Scores were highest in half-day programs ($M = 6.27$, $SD = 0.77$), followed by full-day ($M = 5.92$, $SD = 1.22$), and lowest in shorter programs ($M = 4.58$, $SD = 1.59$), with significant differences observed ($U = 19.72$, $p < 0.001$). In pairwise comparison results indicate significant underperformance in shorter programs compared to both full-day and half-day programs ($t = 6.18$ and 5.42 respectively, both $p < 0.001$). There is a slight non-significant difference between full-day and half-day programs ($t = -1.43$, *adj. p* = 0.455).

Understanding of Space and Time: The pattern of scoring was similar, with half-day programs scoring higher ($M = 6.32$, $SD = 0.95$) compared to full-day ($M = 5.89$, $SD = 1.27$) and shorter programs ($M = 3.60$, $SD = 1.80$). Significant differences were noted ($U = 40.01$, $p < 0.001$). Pairwise Comparison of children in shorter programs indicates significantly lower competencies in understanding space and time categories than those in both full-day and half-day programs, as indicated by high standardized test statistics ($t = 6.20$ and 5.33 respectively, both $p < 0.001$). However, the difference between full-day and half-day programs is minimal and not statistically significant ($t = -1.38$, *adj. p* = 0.498), suggesting similar effectiveness in both program types for these competencies.

Independent Eating: There was a slight difference between full-day ($M = 6.77$, $SD = 0.60$) and half-day programs ($M = 6.75$, $SD = 0.53$), with shorter programs children scoring lower ($M = 6.21$, $SD = 1.04$). These differences were statistically significant ($U = 25.31$, $p < 0.001$). Pairwise comparisons show significant differences between shorter programs and both longer program types, with shorter programs underperforming ($t = 3.03$ and 5.45 respectively, both $p < 0.01$). The lack of significant differences between full-day and half-day programs ($t = 0.70$, *adj. p* = 1.000) suggests that the duration of these programs does not distinctly impact the development of independent eating skills.

Concern for Others and Environment: Full-day program children scored slightly lower ($M = 6.55$, $SD = 0.85$) compared to half-day ($M = 6.50$, $SD = 0.93$), and significantly higher than shorter program participants ($M = 5.56$, $SD = 1.42$). The analysis indicated significant group differences ($U = 26.74$, $p < 0.001$). Statistically significant differences are observed in pairwise comparison, favoring children in longer programs over those in shorter ones ($t = 3.10$ and 5.28 respectively, both $p < 0.01$). The absence of significant differences between full-day and half-day programs ($t = 0.47$, *adj. p* = 1.000) indicates a similar capacity of both program durations to foster this competency.

Self-Care: Minimal difference was observed between full-day ($M = 6.82$, $SD = 0.53$) and half-day ($M = 6.83$, $SD = 0.48$) programs, both outperforming shorter programs ($M = 5.88$, $SD = 1.25$). The differences were highly significant ($U = 54.85$, $p < 0.001$). Pairwise Comparison showed there are pronounced discrepancies favoring longer programs, with shorter programs significantly underperforming ($t = 7.24$ and 4.84 respectively, both $p < 0.001$). The near-zero difference between full-day and half-day programs ($t = -0.11$, *adj. p* = 1.000) demonstrates that both durations are equally effective at developing self-care abilities in children.

Positive Values: Scores of children in full-day program ($M = 6.49$, $SD = 0.87$) were slightly lower than of children in half-day programs ($M = 6.67$, $SD = 0.76$) and significantly higher than in shorter programs ($M = 5.32$, $SD = 1.66$). Significant differences between programs occurred ($U = 30.18$, $p < 0.001$). Pairwise Comparison indicates that children in shorter programs lag significantly behind those in longer programs in demonstrating positive values ($t = 5.43$ and 4.47 respectively, both $p < 0.001$). The comparison between full-day and half-day programs shows a non-significant difference ($t = -1.17$, *adj. p* = 0.730), suggesting that both durations are comparably effective in promoting positive values.

Cultural Acceptance: There were minimal differences between full-day ($M = 6.65$, $SD = 0.70$) and half-day programs ($M = 6.67$, $SD = 1.05$), with shorter programs scoring lower ($M = 5.93$, $SD = 1.46$). These

differences reached statistical significance ($U = 10.80, p < 0.05$). Pairwise comparison: Significant differences are noted, with children in shorter programs scoring lower than those in both longer programs ($t = 3.59$ and 2.93 respectively, both $p \leq 0.01$). The lack of a significant difference between full-day and half-day programs ($t = -0.65, \text{adj. } p = 1.000$) indicates that the length of the program may not be a critical factor in developing cultural acceptance among children.

Overall, these findings suggest that full-day and half-day programs generally provide more supportive environments for the development of competencies related to social studies compared to shorter programs. The consistent pattern of higher competencies in longer duration programs highlights the potential influence of program structure and length on early childhood education outcomes.

Discussion and Conclusions

This study explored differences in preschool teachers' perceptions of children's competencies across various pre-school education programs. We examined two key aspects: the comparison of teachers' assessment on social studies competencies across different ECE programs and the changes in these assessment from the beginning to the end of shorter programs. Although the study has some limitations, e.g. limited generalizability in specific cultural and educational context, it relies on teachers' assessments of children's competencies, which may introduce bias based on individual teacher perceptions or institutional practices, use of non-parametric tests. Besides, longitudinal approach would certainly provide richer insights in how competencies evolve and solidify over time. However, the study still contributes to the body of research by highlighting the effectiveness of shorter ECE programs in improving competencies in the social studies and underscores the need for a balanced approach in early childhood education, where both quality and duration are crucial in children's developmental and learning outcomes (Denham et al., 2012; Han & Kempe, 2006).

The results of this study, though focused on specific ECE program structures in Slovenia, contribute to broader international discussions on the role of program duration and structure in shaping children's competencies. Internationally, research consistently underscores that high-quality, sustained ECE experiences foster enduring benefits in social, cognitive, and emotional competencies, which are foundational for lifelong learning and adaptation in diverse educational and social contexts (Garcia et al., 2016; Garcia et al., 2017). Policymakers globally could leverage these insights to advocate for adjustments in the length and quality of ECE programs, particularly to support vulnerable groups and mitigate developmental disparities (Durlak et al., 2011). Thus, this study's findings reinforce the critical importance of systemic investments in early childhood education as a strategic approach to promoting equity and optimizing developmental outcomes across diverse international contexts.

The significant findings from our study suggest that while shorter programs do offer noticeable improvements in social studies competencies (Licardo, Laure et al., 2024), these gains are notably less than those observed in children participating in full-day and half-day programs.

This aligns with the research by Pelletier and Corter (2019), which asserts that longer program durations in kindergarten settings are instrumental in promoting deeper and more sustainable social and academic engagement. The assessment of early childhood educators and school professionals regarding the importance of preschool education are strongly aligned (Licardo, Laure et al., 2024). Teachers observe that children who have participated in preschool programs more easily establish relationships with peers, embrace cultural diversity, demonstrate better proficiency in language, and are better prepared for learning compared to their peers who were not enrolled in such programs. These findings affirm that enrolling children in preschool programs represents a fundamental step towards ensuring equal opportunities for all children. Furthermore, this enrolment positively impacts various aspects of children's social, cultural, and economic development, underscoring the necessity of fostering greater participation in preschool education, particularly for children from vulnerable groups.

Additionally, the research highlights the efficacy of full-day programs in addressing social and cultural disparities, similar to the study of Garcia et al. (2017), who argue for substantial returns on

investments in high-quality, full-day early childhood education, which demonstrate that comprehensive early education can yield enduring benefits in both academic performance and social adaptability.

However, the outcomes for children in shorter programs, although positive, underline the challenges these programs face in achieving equivalent results within limited hours. This discrepancy points to a critical need for policy adjustments that might extend program hours or enhance program quality, as suggested by studies like Cooper et al. (2010), emphasizing the broad-spectrum benefits of extended educational engagement from an early age. The main issue observed with shorter programs is that they are predominantly attended by children from vulnerable groups. This population of children predominantly demonstrate lower skills in learning domains, lower social skills, often come from lower social and economic background and face language difficulties (e. g. Roma children, immigrant children) (Licardo, Laure et al., 2024). Consequently, the condensed 240-hour duration of these shorter programs is insufficient for children to overcome developmental gaps. This often results in poorer academic performance in the subsequent years of schooling. Analyses show that children enrolled in shorter preschool programs progress across all developmental areas; however, achieving substantial progress in social and emotional domains requires longer timeframes. In this context, the importance of enrolling children, especially those from vulnerable groups, in full-day or at least shorter preschool programs is highlighted as a critical strategy for reducing inequalities.

Given the observed limitations of shorter ECE programs in fully developing children's social studies competencies, targeted enhancements in program design and delivery are recommended. Shorter programs might benefit from integrating more structured activities specifically aimed at social-emotional learning, community engagement, and intercultural competencies, alongside closer collaboration with families to extend learning experiences beyond the limited program hours (Denham et al., 2012; Kemple, 2017). Additionally, professional development for educators in shorter programs could emphasize evidence-based pedagogical strategies focused explicitly on social and civic competencies, ensuring that even with limited contact hours, critical developmental outcomes are effectively targeted (Falkner & Rodríguez, 2024b). Lastly, policy-level considerations could include incremental increases in the duration of shorter programs or establishing robust follow-up mechanisms to sustain and reinforce competencies acquired during limited preschool experiences, particularly for children from vulnerable backgrounds (Garcia et al., 2016).

In addition, our results engage with the discourse on educational equity, as mentioned by Falkner and Rodríguez (2024b), who stress the importance of early childhood education as a foundation for lifelong learning and social integration. The data also align with findings from Neill (2015), who notes that the social studies curriculum in early education can significantly impact children's understanding of cultural and societal norms, thereby shaping their future participatory roles in society.

This research unfolds significant relevance in the Slovenian context, offering insights into the effectiveness of various ECE programs on young children's social competencies. Our findings have important implications for early childhood education in Slovenia, highlighting how duration and structures of the program influences the development of competencies. We have found that short programs are effective in improving competencies in social studies learning domain and that they improve over the duration of the program. However, the lower performance in social competences among children in short programs compared to those in full-day and half-day programs suggests a need to refine these condensed educational experiences in Slovenia.

To ensure the continuous development and improvement of the quality of early childhood education, it is essential to systematically monitor children's competencies within preschool programs and prior to their entry into school. Establishing a unified system of competency monitoring based on validated instruments would enable a reliable assessment of children's progress and the identification of areas requiring adjustments to educational approaches. Such a system would be particularly valuable for the early identification and intervention of children from vulnerable groups, which is significant not only for ensuring equal opportunities but also for its long-term economic benefits. Studies, such as that by Heckman

(2012), highlight that investments in high-quality early childhood education for children from vulnerable groups yield a return of up to 13% annually.

Furthermore, findings (Licardo, Laure et al., 2024) indicate that children attending full-day programmes demonstrate higher competencies across all analysed areas – including social and emotional skills, cognitive abilities, language and mathematics skills, as well as knowledge of nature, art, and movement – compared to children in shorter programs. This reinforces the necessity of adopting a systematic approach at the national level to make the enrolment of children in preschool programmes at least one year before starting school mandatory, whether in the form of full-day or shorter programmes.

Based on these findings, it can be concluded that preschool programs are crucial for the holistic development of children and for reducing social and cultural inequalities. Systematic support for increasing the participation of children, particularly from vulnerable groups, should be a priority at the national level. Such measures not only improve children's educational and social outcomes but also contribute to the long-term development of society and enhance economic prosperity.

Declarations

Authors' Declarations

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