

## Article

# Russian and Indian Preschool Educators' Beliefs about Distance Education for Preschoolers

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**Abstract:** Increasing interest in the digitization of education raises the question of the specifics of the use of digital devices in preschool education and the perception of these new practices by educators. The primary purpose of this study was to examine educators' beliefs about distance education for preschool children in Russia and India, given their professional education and cultural background. These two countries were chosen to explore how the education system has dealt with emergency remote teaching in countries with social and economic diversity. The study involved 909 preschool educators (623 from Russia and 286 from India). An exploratory factor analysis of educators' responses to the Educators' Beliefs about Distance Education for Preschoolers Questionnaire identified three factors. The first factor reflects the degree of positive or negative beliefs about the promotion potential of distance education for preschool children's development. The second represents educators' beliefs about the effectiveness of distance education depending on different teacher, child, and environmental conditions. The third is manifested in the belief among educators that distance education is ineffective in preschool education. The findings suggest that the years of professional education in early childhood pedagogy impacts educators' beliefs about distance education for preschool children. Regardless of the number of years of education training, educators in India were more likely to believe in the high promotion potential of distance education in early childhood.

**Keywords:** distance education; distant teaching; distant learning; teacher beliefs; preschool education; COVID-19 pandemic



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## 1. Introduction

The first few years of a child's life are critical to building the foundations of learning that help them succeed in school and beyond (UNICEF, 2017). Educators worldwide are concerned about preschool education, as unless children are given quality education in their initial years, their future development will be influenced. The COVID-19 pandemic has increased these concerns. Distance education has received focus during these difficult times as a viable medium of education. Increasing interest in the topic of digitalization of education raises the question of the specificities of the use of digital devices in preschool education and the evaluation of this and its impact. The global COVID-19 (short for coronavirus disease, i.e., "disease caused by coronavirus", identified in 2019) pandemic and the economic, health, and educational disruption it has caused have affected virtually every aspect of modern human life [1]. This is the first time that strict quarantine and other restrictions have been imposed in most countries in order to "flatten the curve" of new cases. According to analysts at The Lancet Child & Adolescent Health, schools and kindergartens were suspended in 188 countries at the start of the pandemic [2]. According to other reports, the COVID-19 pandemic has affected more than 860 million children and

adolescents worldwide [3]. The most affordable way to fill the gaps in the interrupted education process has been through remote teaching, which has been used extensively during the pandemic [4].

### *1.1. Preschoolers during a Pandemic*

Families with children represent one of the populations most severely affected by the restrictive measures of the pandemic [5–8]. They experienced a psychological adjustment to the new situation and an uncertain future. The closure of schools and kindergartens imposed an obligation on parents to care for their children around the clock. In contrast, as it became known later, the effectiveness of the closure remains uncertain [9]. For many, this meant that parents had to work, take care of the household, and look after their children without the usual sources of support (kindergartens, grandparents, or house help) in conditions of obligatory social isolation [10]. The psychological well-being of parents during the quarantine period deteriorated dramatically concerning typical situations [3,5]. Researchers recorded difficulty concentrating, irritability, anxiety, nervousness, and restlessness as the most common symptoms parents complained about [11]. High levels of parental stress were significantly associated with the number of emotional problems in children [12–14]. Nevertheless, the available research has been conducted mainly on adults, so the results cannot be extrapolated to children.

“Growing up in the shadow of COVID-19” is the name given by researchers to an entire generation of children whom researchers and practitioners have overlooked because of the current epidemiological situation worldwide [15]. The authors of this concept argue that although children are less clinically susceptible to COVID-19, they experience several adverse effects of societal changes [14,16,17]. The closure of schools, kindergartens, and outdoor playgrounds and the reduction in the number of supplementary activities have reinforced the social disproportions, diversity, and inequality previously present in society [18,19]. According to research, between March and June 2020, children from disadvantaged families had fewer opportunities to engage in developmental activities, had less access to open space (private playgrounds), and spent more screen time each day than their peers from wealthier families [15]. In addition to increased screen time during the pandemic [20,21], children increased their risk of developing other harmful habits, such as overeating, lack of physical activity, and sleep disturbances. One study focused on the possibilities of restoring missed months of social and cognitive development in children [22]. The study found that communication within the family can partially compensate for educational disruption in preschool children. However, this conclusion is drawn by the researchers only based on the increased amount of time parents spent with their children in social isolation, without taking into account the types of joint activities and individual psychological characteristics of the parents. In the case of families where both parents are working and during COVID-19 times working from home as well as managing all kinds of household work, even this time was less. Meanwhile, even before the pandemic, watching video content was one of the most common shared activities among children. The pandemic has, in turn, significantly increased the amount of screen time children receive [11,23,24]. This means that screen time during the pandemic displaces the developmental activities and lessons that were a necessary part of the daily schedule when children attended educational institutions. Another risk factor for children’s mental development is the striking reduction in physical activity and frequent sleep disturbances during quarantine, as reported in several studies [13,15].

In conclusion, the pandemic has seen a dramatic interruption of social contacts, an impoverished educational environment, changes in routines and daily routines, and radical changes in child–parent relationships and the psycho-emotional state of parents, which must indeed have immediate consequences for children’s development and learning. The pandemic has significantly changed most children’s lives, but its effects remain largely unexplored [13]. To some extent, this period can be called “missing months” in development in children. The pandemic is likely to continue in the near future and have a significant

impact on the development and learning of children of all ages and their social interactions. In this light, there is an evident lack of robust research to develop programs to reduce the potential for a negative impact of the COVID-19 pandemic on children's development and academic achievements and to support children in recovering from the missed months of social and cognitive development during this crucial preschool period of life.

### *1.2. Distance Education in Preschool Age*

The defining characteristics of distance education are the physical separation of students and teachers during classes and the use of digital devices and technologies (e.g., videoconference) [25]. Distance education combines two processes: distance teaching and distance learning [26]. The first refers to the methodology and teacher's activity. The second relates to the learner's experience and activities. Distance education was initially used to teach students who could not attend the classroom. Later, due to its convenience and cost-effectiveness, distance education became more commonly used in schools, colleges, universities, and workplaces [27]. Today, distance education is an integral part of education that continues to grow [2]. However, in preschool education it is a relatively new practice. Over the last decade, the educational preschool practice has accumulated some examples of distance education applications for children unable to attend kindergartens or educational centers for various reasons, such as health problems. On the other hand, distance education has found applications in supplementary services for children beyond face-to-face education and communication. Many projects have explored the potential of using digital devices and technologies in early childhood education, but almost all of them involve face-to-face teacher-child interaction. The tense and sudden increase in the use of distance-based practices in education was triggered by the beginning of the COVID-19 pandemic.

Distance education (specifically, emergency remote teaching) is one of the few tools available to educate children in a raging pandemic. Against the background of frequent changes in the epidemiological situation worldwide, study of the educational process during the pandemic, particularly distance education [14], is required. This will then allow for more effective policies to control the spread of the disease and maintain the quality of the educational process [28]. The least researched level of education during the raging pandemic today is preschool education and how it adapts to a possible switch to a distant mode [15]. The situation is complicated by the adult generation's ambivalent and rather hostile attitude towards screen time among preschool children. These public opinion trends call into question the effectiveness of digital devices in preschool education. It is highly probable that economic and cultural factors in countries may influence the prevalence and acceptance of distance practices in preschool education.

The current study aims to explore how large education systems in countries with social and economic diversity face emergency remote teaching with preschoolers. For this purpose, preschool educators' beliefs about distance education across Russia and India have been analyzed. These countries were chosen based on their social, economic, and cultural diversity, and at the same time for their common economic development tendencies such as Gross Domestic Product in 2020 (India 6th in the world ranking, Russia 11th), Unemployment Index in 2020 (India 90th in the world ranking, Russia 103rd) and government expenditure on pre-primary education as % of GDP (India 3.84%, Russia 3.79%) [29].

### *1.3. Cultural Differences between Russia and India*

The Six Dimensions of National Culture (6-D model) by Hofstede [30] is widely used in research and practice methodology for understanding and analyzing cultural patterns across countries [31–33]. The 6-D model includes dimensions that cover the critical underlying principles by which a person from a particular culture frames his or her behavior: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long-Term Orientation, and Indulgence [30,33].

Regarding Russia and India, the 6-D model indicated the most considerable differences in the Uncertainty Avoidance and Long-Term Orientation dimensions [34]. Russia's high score on the Uncertainty Avoidance dimension (95) indicates the extent to which culture members feel threatened by ambiguous or unknown situations. The use of ICT with preschool children can, to some extent, be classified as such a situation. With a high score on the Long-Term Orientation dimension (81), Russia is a country where people believe that the truth depends very much on the situation, context, and time. In comparison, India has much lower scores in Uncertainty Avoidance (40) and Long-Term Orientation (51).

#### *1.4. Preschool Education in Russia and India*

Preschool education in Russia constitutes the first level of state-funded general education. It is intended for children from 3 to 7 years of age. Preschool education is not compulsory; however, more than 8 million preschoolers attend public kindergartens, more than 80% of this age cohort. Public kindergartens in Russia operate by fixed educational programs, which they develop themselves. However, the development of the programs must be guided by the requirements of the unified state standard for Early Childhood Care and Education (ECCE). The public kindergarten educational program contains a clear and detailed description of the educational and pedagogical activities. There are also private kindergartens in Russia, but their activities are not sufficiently regulated in compliance with preschool education standards, and they are regarded as supplementary education services. Due to high costs and insufficient quality monitoring, private kindergartens are much less in demand across the country. Preschool education in India is not compulsory either. However, in comparison to Russia, there are no single nationwide norms or standards for ECCE in India. Integrated Child Development Services (ICDS) offers non-formal education for children aged 3 to 6. Nowadays, 36 million children are enrolled in ICDS (Ministry of Women and Child Development 2015), the most extensive public child development program, which not only provides preschool education but also caters to the nutritional needs of children [35]. However, today, a large part of preschool services is still private. Surveys have shown that many parents with high socioeconomic status prefer private kindergartens. The main difference between private and public kindergartens is the intensive preparation of children for further schooling in private kindergartens.

To summarize, the preschool education systems in Russia and India are similar in that they target children from age 3 to 6 (India) and from age 3 to 7 (Russia); both countries have a large part of their preschool education sectors financed by the government; both also operate commercial kindergartens, which are in demand among high-income families. The main difference is that Russia has a state standard for preschool education that governs all kindergartens, whereas in India, there is currently no preschool education standard valid for all states.

Regarding distance education and digital devices and technologies in both countries, it is a relatively new trend that applies more to school and higher education [36]. Before the pandemic, Russian and Indian educators had no systematic distance teaching experience. In Russia, since 25 March 2020, many preschools, schools, and universities have been moved to distance education in order to minimize the risk of spreading the disease. The decision to hold distant classes in kindergartens was made individually by the administration, taking into account parents' wishes. In India, especially in Delhi and the NCR region, schools were closed as early as 6 March 2020, before the lockdown was announced. In some kindergartens, remote work by preschool teachers was started with the children. The government of India gave guidelines for digital education for classes from Preschool up to Class 12. The recommendation for preschoolers was an interaction with the parents for not more than 30 min, guiding them on how to use the e-content using available gadgets at home [37]. In India, several initiatives were undertaken towards digital education, such as DIKSHA (Digital Infrastructure for Knowledge Sharing), which provides a web portal for e-content for Classes 1–12; Swayam Prabha TV channels, which telecast educational content for Classes 1–12; and radio broadcasting for children living in remote areas with no

access to digital gadgets, especially for Classes 1–5 [38]. A survey reported that nearly 95% of parents surveyed enrolled their children in either online or homeschooling to ensure some form of continuity in attaining academic skills. However, they also reported some level of worry regarding their children’s social and physical development [39]. Few studies delve into the digital competency of preschool teachers or the change in the enrollment rate for preschool education.

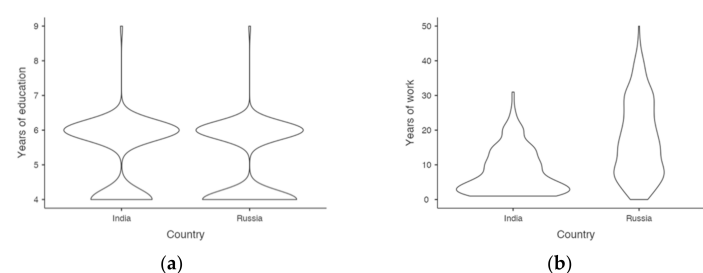
### 1.5. Current Study

The current study aims to explore how large education systems in countries with social and economic diversity face emergency remote teaching with preschoolers, controlling for teachers’ education, cultural background, and length of service. Because of cultural differences between the two countries based on the original cultural categorization (the 6-D model) provided by Hofstede [30], we would expect differences in attitudes of educators towards various dimensions of distance education (DE). Hence, it is essential to understand teachers’ perceptions of distance education and examine the factors that determine these perceptions. The first hypothesis of the current study is that years of professional education in early childhood pedagogy impacts educators’ beliefs about distance education for preschool children (even when country of residence is taken into account). The second hypothesis is that Russian and Indian educators hold different beliefs about distance education for preschool children when controlling for years of professional education. The third hypothesis is that educators hold different beliefs about distance education depending on years of work experience, controlling for years of education and country of residence. This research provides a possible direction for discovering new possibilities and maintaining the effectiveness of early childhood education even in the face of a pandemic.

## 2. Methods

### 2.1. Participants

The study involved 909 kindergarten educators, 286 from India and 623 from Russia, who work with children aged 3 to 7 in the public kindergarten sector. Of these, 80.1% were educators, 14.1% were deputy heads, and 5.8% were kindergarten teachers. The length of education training in preschool education was four years (bachelor’s or secondary education and professional retraining courses) for 42.6%, six years (master’s or specialist in the Russian education system) for 56.5%, and nine years (completed postgraduate course) for 0.9% (see Figure 1). Years of teaching experience in kindergarten was on average significantly greater for Russian educators ( $M = 17.31$ ,  $SD = 6.42$ ) compared with educators from India ( $M = 8.13$ ,  $SD = 10.95$ ) ( $t = 13.09$  (903),  $p < 0.001$ ). Among respondents, 14.1% rated their family’s financial security level as below average, 74.7% as average, and 11.2% as above average. Of those surveyed, 25.1% had already had experience in running distance education for preschool children. Teachers in both countries used traditional approaches to teaching preschool children online: reading and discussing stories, learning rhymes and songs, didactic games, studying visual materials, and talking about events in children’s lives. Teachers reported that children were receptive to the new format but needed assistance from adults while participating in the online lessons.



**Figure 1.** Comparing Russia and India in terms of years of professional education in early childhood pedagogy (a) and years of work experience as a preschool educator (b).

## 2.2. Procedure

The data were collected between November and December 2020. The data collection process was organized similarly in both countries. First, surveys (in Russian and Hindi languages) were created on the survey service <https://www.testograf.ru> (accessed on 8 December 2021). Then, the survey was presented in electronic form for Russian and Indian educators who work with children aged 3 to 7 in the public kindergarten sector. The link to the questionnaire was distributed through higher education institutions in preschool education and heads of public kindergartens and schools in large cities in Russia and India. The main channels for distributing the link to the questionnaire were work emails and work chats in the common messengers in both countries. The accompanying text provided brief information about the study's aims, respondents' requirements, and the time needed to complete the questionnaire. The average time to complete the questionnaire was 29.4 min across both countries. The information collected in the study is anonymous. The study and consent procedures were approved by the Ethics Committee of the Faculty of Psychology at Lomonosov Moscow State University (approval no: 2021/68).

## 3. Materials

### 3.1. Educators' Beliefs about Distance Education for Preschoolers Questionnaire

This questionnaire is based on extensive developmental and educational literature on distance education (DE) [11]. The questionnaire includes questions on distant teaching (teacher activity) and distant learning (child activity). The questions are arranged around the following three dimensions: (a) Pros vs. cons of distance education for preschool children; (b) Factors affecting the effectiveness of distance education for preschool children; (c) Applicability of distance education to children's development (Table 1). The questionnaire is structured with 9 to 19 questions for each of the three dimensions, with a total of 38 statements where the educators gave their level of agreement on a 5-point Likert scale from 1 ("Strongly disagree") to 5 ("Strongly agree").

**Table 1.** Factors of beliefs about distance education for preschool children among preschool educators in Russia and India (extracted using the principal axis factoring method).

	Factor			Uniqueness
	1	2	3	
<b>Promotion Potential</b>				
DE promotes communicative skills	0.873			0.295
DE promotes the ability to regulate their behavior	0.873			0.285
DE promotes the ability to recognize emotions	0.871			0.281
DE promotes the ability to understand emotions	0.853			0.284
DE promotes the ability to regulate their emotions	0.853			0.303
DE promotes speech skills	0.847			0.336
DE promotes self-regulation skills	0.829			0.308
DE promotes socio-dramatic play	0.751			0.398
DE promotes the development of thinking skills in preschool children	0.676			0.386
DE promotes mathematical abilities	0.670			0.464
<b>Condition Dependency</b>				
Effectiveness of DE depends on the teacher's level of computer skills		0.775	D	0.414
Effectiveness of DE depends on the teacher and her or his professional competence		0.761		0.393
Effectiveness of DE depends on the quality of methodological support provided by the kindergarten		0.716		0.494
Effectiveness of DE depends on the quality of technical support provided by the kindergarten		0.709		0.513

Table 1. Cont.

	Factor			Uniqueness
	1	2	3	
<b>Condition Dependency</b>				
Effectiveness of DE depends on the parental participation in the learning process		0.677		0.529
Effectiveness of DE depends on the child's learning motivation		0.655		0.521
Effectiveness of DE depends on the child's ability to concentrate and maintain attention during classes		0.630		0.571
Effectiveness of DE depends on the child's level of computer skills		0.614		0.641
Effectiveness of DE depends on the specific child and his or her individual characteristics		0.581		0.643
DE can only be effective if the child participates in the class together with the parent		0.492		0.665
<b>Resistance to Change</b>				
DE cannot replace offline learning for preschool children			0.719	0.497
DE is not as deep as offline learning			0.708	0.514
DE will never replace the developmental potential of offline learning			0.704	0.485
DE provides low memorability of the material taught compared with offline learning			0.598	0.662
DE significantly increases the workload for children compared with offline learning			0.597	0.583
DE significantly increases the workload for teachers compared with offline learning			0.529	0.666
DE can be just as comfortable for a teacher as offline learning			−0.449	0.573
DE is associated with higher fatigue in teachers than offline learning			0.421	0.791
DE reduces the teacher's authority in the children's eyes			0.417	0.824

Note: The principal axis factoring extraction method was used in combination with an "oblimin" rotation.

### 3.2. Statistical Analysis

Jamovi software version 1.0.7.0 (the Jamovi project) was used for all analyses in the current study. The first step was an exploratory factor analysis (the principal axis factoring extraction method was used in combination with an "oblimin" rotation) to identify the structure of the data and obtain the factor scores that best summarize the respondents' answers. The main analysis of the study was based on general linear models as it assessed the impact of two independent variables (years of professional education and cultural belonging) on dependent variables (factor scores of educators' beliefs about OL). Three general linear models were built to examine the effects of cultural belonging and years of professional education on each factor score. We used an alpha level of 0.05 for all statistical tests. ANCOVA was conducted to examine the role of culture (country of residence) when controlling for years of professional education. Then, ANCOVA was conducted to examine the role of seniority as a teacher, controlling for years of education and country of residence. For any of the three factors, partial eta squared ( $\eta^2_{\text{partial}}$ ) was used to determine the effect size (small  $\eta^2_{\text{partial}} = 0.010$ , medium  $\eta^2_{\text{partial}} = 0.060$ , large  $\eta^2_{\text{partial}} = 0.140$ ). The linear model fit was performed using OLS (Factor Score  $\sim 1 + \text{Country} + \text{'Years of education'} + \text{Country: 'Years of education'}$ ).

## 4. Results

### 4.1. Exploratory Factor Analysis

An exploratory factor analysis (principal axis factoring extraction method) was used in combination with an "oblimin" rotation to identify the internal structure of educators' beliefs about OL. Sampling adequacy was checked using the Kaiser–Meyer–Olkin test

(KMO). The total KMO was 0.929, above the commonly recommended value of 0.6 and indicating that variables were not multicollinear. Bartlett's test of sphericity was significant ( $\chi^2(703) = 21940, p < 0.001$ ). The number of factors was determined using eigenvalues ( $\geq 1$ ). The minimum factor load including a variable into a factor was 0.4. As a result, nine items were not included in any of the factors. Three factors reflecting educators' beliefs about distance education were identified (Table 1).

The first factor in Table 1 combines ten items of the questionnaire, which were "I believe that it is possible to structure an online class in such a way that it promotes the development of . . . ": communicative skills, ability to regulate their behavior, ability to recognize emotions, ability to understand emotions, ability to regulate their emotions, self-regulation skills, socio-dramatic play, thinking skills, and mathematical abilities among preschool children. This factor seems to characterize educators' beliefs about the *promotion potential of distance education* for preschool children's development.

The second factor, characterized as *condition dependency*, represents an idea of educators' beliefs about teacher, child, and environment factors that could impact distance education processes in preschool children. This factor includes nine items from the questionnaire, which were "I believe that the effectiveness of distance education for preschool children depends on . . . ": the teacher's level of computer skills; the teacher and her or his professional competence; quality of methodological support provided by the kindergarten; quality of technical support provided by the kindergarten; parental participation in the learning process; the child's learning motivation; the child's ability to concentrate and maintain attention during classes; the child's level of computer skills; the specific child and his or her individual characteristics, and the tenth item being that distance education can only be effective if the child participates in the class together with the parent. Individual condition dependency factor scores reflect educators' beliefs about the variability of distance education's effectiveness due to different teacher, child, and environment conditions.

The third factor is characterized as *resistance to change*, due to the composition of nine items that reflect disbelief or negative attitudes among educators towards distance education for preschool children: distance education cannot replace offline learning for preschool children, it is not as deep as offline learning, it will never replace the developmental potential of offline learning, it provides low memorability of the material taught compared with offline learning, it significantly increases the workload for children and educators compared with offline learning, it cannot be just as comfortable for teachers and is associated with higher fatigue in teachers compared with offline learning, and also it reduces the teacher's authority in the children's eyes.

Items not included in any of the factors were: distance education can be regarded as a useful experience for a child (0.490); distance education allows children to gain skills that are relevant in the modern world and will be useful to them in life, for example, computational thinking and computer skills (0.499); distance education is simply a modern form of traditional learning (0.695); distance education allows for higher visibility of visual materials (0.652); distance education helps reduce distractions, such as non-constructive behavior of peers (0.666); distance education allows the group size to be increased (0.706); distance education can be just as engaging for children as offline learning (0.558); distance education is a more comfortable form of learning than offline education from the organizational point of view (0.668); distance education is associated with higher fatigue in children than offline learning (0.831).

#### 4.2. The Role of Professional Education in Early Childhood Pedagogy

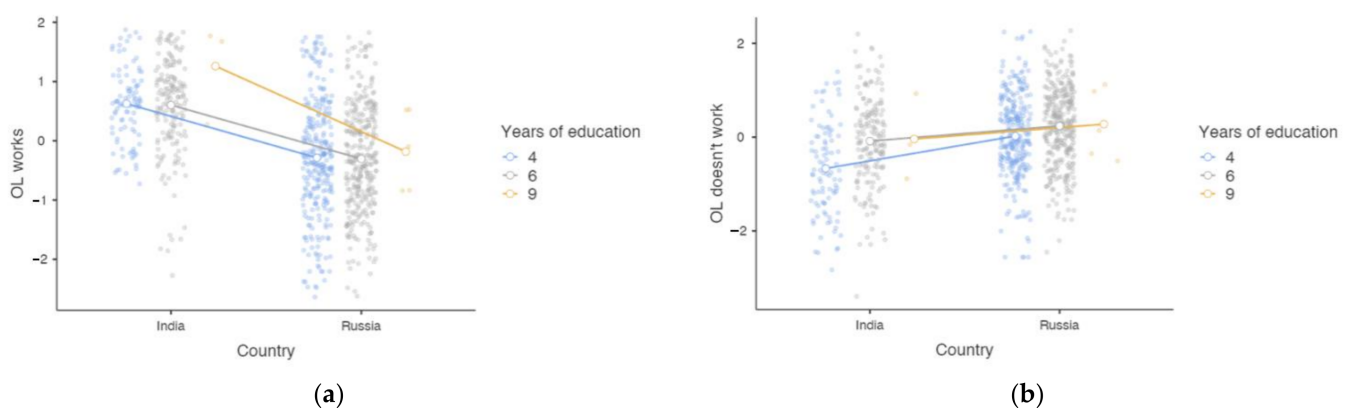
The next step was to test the hypothesis of differences in educators' beliefs about distance education as a function of the number of years of professional education in early childhood pedagogy, controlling for country of residence. An analysis was constructed to examine the effects of cultural belonging and years of professional education on each of the factor scores (promotion potential, condition dependency, and resistance to change) (Factor Score $\sim 1$  + Country + 'Years of education' + Country: 'Years of education'). The analysis



showed that when controlling for region of residence, a teacher's level of education was significantly related to the resistance to change factor score (R-squared = 0.0829; Adj. R-squared = 0.0776). Educators with 6 years of education, regardless of country of residence, were more likely than educators with 4 years of training to show resistance to the distance education format and note a number of its limitations ( $\beta = -0.395$ , 95% CI =  $-0.6286 - 0.09222$ ,  $p = 0.007$ ).

#### 4.3. The Role of Culture (Country of Residence)

The hypothesis of differences in educators' beliefs about distance education by country of residence was tested using the ANCOVA criterion when controlling for the number of years of professional education. The analysis revealed differences between the responses of educators from Russia and India in two out of three factor scores. Regardless of years of education training, educators in India had higher promotion potential factor scores for distance education in early childhood education ( $F = 23.93$ ,  $p < 0.001$ ) ( $\eta^2 = 0.026$ ;  $\omega^2 = 0.025$ ;  $df = 1$ ; mean square = 17.800) than those in Russia (Figure 2a). Regardless of the number of years of education, educators in Russia showed higher resistance to change factor scores for distance education in early childhood education ( $F = 3.73$ ,  $p < 0.024$ ) ( $\eta^2 = 0.008$ ;  $\omega^2 = 0.006$ ;  $df = 2$ ; mean square = 2.929) (Figure 2b).



**Figure 2.** Differences in educators' beliefs about distance education by country of residence when controlling for the number of years of professional education.

#### 4.4. The Role of Seniority as a Preschool Educator

We tested the hypothesis of differences in educators' beliefs about distance education as a function of years of work experience using the ANCOVA criterion. The analysis revealed no significant contribution of this factor, when controlling for number of years of education and country of residence, for any of the three factors ( $>0.05$ ).

## 5. Discussion

The present study sheds light on the challenges and benefits kindergarten teachers face in relation to various social and cultural factors. Digital learning has been necessary in COVID-19 times as children have not been able to attend school. It is also true that neither teachers nor children and their parents were prepared for these challenges [40,41]. The unprecedented manner in which distance education was imposed on both teachers and students has opened up a number of questions for teachers, parents, and education administrators. The success of distance education depends on teachers' perception of distance education as a suitable pedagogy for preschool students. This study examined what factors impacted teachers' perceptions of distance education, more specifically, the role of professional education in early childhood pedagogy, years of experience, and culture.

An exploratory factor analysis of educators' responses to the Educators' Beliefs about Distance Education for Preschoolers Questionnaire identified three factors. Based on the obtained factors, it was assumed that they could be conceptualized as promotion potential, condition dependency, and resistance to change factors. The first factor reflects the degree of positive or negative beliefs about the promotion potential of distance education for preschool children's development in relation to cognitive, emotional, and self-regulation development. The condition dependency factor represents an idea of educators' beliefs about the effectiveness of distance education depending on different teacher, child, and environment conditions. The resistance to change factor is manifested in the belief among educators that distance education is ineffective in preschool years.

The findings suggest that the years of professional education in early childhood pedagogy impacts educators' beliefs about distance education for preschool children, leading us to accept the first hypothesis. The teacher's perception of distance education tilts in the unfavorable direction as those with more years of education (6 years vs. four years) more staunchly support offline learning than distance education. Other research works have shown mixed results in this regard. A study by Kulal and Nayal [42] echoed similar results wherein teachers found it hard to effectively shift to a distant teaching mode, specifically due to a lack of proper training. However, another study found that teachers have an overall positive perception of distance education, with younger teachers showing more active participation. In the literature, the term "training" can be confusing as many researchers suggest that a lack of proper training leads to a negative perception of distant teaching. In such research, the term "training" is mostly used to mean training and development in distant teaching methods. In our research, the teachers with higher professional education are more trained in traditional teaching methods and hence perhaps find the transition to distance education more unsettling. The results suggest that the nature of expertise required in distant teaching is different from the training received for the offline mode. Teachers with higher professional education might need to unlearn and then further relearn the digital teaching pedagogy to have a more positive perception of distance education.

The second hypothesis tested the role of culture in perceptions and beliefs about distance education. India and Russia differ culturally in several of Hofstede's dimensions; for example, the greatest differences are in Uncertainty Avoidance and Long-Term Orientation. In other dimensions, differences are present but are not so striking. Research has shown that cultural groups can differ in their beliefs, perceptions, behaviors, and social institutions. It is also true that in some dimensions, they may also be similar. Within Hofstede's framework, Uncertainty Avoidance refers to how much a society is tolerant of uncertainty and ambiguity. It also shows to what extent members of a particular society attempt to minimize uncertainty. In high Uncertainty Avoidance cultures such as Russia, there is a greater emphasis on structure, rules, and security. In low Uncertainty Avoidance cultures such as India, one finds less emphasis on rules, structure, and security. In the dimension of Long-Term Orientation, which measures how society connects with the past and deals with the present and future, Russia scores high in Long-Term Orientation, thus suggesting more flexibility with tradition and adapting to the present time. On the other hand, India is comparatively low in Long-Term Orientation, which means there is more connectedness to the past and respecting traditions. The study hypothesized that Russian and Indian educators hold different beliefs about distance education for preschool children. This is because of differences in the cultural dimensions. Regardless of the number of years of education training, educators in India were more likely to believe in the high promotion potential of distance education in early childhood education. The adaptability of Indian educators is comparatively high to the needs of the new mode of teaching and learning, and this can be attributed to their flexibility and greater tolerance of uncertainty compared with their Russian counterparts. The results further showed that regardless of the number of years of education, educators in Russia are more likely than in India to resist change and to note potential adverse effects of distance education in preschool education. Russia is

higher in Long-Term Orientation as compared with India. Hence, Indian educators were more open in their evaluation of distance education than Russian educators. Thus, results suggest that culture plays a role in perceptions of distance education.

The third hypothesis of the study was not supported by the results obtained. The study revealed no significant contribution of years of teaching experience in beliefs about distance education when controlling for education and country of residence. Previous studies have found that a teacher's seniority positively influences the perception of distance education, wherein the physical distance between the teachers and students opens up room for communication gaps [43]. A greater level of seniority, experience, and practice was found to reduce the negative perception of such teaching distance [43]. However, our study found no such impact, which further underlines the challenges of distance education.

This study's conclusions are constrained by several limitations. A key limitation is that according to Global Change Data Lab, the share of the population using the Internet varies from country to country [44]. Possibly, the lower availability of the Internet and multimedia resources in India compared with Russia may account for the interest of Indian educators in online classes. However, this limitation is mitigated because preschool teachers in large economically developed cities were surveyed in both countries. The sample size from the two countries is also different. Comparative analysis results would have been more reliable if the Indian part of the sample had been more extensive.

The results have practical relevance in helping to better understand how large education systems in countries with social and economic diversity face emergency remote teaching with preschoolers. Identified factors associated with teachers' positive and negative attitudes towards online classes with children can form the basis for professional development programs. Training educators in distance learning is relevant as the pandemic continues to be a problem for global society even after two years [45]. In addition, the study showed the influence of cultural factors on teachers' attitudes towards distance learning, which must be taken into account in the development and implementation of any innovation.

## 6. Conclusions

Overall, the results of this study indicate that cultural factors play a significant role in perceptions of distance education. Indian teachers show more flexibility and hence have more positive perceptions about distance education. Since this is the first research study exploring the role of cultural differences between India and Russia in this particular area, more research is needed to explore the cultural differences and similarities in teachers' perceptions of digital learning. Digital learning is here to stay in some format or the other. Understanding these similarities and differences will help extend cooperation between the two countries, which is much needed as both countries have technical prowess. It can strengthen teacher training and the construction of platforms that can be more interactive and supportive for both teachers and students. Practical applications of the findings are possible in the development of mechanisms to mitigate the impact of the pandemic on preschool education through enhanced telework practices and improved resilience of educators in the pandemic.

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