Original Research Article

The Lived Experiences of Preschool Children Ages 3–4: The Practices of Independence in the Case Some Pre School in Vietnam

ABSTRACT

Independence helps children to always be confident and to control themselves in activities and communication. Education for independence is an urgent issue for education systems around the world to meet the requirements of society in the current context, one side it represented the developments of the education system and the other is it shows the developments of the early ages of the generation of a nation. By means of observation measured by the 5-point Likert scale, by the observers are lecturers and staff of the National College for Education this study was conducted in suburban and inner-city schools of both public and non-public types on the independence of 3–4-year-olds whose ages from 36 to 48 months the data then was collected and proceed by SPSS. The results show that children's independence is quite good, with a five-point scale in all independent expressions. However, there is a need for more in-depth additional studies for each type of school or further identification of the influencing factors for children's independence at this age.

Keywords: preschool children, self-made, observation method

1. INTRODUCTION

In the formation of a child's personality, there are two stages in which independence manifests prominently: the period of 3–4 years of age and the period of 10–14 years of age. At the end of infancy (age three), called the "crisis age of three", children appear to have a conflict between their growing independence, wanting to do everything by themselves like adults without the help of others, and, on the other hand, their immature ability to do those things. The demand to be free to act alone without anyone helping him is spontaneous, but if this need is not fully satisfied, it leads to a crisis. This period will have a series of very significant changes in the psychological development of children. Children do not want to depend on adults for activities, and they become more active in activities [10]. This is also the optimal period to start educating children on independence [14].

Children's participation in the preschool period is understood that children have the opportunity to express their views, understand about the activities they participate in, voluntarily and become active learners, having an impact on the community [22]. Research on children's participation in early childhood education shows that even very young children are capable of making sense of their experiences and are, in fact, very capable of expressing themselves. Children's ability to form and express opinions and participate in decision-making is highly context-dependent, particularly on the extent to which adults can support and facilitate child participation [3]. [3]. According to the research results of advanced educators and the current trend of constructivist education, in order to form skills and develop independent capacity for children, it is necessary to create an environment for them to participate in and experience. When in a safe environment, children are confident enough to express their desire to operate according to their abilities and interests, to make choices, to decide on their own activities, and to actively participate [19], [**Error! Reference source not found.**].

Research results from Muhammad Saleh et al (2017) [13] show that independence needs to be formed and trained as soon as possible, specifically at the age of 3, when children begin to interact a lot with people other than parents and family members. This is the right time to socialize as well as practice independence for children. One of the outstanding characteristics of children is their ability to imitate what they see, hear, feel, and experience [13], so all the behaviors of adults around need to be an example for children to follow and develop independence. As can be seen, independence education in preschool children is a necessary job, helping children gain confidence in life, develop communication abilities, adapt to relationships in the environment, know how to take care of themselves, be aware of their own responsibilities, develop social skills, and greatly contribute to the comprehensive development of children. Children in the period of 3–4 years old are at the first stage of personality formation. Right at this stage, if they are taught independence, they will help form the foundation for later personality development [8], and independence is also an interest of many researchers [3], [23], [15], [16].

2. MATERIAL AND METHODS

The mixed method is used by two aspects, which one is to see real activities of children and these information then is processed by SPSS software to find the relations among variables. Observe and record activities in children's daily activities at kindergartens and families to see the impact of school and family on children, thereby assessing children's behavior, attitude, independence, and self-control in activities. Collecting information through observing communication and interaction activities between a teacher and the child. Use the form to observe and record the independence education activities for children 3–4 years old according to the participatory approach, measured by the 5-point Likert scale, 1 = Not yet implemented; 2 = rarely; 3 = occasionally; 4 = Quite often; 5 = Regularly. This survey is conducted in the areas which are urban and suburb of Hanoi, Vietnam with the characteristics of the participants described in the Table 1. Based on the concept of independence, the expression of independence in children 3–4 years old, the process of forming independence in children 3–4 years old, and the checklists collected, the thesis determines the criteria for assessing the expression level of independence in children 3–4 years old, including 3 criteria and 12 indicators as follows:

Criterion 1: Performing simple self-care activities (Physical autonomy)
Indicator 1: Can carry out eating and drinking activities.
Indicator 2: Self-care for simple personal hygiene in daily life
Indicator 3: Caring for the classroom and home environment
Criteria 2: Self-expression, expression of personal feelings and needs (emotional autonomy)
Indicator 4: Talking about your needs and seeking help when needed
Indicator 5: Expressing emotions
Indicator 6: Adapting to situations in a collective environment
Criteria 3: Self-selection and self-determination of simple activities (intellectual autonomy)
Indicator 7. Self-selection of activities, materials, and toys
Indicator 8: Make your own decisions about simple life activities.
Indicator 9. Come up with ideas and have your own way of doing games and activities.

Table 1 The characteristics of the participants

		No	**Percent**
Gender	Male	98	48.5
	Female	104	51.5
	Total	202	100.0
Ages (months)			

	36	33	16.3
	37	15	7.4
	38	14	6.9
	39	7	3.5
	40	8	4.0
	41	5	2.5
	42	22	10.9
	43	19	9.4
	44	7	3.5
	45	9	4.5
	46	31	15.3
	47	5	2.5
	48	27	13.4
	Total	**202**	**100.0**
Kinds of school			
Urban public schools		66	32.7
Suburb public schools		65	32.2
Urban non-public schools		41	20.3
Foreign non-public schools		30	14.9
	Total	202	100.0

3. RESULTS AND DISCUSSION

Table 2. Criterion 1: Performing simple self-care activities (Physical autonomy)

	1		2		3		4		5		$\bar{x}$	*SD*	Order
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**			
1. Can carry out eating and drinking activities.													
1.1. Eat by yourself	8	4	12	5.9	54	26.7	17	8.4	111	55	4.04	1.190	4
1.2. Using a cup to drink water	3	1.5	9	4.5	31	15.3	17	8.4	142	70.3			
1.3. Take their own food and drink from the dining table and a water bottle	10	5	11	5.4	51	25.2	22	10.9	108	53.5	4.02	1.207	6
2. Self-care for simple personal hygiene in daily life													
2.1. Going to the toilet by themselves	4	2	1	0.5	37	18.3	14	6.9	146	72.3	4.47	0.942	1
2.2. Wear the shoes.	4	2	8	4	31	15.3	15	7.4	144	71.3	4.42	1.015	2

2.3.	Self-dress of simple clothes	18	8.9	14	6.9	80	39.6	20	9.9	70	34.7	3.54	1.274	14
3.	Caring for the classroom and home environment													
3.1.	Arrange utensils and toys	13	6.4	5	2.5	54	26.7	18	8.9	112	55.4	4.04	1.227	4
3.2.	Clear the table, wipe the table, and prepare the spoon	23	11.4	20	9.9	82	40.6	17	8.4	60	29.7	3.35	1.308	18
3.3.	Know how to water plants and pick up trash	25	12.4	10	5	79	39.1	11	5.4	77	38.1	3.52	1.365	15

Table 2 provides information on children's independence in performing eating activities, taking care of simple personal hygiene, and taking care of the classroom environment. The data are statistically based on five levels, from 1 (not done) to 5 (frequent). Figures are calculated as a percentage of the number of children participating in each activity.

In the performance of eating and taking food activities, the activities "Self-feeding" and "Drinking water from a cup" were best performed at level 5, accounting for 55% and 70.3%, respectively. Meanwhile, at this same level, the activity "Get your own food and drink from the dining table and a water bottle" has the lowest rate, accounting for 53.5%. This indicates that some children were able to perform these activities at an average or fairly good level.

Regarding personal hygiene care, the activities "Go to the toilet by yourself" and "put on shoes by yourself" reached the highest rate at level 5, about 72.3% and 71.3%, respectively. Meanwhile, "Simply dressing yourself" has the highest rate at level 3 with 39.6%, which means that only a few children achieve a high level of independence in this.

The number and proportion of children who are independent in taking care of the classroom environment tend to decrease compared to the above two aspects. The data shows that children have a high sense of "Pick up and put away things and toys", reaching level 5 with 55.4%. The remaining two activities, respectively, "Cleaning the table, wiping the table, sharing spoons" and "Knowing how to water the plants, picking up the trash by yourself," only achieved the highest rate at level 3 with 40.6% and 39.1%, respectively. In general, children's levels of independence in performing activities such as eating, taking care of personal hygiene, and the classroom environment can be found to be markedly different between activities and assessment levels. Regular activities performed at level 5 accounted for a large percentage, indicating that the child's independence was well expressed. Figures at level 3 are relative thresholds, which may need to be considered in order to provide support and encouragement for children in the development of these independent skills.

Table 3. Criteria 2: Self-expression, expression of personal feelings and needs (emotional)

	1		2		3		4		5		$\bar{x}$	*SD*	Order
	N	%	N	%	N	%	N	%	N	%			
1. Talking about your needs and seeking help when needed													
1.1. Speak up in need.	20	9.9	9	4.5	55	27.2	16	7.9	102	50.5	3.85	1.35	11
1.2. Know how to make suggestions and choices.	18	8.9	18	8.9	62	30.7	7	3.5	97	48	3.73	1.37	12
1.3. Know how to invite friends to play, talk about intentions to play, and perform tasks.	23	11.4	14	6.9	80	39.6	7	3.5	78	38.6	3.51	1.36	16
2. Expressing emotions													
2.1. Express own feelings	13	6.4	8	4	49	24.3	11	5.4	121	59.9	4.08	1.25	3
2.2. Recognize other people's feelings and show affection to others.	7	3.5	14	6.9	77	38.1	6	3	98	48.5	3.86	1.20	10
2.3. Express apology and gratitude.	16	7.9	20	9.9	68	33.7	8	4	90	44.6	3.67	1.33	13
3. Adapting to situations in a collective environment													
3.1. Confident and comfortable when coming and going to class or when loved ones leave	12	5.9	14	6.9	48	23.8	18	8.9	110	54.5	3.99	1.26	7
3.2. Stay calm when are disturbed by others.	20	9.9	20	9.9	78	38.6	14	6.9	70	34.7	3.47	1.32	17
3.3. Listen and follow the rules of play and classroom rules.	11	5.4	17	8.4	57	28.2	9	4.5	108	53.5	3.92	1.28	8

The above mentioned the criteria for self-expression, expression of feelings, and personal needs are considered in three aspects: Speaking of one's own needs and seeking help when needed; expressing feelings, adapting to situations in a collective environment. The data are statistically based on five levels, from 1 to 5. Figures are calculated as a percentage

of the number of children participating in each activity.
Among the children participating in the study, the percentages of "Speaking of need when needed for help" and "Knowing how to make your own suggestions and choices" reached level 5 with 50.5% and 48%, respectively, showing children's initiative in being clear about their needs and confident when asking for help. However, with "Speaking in need of help", the percentages reaching levels 1 (9.9%) and 2 (4.5%) are still significant, indicating that some children need support to develop this ability. Similar to the topic "Knowing how to make your own suggestions and choices," with the number of children reaching levels 1 (8.9%) and 2 (8.9%). Meanwhile, the difference between the levels of "Knowing to invite friends to play and talking about the intention to play or perform the task" is not too large, with the number of children reaching levels 3 (39.6%) and 5 (38.6%) almost equally, indicating that many children are likely to invite their friends to play and show their intention to play or perform the task.
In terms of emotional expression, the number of children reaching level 5 is the highest through the actions of "Showing your own feelings", "Recognizing others' feelings and showing affection to others" and "Expressing guilt and gratitude," respectively 59.9%, 48.5%, and 44.6%. However, the group selected for level 3 also reached the relative thresholds of 24.3%, 38.1%, and 33.7%, showing that there is not too much difference between the two levels mentioned above.
In adapting to situations in a group environment, children who chose "Confident and comfortable when coming and going to class or when relatives leave" and "Listening, obeying play rules, and classroom rules" accounted for the majority, with 54.5% and 53.5%, respectively, at level 5. Similarly, the number of children who chose "Calm when being disturbed by others" reached the same level, and the ability to adapt was 38% and 5 (34.6%). good in collective environments and situations.
From the data table, the number of children reaching level 5 is relatively high for most of the criteria. This shows that the group of children participating in the study is relatively confident and expresses their emotions well. However, the expression of individual needs and the ability to adapt to situations in a collective environment still have a clear difference between levels.

Table 4. Criteria 3: Self-selection and self-determination of simple activities (intellectual)

	1		2		3		4		5		$\bar{x}$	*SD*	Order
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**			
1. Self-selection of activities, materials, and toys													
1.1. Know how to choose activities, toys, and materials for the liking.	16	7.9	7	3.5	47	23.2	17	8.4	115	56.9	4.03	1.289	5
1.2. Know how to choose	13	6.4	13	6.4	44	21.8	16	7.9	116	57.4	4.03	1.279	5

	games and activities to liking.													
1.3.	Find materials without help.	26	12.9	18	8.9	86	42.6	11	5.4	61	30.2	3.31	1.333	19
2.	Make your own decisions about simple life activities.													
2.1.	Do own learning and playing activities.	23	11.4	13	6.4	75	37.1	13	6.4	78	38.6	3.54	1.357	14
2.2.	Choose the food and drink	17	8.4	13	6.4	47	23.3	19	9.4	106	52.5	3.91	1.332	9
2.3.	Decide on play ideas and learn after being suggested by others.	33	16.3	20	9.9	39.1	79	13	6.4	57	28.2	3.20	1.383	20
3.	Come up with ideas and have your own way of doing games and activities.													
3.1.	Give opinions about games and activities.	42	20.8	25	12.4	81	40.1	10	5	44	21.8	2.95	1.372	21
3.2.	Giving ideas on how to make visual produ	35	13.7	35	13.7	95	47	10	5	27	13.4	2.80	1.190	22

	cts and games													
3.3.	Find or try new ways to play or make creations or toys.	46	22.8	35	17.3	84	41.6	11	5.4	26	12.9	2.68	1.249	23

The table above provides information on children's independence in performing eating activities, taking care of simple personal hygiene, and taking care of the classroom environment. The data are statistically based on five levels, from 1 to 5. Figures are calculated as a percentage of the number of children participating in each activity. With the criterion of self-selecting and self-determining about simple activities, "Knowing how to choose activities, toys, and materials according to your liking" and "Knowing how to choose games, doing activities at will" accounted for the majority, reaching level 5 with 56.9% and 57.4%, respectively. However, the number of children tended to decrease slightly when choosing "Find materials by themselves without adult assistance," with the highest 42.6% at level 3, indicating that children still have difficulty finding toys and materials by themselves.

With the ability to self-determine about simple activities in life, 38.6% of the participants chose level 5, not too much of a difference from 75% at the corresponding level 3 in "Performing their own learning and playing activities". The ability to "Choose suitable food and drink by yourself" also reached the highest percentage at level 5, with 52.5%. Meanwhile, at this same level, only 28.2% of children have the ability to "Decide on playing and learning ideas after being suggested by others".

When asked to give ideas or have their own way to implement games and activities, the tendency to choose level 3 was the highest in all three aspects: "Give the children's opinions on games and activities", "Give ideas on how to make visual products and games" and "Find or try new ways to play or implement visual products and toys", 47% and 41%, respectively. This shows that the ability of children to create ideas and learn to do it independently is still at a relative threshold.

In general, from the data table, it can be seen that the level of self-choice and self-determination of children about simple activities has a relative difference between levels. The activities at levels 3 and 5 did not change much, with the percentages all being correlated.

It is clear that the studies and the research trends and content in this article share some similarities. These similarities include the physical and mental characteristics of preschoolers, such as behavioral commitment [12] or the four different domains of school readiness among the children: early learning skills, self-regulation, social-emotional development, and physical health and motor development [2], as well as how preschoolers and adults constructed and a sense of self. Additionally, according to the findings of these research, an accumulation of ACEs raised the percentage of items on which a child requires support or is at risk, independent of the school preparation domain studied [2] and Children and adults construct different moral and conventional norms from social experiences, which in turn guide judgments, reasoning, and behavior [9]; and significant relations between children's engagement and child and family demographic characteristics [12] .

On the other hand, it's also feasible to find some contrasts between this study with some other recent studies on children's independence, or the aspect of children's independence. Social: Take into account how migrant families' living arrangements have affected young children in China and contrast the early learning opportunities for urban migrant children and urban native children [5]; or look at associations between residential and preschool economic match and 3- and 4-year-old children's skills that were inconsistent and dependent on the economic status of the children's residential neighborhood [4]. The performance of economically disadvantaged bilingual and monolingual preschoolers on an English novel word learning task was compared, and it was investigated whether differences in the groups' novel word learning performance levels are explained by differences in the children's executive function (EF) skills [7] associations between preschool economic neighborhood match and the children's skills were inconsistent and dependent on the economic status of the children's residential neighborhood [4] . Numbers-wise, minimal empirical research has looked at how virtual reality technology might affect preschoolers' prosocial conduct [20] and how a digital educational game can foster preschoolers' creative thinking [25]

Among the discoveries, the creators point out that discoveries outline how the concept of statistic coordinate can be connected to a extend of settings and contribute to the field's understanding of how the energetic interaction of children's numerous day-to-day settings may relate to early learning and advancement [4]. And in any case of parental movement status, the early learning openings of children living in rustic ranges were comparative. Moving to urban ranges was emphatically related with fortifying domestic learning situations and the probability of preschool enrollment, but urban local children experienced more invigorating domestic learning situations and had higher preschool enrollment rates than transient children [5]. Besides, children within the pro-social diversion condition displayed more making a difference and sharing behaviors than children within the rough, positive influence, or impartial conditions. Positive influence intervened the impact of VR prosocial play on prosocial behavior; the impact of competence was not critical. The commitment of gamified VR situations to encouraging prosocial advancement amid the preschool age [20] or computerized instructive diversion preparing may viably progress the inventive considering of preschool children [25]

4. CONCLUSION

Observational results show that the level of independence of children in the survey group has a fairly good level in all criteria, from activities that represent physical behaviors and activities in daily activities to expressions of mental activity and behaviors that show high levels of physical and mental requirements of children. It can be said that the fine and gross activities of the children in the survey group have shown the current level of independence of children of preschool age in preschools in Vietnam. This also shows some aspects of education in schools: preschool educational activities have an influence on the development of independence in particular and the cognitive development of preschool students in general.

In fact, at the age of 3–4 years old, the expression level of children's independence is not high, incomplete, and does not properly reflect the level of psycho-physiological development of the age group. Researchers are often more inclined to study the psychophysiological characteristics and manifestations of age than to conduct in-depth

research on educating children about independence, an aspect of personality. Education for children's independence has been researched and proposed by many scientists, psychologists, and educators for different age groups in different environments. Research on the independence of Vietnamese children aged 3–4 years has not received much research attention from scientists, so there are still gaps that need to be clarified, contributing to creating the best conditions for the development and maturity of children.

As society develops and advances, ensuring human rights, including children's rights, is also concerned and implemented. Education according to the participatory approach is a humane approach based on children's rights and autonomy, which is especially important in the current period, requiring teachers to understand and respect children's rights in the process of caring for and educating children. In fact, preschool teachers do not have a clear understanding of children's participatory approach, and there are limited resources to guide teachers on independence education in general and participation-based independence education for children in particular. Therefore, it is necessary to have in-depth scientific studies and specific guidelines on self-reliance education for preschool children, especially for children 3–4 years old.

CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

REFERENCES

1. Ivanov, V.D., Borissova, J., Vanzi, L., 2000, A&A, 362, L1, "Deep Near Infrared Photometry of New Galactic Globular Clusters"
2. Jackson, D. B., Testa, A., & Vaughn, M. G. (2021). Adverse Childhood Experiences and School Readiness Among Preschool-Aged Children. The Journal of Pediatrics, 230, 191-197.e5. https://doi.org/https://doi.org/10.1016/j.jpeds.2020.11.023
3. Jonna Kangas, Enhancing children's participation in early childhood education through the participatory pedagogy, ISBN 978-951-51-1832-5 (paperback) ISBN 978-951-51-1833-2 (PDF) Unigrafia 2016
4. Gardner, M., Hanno, E. C., Wei, W. S., Turco, R. G., Jones, S. M., & Lesaux, N. K. (2023). Residential and preschool neighborhoods: Exploring patterns of socioeconomic match and its association with child skills across Massachusetts. Early Childhood Research Quarterly, 63, 24–38. https://doi.org/https://doi.org/10.1016/j.ecresq.2022.11.004
5. Gong, J., & Rao, N. (2023). Early learning opportunities of preschool children affected by migration in China. Early Childhood Research Quarterly, 63, 228–239. https://doi.org/https://doi.org/10.1016/j.ecresq.2022.12.010
6. Hoffmann, S., Sander, L., Rattay, P., Blume, M., Hövener, C., Schneider, S., Richter, M., Pischke, C. R., Schüttig, W., De Bock, F., & Spallek, J. (2023). Do family characteristics contribute to a socioeconomic gradient in overweight in early childhood? – Single mediation analyses of data from German preschool children. Preventive Medicine Reports, 33, 102178. https://doi.org/https://doi.org/10.1016/j.pmedr.2023.102178
7. Huang, R., Baker, E. R., & Schneider, J. M. (2023). Executive function skills account for a bilingual advantage in English novel word learning among low-income preschoolers. Journal of Experimental Child Psychology, 235, 105714. https://doi.org/https://doi.org/10.1016/j.jecp.2023.105714
8. K.D. Usinxki (1999). How to promote student positivity?. Vietnam Education Publishing House
9. Langenhoff, A. F., Dahl, A., & Srinivasan, M. (2022). Preschoolers learn new moral and

conventional norms from direct experiences. Journal of Experimental Child Psychology, 215, 105322. https://doi.org/https://doi.org/10.1016/j.jecp.2021.105322
10. Le Huong Ly (2005), Methods for training children to be independent. Labor and Social Publisher
11. Liu, G., Chen, Y., Ou, P., Huang, L., Qian, Q., Wang, Y., He, H.-G., & Hu, R. (2023). Effects of Parent-Child Sandplay Therapy for preschool children with autism spectrum disorder and their mothers: A randomized controlled trial. Journal of Pediatric Nursing, 71, 6–13. https://doi.org/https://doi.org/10.1016/j.pedn.2023.02.006
12. McWayne, C. M., Ochoa, W., Segovia, J., Zan, B., Greenfield, D., & Mistry, J. (2023). Engagement in the preschool classroom: Brief measures for use with children from ethno-racially diverse and low-income backgrounds. Early Childhood Research Quarterly, 64, 177–185. https://doi.org/https://doi.org/10.1016/j.ecresq.2023.03.002
13. Muhammad Saleh (2022). A Case Study of Culturing Children's Independence Attitude Through Parent's Role and Teacher's Role. https://journal.uny.ac.id/index.php/jppm/article/download/47465/pdf],
14. Ngo Cong Hoan (1995), Psychology of children from birth to 6 years old. Episode 1,2. Thuy Loi printing factory.
15. Nguyen Hong Thuan (2002), Some measures of family impact to develop independence for preschool children 5–6 years old. Doctoral Thesis in Education, Vietnam Institute of Educational Sciences.
16. Nguyen Thi My Trinh (2004), Research on psychological conditions of the development of independence in children 5–6 years old in thematic role-playing games/ PhD thesis, Institute of Strategy and Program Development
17. Raymond Beach (1990), Family Education. Ho Chi Minh City Publishing House. [Family education], The Publishing House of Ho Chi Minh city.
18. Rochmat Wahab and Yulia Ayriza M. Fadllillah, Un understanding the experience of early childhood education Teachers teaching and training Student independence at School,Qualitative Report 2020 Volume 25, No. 6, Article 3, 1461-1472
19. Schulman, Nancy (2010); Translator Kieu Hoa, Ngoc Lam, Thanh Xuan, Encouraging children to develop independence, Times Publishing House.
20. Shoshani, A. (2023). From virtual to prosocial reality: The effects of prosocial virtual reality games on preschool Children's prosocial tendencies in real life environments. Computers in Human Behavior, 139, 107546. https://doi.org/https://doi.org/10.1016/j.chb.2022.107546
21. Schunk, D. H., & Meece, J. L. (2006). Self-Efficacy Development in Adolescence. In F. Pajares, & T. Urdan (Eds.), Self-Efficacy Beliefs of Adolescents. Greenwich, CT: Information Age Publishing.
22. Tara Winterton (1997), Communicating with Children, C.R.S. Development and Support Organization, Hanoi.
23. VX. Mukhina (1980), Kindergarten Psychology Volume 1, 2, Education Publishing House
24. Xmiecnop A.A. (editor), Leonchiep A.N., Rubinxtein X.L. and N.K. Krupxcaia, Psychology, Education Publishing House, Hanoi.
25. Xiong, Z., Liu, Q., & Huang, X. (2022). The influence of digital educational games on preschool Children's creative thinking. Computers & Education, 189, 104578. https://doi.org/https://doi.org/10.1016/j.compedu.2022.104578