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Bronfenbrenner's Bioecological Theory: School Readiness for Children in the Context of Distance Learning During the Covid-19 Pandemic

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ABSTRACT: School readiness is an important factor that affects the child's development. However, promoting children's school readiness becomes even more challenging during the COVID-19 pandemic. There is a gap between the implementation of Distance Learning and the limited understanding about effect of Distance Learning to promote children's school readiness. This study aims to find out how distance learning affects children's school readiness during the Covid-19 pandemic and to understand the role of the children's environment in promoting children's school readiness, in terms of Bronfenbrenner's Bio-ecological theory. This research uses a descriptive quantitative method. Data was collected by an online survey. There were 326 parents and 34 KG-B teachers from 16 private schools in Semarang who participated in this study. Data analysis uses descriptive analysis techniques and independent sample t-test. The result finds out that distance learning is less effective in promoting children's school readiness, especially in socio-emotional skills. The role of the ecological system also influences distance learning in promoting school readiness, so for promoting school readiness, both children's skills and the roles of systems should be emphasized. The findings suggest the school needs to evaluate and review every strategy, planning and implementation of distance learning in their schools. The findings also suggest the kindergarten teachers need to enrich their competence in designing innovative, creative, and interesting distance learning activities, based on digital technology.

Keywords: early childhood, school readiness; distance learning

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1 INTRODUCTION

School readiness refers to the state of child competencies at the time of school entry that is important for later success (Snow, 2006). According to many studies, school readiness is a factor that influences a child's development and success in the future (Kokkalia et al., 2019; Pan et al., 2019; Ricciardi et al., 2021). Children who ready for school will be able to adapt well to their new environment and show good academic achievements. On the other hand, children who are less for school tend to be frustrated in an learning environment, and they are more likely to be a school dropout, become teen parents, engage in criminal activity or do not have a permanent job (Kokkalia et al., 2019; Majzub & Rashid, 2012). Given the importance of school readiness, the task of promoting children's school readiness is the shared responsibility of all stakeholders, including parents, families, teachers, schools and the community (Britto, 2012).

Promoting children's school readiness becomes even more challenging during the COVID-19 pandemic. The Distance Learning policy was regulated by Indonesian's Government has brought major changes in the early-childhood education (ECE) program in Indonesia. This policy requires every child to study at home and learning activities are carried out remotely, either online or offline. However, the sudden implementation of the Distance Learning policy caused many problems, especially for children, parents, and teachers. Several studies in Indonesia show that there are obstacles faced by teachers in implementing distance learning policies for early childhood education, including pedagogical, technological, and economic constraints (Agustin et al., 2020; Jalal, 2020; Nurdin & Anhusadar, 2020; Nurkolis & Muhdi, 2020; Satrianingrum & Prasetyo, 2020; Sit & Assingkily, 2020). Other Studies show that there is a negative perception of parents towards distance learning caused by obstacles in terms of technology, readiness and children's readiness to study at home (Ayudia et al., 2020; Lutfiah, 2020; Wijayanti & Fauziah, 2020). These findings show that there is a gap between the knowledge needed to promote children's school readiness in Covid-19 pandemic's time and the limited understanding of this topic.

Unfortunately, there has been no research on the effect of the distance learning on children's school readiness in Indonesia. Previous research on the school readiness in Indonesia was carried out before the Covid-19 pandemic (Fridani, 2014; Nurhayati, 2019; Pangestuti et al., 2018). Other studies are more focused on distance learning problems faced by teachers or parents, as well as their impact on one or more aspects of children's development (Ekyana et al., 2021; Saodi et al., 2021; Sibagariang & S. Pandia, 2021; Wijaya et al., 2021; Wulandari et al., 2021).

This study aims to find out how distance learning affects children's school readiness during the Covid-19 pandemic. This study also aims to understand the role of the children's environment in promoting children's school readiness during this pandemic, namely family and parent's support, teacher's readiness, and school's policies in implementing distance learning. The results of this study can be used to understand the characteristics of children's school readiness during the Covid-19 pandemic, which is

different from the previous period. In addition, research results can be used to evaluate the effectiveness of distance learning for early childhood, as well as find ways to encourage the role of the children's environment to promote children's school readiness.

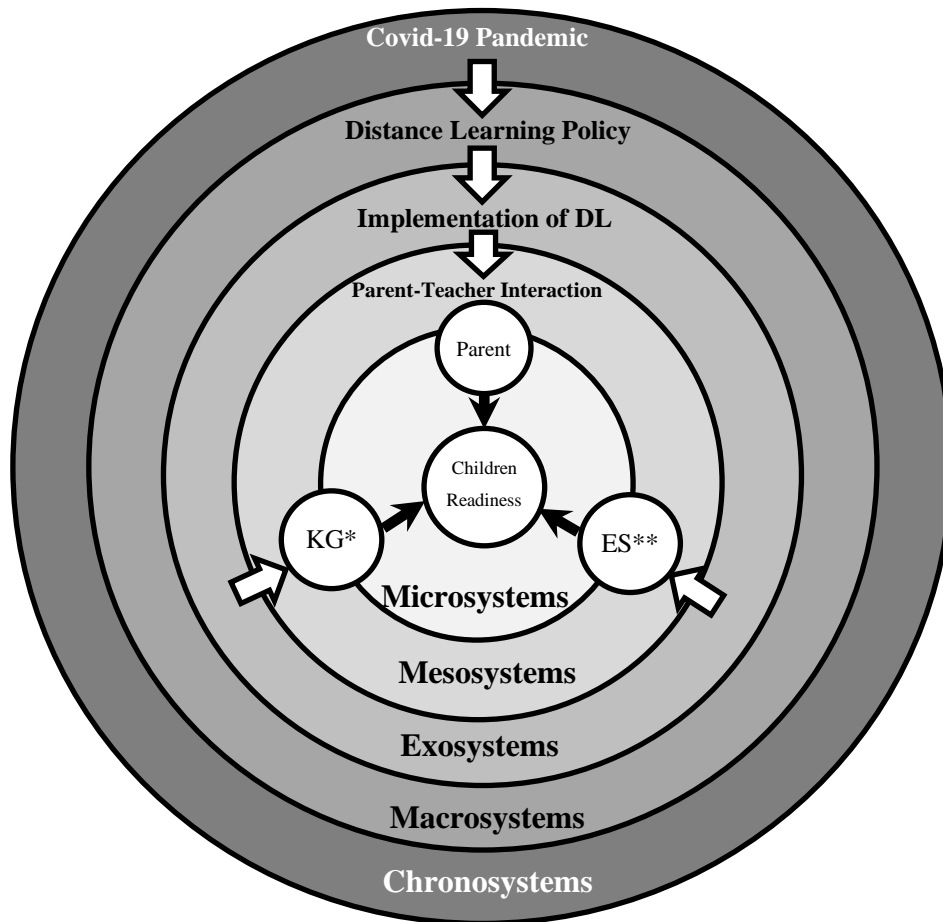
2 THEORITICAL STUDY

2.1. *Children's School Readiness*

The concept of school readiness has been debated by experts for decades and there is no definite agreement on its meaning (Fridani, 2014; Lau & Li, 2021). In general, children's school readiness is defined as the level of development of children who are ready to take part in learning with certain materials, marked by the child's achievement of the standard of physical, intellectual and social development, which allows the child to meet the requirements for attending school and following the school curriculum (Kagan, 1992; Snow, 2006). School readiness refers to a child's ability to fulfill school assignments, such as sitting still, listening to teachers and following the school curriculum (Doherty, 1997). School readiness is not only based on the child's level of physiological maturity, but is also strongly influenced by the innate abilities of the child and the initial experience of schooling (Dockett & Perry, 2002).

In this study, the definition of school readiness is based on the Bio-Ecological theory of Bronfenbrenner, that allows us to examine school readiness from a view of human development and explain how a child's development is determined by what they experience and their interactions in larger contexts over extended periods of time (Cohen & Friedman, 2015). From this perspective, school readiness is not only determined by the child's characteristics himself, but is also influenced by his active interaction with the environment in which he lives (Shelton, 2019). School readiness is a product of the interaction between the child and the range of environmental and cultural experiences that maximize the development outcomes for children (Britto, 2012).

Based on this theory, for promoting school readiness, both children's skills (e.g., emotional and social skills) and the roles of ecological systems (e.g. family, school) should be emphasized (Diamond, 2010). According to Britto, promoting school readiness means gaining children's competencies and providing a smooth transition to a new learning environment, taking into three dimensions, namely: children's readiness for school, schools' readiness for children, and families' and communities' readiness for school (Britto, 2012). Figure 1 shows the implementation of Bronfenbrenner's Bioecological model as a framework for this study.



*KG = Kindergarten, **ES = Elementary School

Figure 1. Conceptual Framework for School Readiness in Covid-19 Pandemic Period

2.2. Distance Learning

Simply, distance learning is providing education to students who are separated by distance and in which the pedagogical material is planned and prepared by educational institutions (Kaplan & Haenlein, 2016). In Indonesia, there are two distance learning methods used, online learning (provides access to the Internet (Kim, 2020)) and offline learning (no internet access). The learning provides more benefits for learning, more flexible, timetable and available and also reduce the educational barrier's geographical location (Dong et al., 2020; Kim, 2020). Online learning can be either asynchronous learning (students can choose their own time for participation in learning through different media tools) or synchronous learning (learning activities occur through live video and/or audio conferencing) (Dong et al., 2020; Kim, 2020)..

Distance learning for the Early-Childhood Education (ECE) program has sparked debate among experts, especially in the use of digital technology (Dong et al., 2020). Some scholars have insisted that young children should not expose to online learning because the latter cannot prepare children socially and emotionally ready for school (Zalaznick, 2019). However, in the Covid-19 pandemic context, the learning is not an

ideal learning condition, but an emergency condition that must be carried out (Arifa, 2020).

However, there are some drawbacks of online learning for children such as depend on the technological abilities of students and teachers, need parent/adult guidance, and need more interactive methods to make children focused in learning (Gayatri, 2020). The attitudes and skills of kindergarten teachers in the use of technology also affect children's motivation and learning (Kim, 2020). Abuhammad's (2020) research in Jordan also shows that there are four barriers of distance learning, personal barriers, technical barriers, logistical barriers, and financial barriers.

3 METHOD

This research method uses descriptive quantitative to get an overview of the perceptions of parents and Kindergarten-B teachers on the school readiness in Semarang during the Covid-19 pandemic. The data collection from respondents was carried out online using the Google Form application from August 15, 2021 – September 30, 2021.

3.1 *Instrument*

The instrument is a questionnaire consisting of five parts, namely the socio demographic of the respondents, the children's readiness for Elementary School, schools' readiness, teachers' readiness, and families' readiness. The children's readiness indicator was developed from the Children Development Achievement Level Standard (STPPA, Regulation of the Minister of Education and Culture, Number 137, 2014) and The National Education Goals Panel (1995). Indicators of schools' readiness and families' readiness were developed from the Conceptual Framework School Readiness (Britto, 2012). Teachers' readiness indicators were developed based on Educator Competency Standards (National Standards for Early-Childhood Education, Regulation of the Minister of Education and Culture, Number 137, 2014). The indicators are based on a Likert scale, where each indicator has five attitude scales (1-strongly disagree; 5-strongly agree). The validation test resulted in 15 indicators of children's readiness, seven indicators of school's readiness, seven indicators of teachers' readiness, and three indicators of families' readiness. The results of the Cronbach Alpha reliability test showed the number 0.873. These results indicate that the questionnaire is valid and reliable for be used in this study.

3.2 *Respondent*

Respondents were parents and teachers of KG-B students who experienced distance learning during the pandemic (academic year 2020/2021) and entered Elementary School in the same year (academic year 2021/2022). There are 16 kindergartens in Semarang that participated in this study. All schools are private schools. The researcher distributed the questionnaire link to these schools, and then they distributed it to the parents and teachers. Determination of the sample of respondents from parents and Kindergarten-B teacher was

carried out using a random sampling technique, where the policy and determination of respondents were left to each school.

During the data collection period, there were 326 parents and 34 KG-B teachers who participated in this study. Most of the parents were mothered (86.5%), over 36 years old (61.04%), undergraduate education (73.01%) and housewife (45.40%). Most of KG-B teachers are female (97.1%), over 45 years old (47.1%). Undergraduate education (94.1%) and have over 20-year teaching experience (32.4%). In filling out the questionnaire, the respondent was asked to fill in personal data (gender, age, education, etc.) as well as their opinions on the level of children's readiness, schools' policies, teachers' competences, and families' support in distance learning.

3.3 *Data Analysis*

The research data collected were analyzed using SPSS software version 25 and analyzed using descriptive methods, correlation tests, and independent sample t-tests. Descriptive analysis techniques are presented in terms of mean and standard deviation, to measure a child's level of school readiness and the ecological systems that influence it (e.g., distance learning policies, teacher competence and parental support). The correlation test was conducted to see the correlation between children's school readiness and the system. This study also compared the perceptions of parents and kindergarten teachers with the independent sample t-test.

4 RESULT AND DISCUSSION

4.1 *Result*

4.1.1 *Level on Children's School Readiness*

The results shown in figure 2, parents had different ratings on various school readiness indicators. Specifically, parents considered that their children were quite ready in terms of fine motor ability (3.69 out of 5). Another Term shown such as, motivation (3.40 out of 5), cognitive ability (3.32 out of 5), moral and religion (3.18 out of 5), and language ability (3.13 out of 5). Whereas They perceived that their children were less prepared for primary school in terms of social skills (2.27 out of 5), gross motor skills (2.25 out of 5), emotional skills (2.73 out of 5) and art skills (2.94 out of 4).

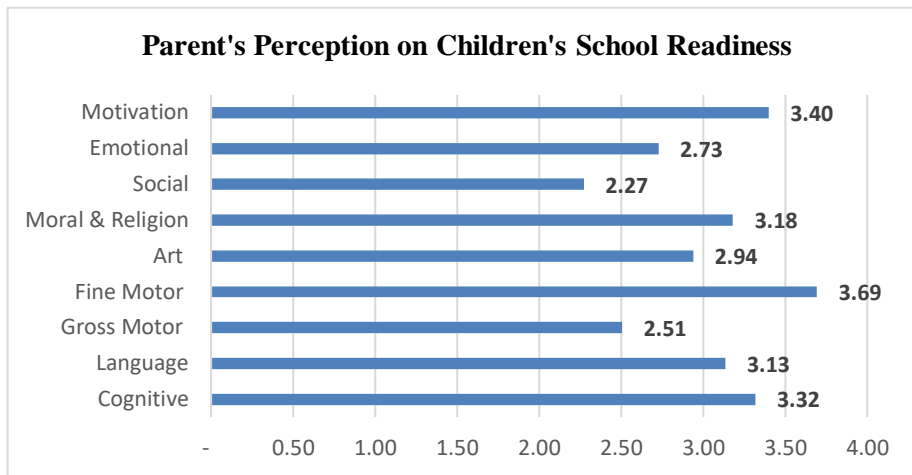


Figure 2. Parent's Perception on Children's School Readiness

Figure 3 shown that the teachers had different ratings on various school readiness indicators. Specifically, teachers considered that their students were quite ready in terms of fine motor ability (4.21 out of 5) and another term shown such as, motivation (3.79 out of 5), moral and religion (3.76 out of 5), arts (3.53 out of 5), cognitive ability (3.44 out of 5), and language ability (3.44 out of 5). Whereas they perceived that their children were less prepared for primary school in terms of social skills (2.78 out of 5), emotional skills (3.03 out of 5) and gross motor skills (3.03 out of 5).

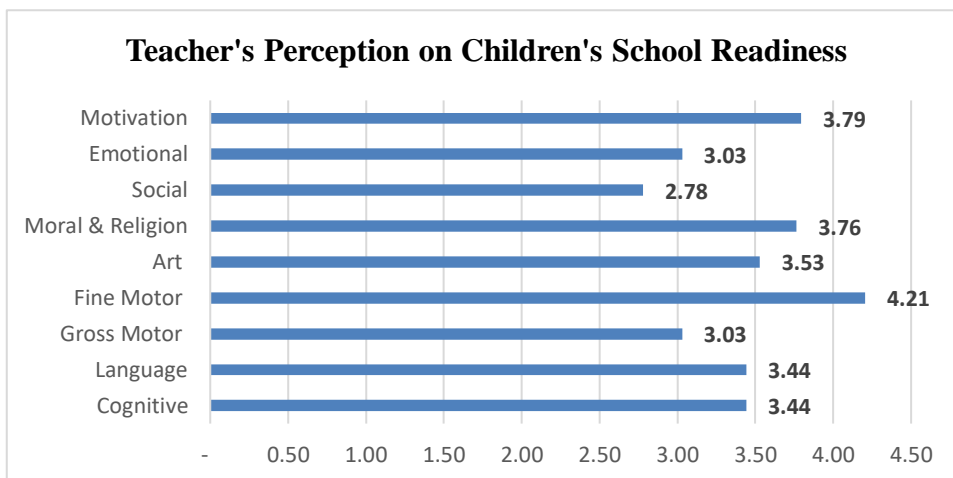


Figure 3. Parent's Perception on Children's School Readiness.

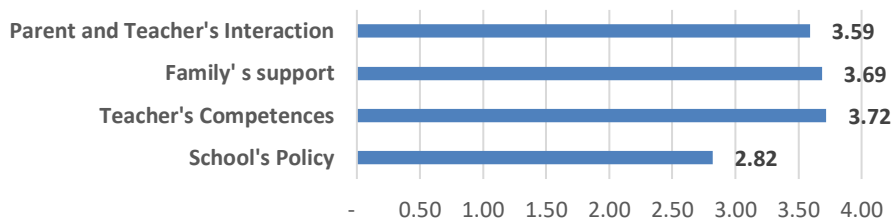
Based on the results of the Independent T-Sample test, it appears that there is a significant difference between the perceptions of the parents and teachers on the children's school readiness. This difference in perception is mainly due to differences in the observation situation by respondents. In this case, the situation becomes a differentiating factor in perceptions between individuals (Robbins & Judge, 2015). During this Covid-19 pandemic, teachers' observations of children's growth and development are more limited than in the past. Limited online learning, make teachers less able to observe the growth and development of each child. For children's task that is collected by parents (both in physical form and photos) is also not authentic, because the teacher does not know the process of work carried out by the children, whether the

children have done it, themselves or still needs help from their parents. The inauthenticity of these observations and assessments affects the KG-B teacher's perception of the level of children's development and school readiness. Otherwise, during this pandemic, parents have more time and more involvement in their child's learning process, compared to previous times. Throughout the day, parents can observe children's growth and development, in the learning process and other daily activities. Thus, perceptions of parent respondents are more authentic than those of KG-B teachers.

4.1.2 The Role of Ecological System

As shown in Figure 4, parents had different ratings on various ecological systems. Specifically, parents had a positive perception of teacher's competences (3.72 out of 5),

Parent's Perception on the Role of Ecological System



family support (3.69 out of 5) and interaction between parent and teacher (3.59 out of 5).

However, parents had a negative perception of school's policy in implementing distance learning (2.82 out of 5).

Figure 4. Parent's Perception on the Role of Ecological System

Teachers had positive perception on various ecological systems, in terms of interaction between parent and teacher (4.13 out of 5), teacher's competences (3.84 out of 5), school's policy (3.56 out of 5) and family's support (3.54 out of 5) (see in Figure 5).

Teacher's Perception on the Role of Ecological System

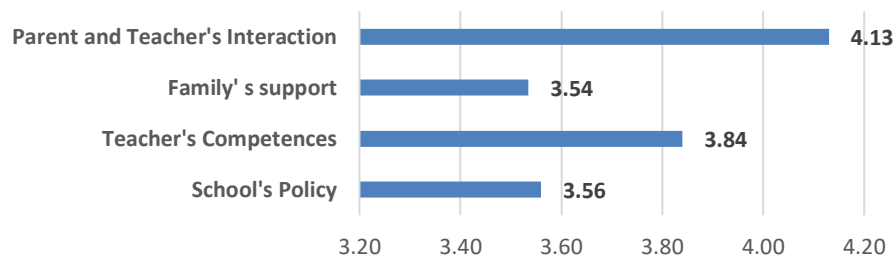


Figure 5. Teacher's Perception on the Role of Ecological System

The results of the correlation test between the family support's rate and children's school readiness show a strong correlation between the two variables (correlation coefficients = 0.673, at significant level 0.05). Although parents and families have a high commitment and involvement in promoting children's school readiness, many parents state that their children are less ready for Elementary School. This shows that there are barriers experienced by parents in implementing distance learning at home (see figure 6), especially managing time and motivating children.

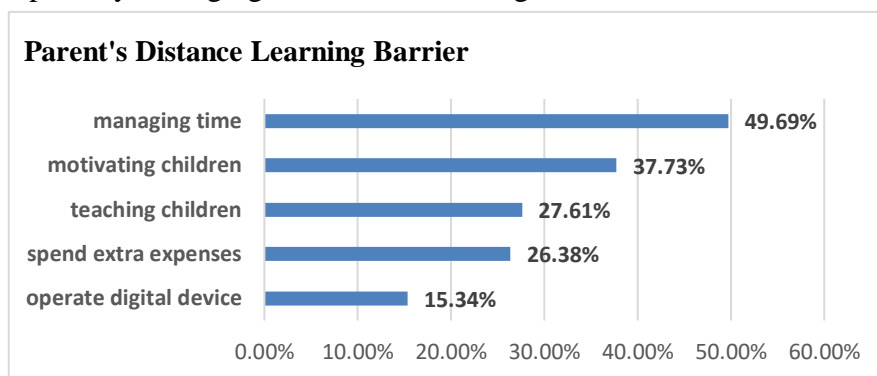


Figure 6. Parents' Efforts to Overcome Distance Learning

4.2 Discussion

4.2.1 Level of Children's School Readiness

The most developed children's school readiness during the Covid-19 pandemic, according to both of group respondents, is fine motor skills. Respondents agreed that the tasks given to children in distance learning, such as cutting, drawing, drawing, holding stationary, and so on, could improve children's motor skills. This result is in accordance with the results of a research conducted before the pandemic, which states that teachers stimulate fine motor skill because this ability supports writing learning activities (Nurhayati, 2019). These results are also consistent with the results of a study on school readiness in Hong Kong in this pandemic, which showed that fine motor skills were the most developed school readiness (Lau & Li, 2021).

Another aspect of school readiness that is well developed is literacy and numeracy. This finding reflects parent's high expectations on their children's preparedness for formal schooling to fit in the soon and reach good academic achievement. For this reason, KG-B teachers and parents put more emphasis on the ability than other aspects. Most of the parents also agreed to include their children in numeracy and literacy lessons, if their children were not fluent in reading, writing, and counting. This finding is in accordance with the results of previous research on the school readiness in Indonesia, which was carried out before the Covid-19 pandemic (Fridani, 2014; Pangestuti et al., 2018; Rahmawati et al., 2018).

Parents and teachers rated their children to be least ready in terms of social and emotional skill. This finding is consistent with the result of a research, which indicates that children's socio-emotional development is very disturbed while staying at home

during the Covid-19 pandemic, with various negative impacts such as anxiety, tantrums, boredom and lack of stimulation (Egan et al., 2021). Only a few children can socialize with teachers and friends in the learning process, so children generally have a few friends. Children are also less able to control themselves, namely lack of discipline, less independence and cannot focus on participating in learning activities. This is in accordance with a study which showed 58.9% of early childhood became independent during the Covid-19 pandemic (Ekyana et al., 2021). Social skills have a direct influence on early-childhood independence, where disturbances in the development of children's skills, will interfere with the development of independence (Rusmayadi & Herman, 2019).

The lack of development of socio-emotional aspects in children during the pandemic is mainly due to two factors. The first factor, the lack of opportunities to socialize with peers, causes children's social skills to be less stimulated, so children are shier and lack of confident. The next factor is in appropriate parenting styles in accompanying children to study at home. Parents not so much apply rules and good habits, so that the children less disciplined, independent, responsible, and lack of focused on learning. In fact, these attitudes and behaviors must be possessed by children when attending Elementary School. Without these attitudes and behaviors, children will have difficulty adapting and learning in Elementary School.

Another ability that was underdeveloped during the Covid-19 pandemic was gross motor skills. During this pandemic, children must always be at home, so the area to move is very limited. Parents who are worried about their children's health, prefer if their children play in front of the computer or other digital games than playing outside the house (de Figueiredo et al., 2021). This causes children to get less gross motor stimulation and can interfere with their physical growth.

These findings reflect that distance learning for early childhood is less effective for promoting children's school readiness. Distance learning tends to promote school readiness in terms of numeracy, literacy, and fine motor skills, but is less able to develop socio-emotional and gross motor skills. Therefore, parents should pay special attention to this socio-emotional aspect when the child is in the 1st grade of Elementary School. Although children have sufficient academic readiness, but lack of emotional control (especially concentration) will have a negative impact on their achievement (Harrington et al., 2020; Potmesilova & Potmesil, 2021; Valiente et al., 2021; White et al., 2021) Otherwise, children who have high social readiness will be easier to adapt and success in school (Magelinskaite, 2011).

4.2.2 *The Role of Ecological System for Promoting Children's School Readiness*

According to Bronfenbrenner's Bio-ecological theory, the children's school readiness is not determined by the characteristics of the child himself but is also influenced by his active interaction with the environment in which the child lives. In the context of the Covid-19 pandemic, the development of children's school readiness depends on their

reciprocal interaction with the microsystem's environment (KG-B parents and teachers), the mesosystems environment (TK-B parents and teachers' interaction), and the exosystems environment (school policy).

4.2.2.1 *The Role of Parents and Families*

Parents and families are the first Microsystems environment for promoting children's school readiness to attend Elementary School (Cohen & Friedman, 2015). During this Covid-19 pandemic, strong commitment from parents to be involved and accompanying their children in distance learning at home, promote children are more prepared to attend Elementary School. Figure 4 and five shows that families' support rate is in the high category. This finding reflects that parents and families have a high commitment in preparing their children for Elementary School. The commitment of parents to support their children's readiness can be seen in the efforts of parents during the Covid-19 pandemic, namely assisting children in distance learning and providing additional training outside of school lessons. Even parents are ready to provide additional tutoring if their child is lacking in literacy and numeracy.

This finding reflects that the children's school readiness is very dependent on the involvement and support of parents and their families. Children who are not cared for by their parents in distance learning at home, generally lag in their abilities compared to their friends. This finding is in accordance with several research results that show the importance of parental and family involvement in promoting children to be ready for Elementary School, especially in Covid-19 pandemic period (Insani et al., 2021; Lau & Li, 2021; Nurhayati, 2019; Turnbull et al., 2022).

Accordance with the results of Abuhammad's (2020) research on the implementation of distance learning in Jordan which shows that there are four barriers of distance learning, namely: personal barriers, technical barriers, logistical barriers and financial barriers. The biggest barrier faced by parents is the problem of managing time, especially for working mothers. Assisting children to study at home and do assignments takes a long time, because there are many activities that must be carried out by parents, starting from preparing learning materials and tools, teaching, guiding, motivating, and documenting children's activities. This barrier will affect the level of children's school readiness. This finding is in accordance with the results of Lau and Li (2021) research on Hong Kong children's school readiness in Times of COVID-19, which shows that children were rated most ready when parent spent more time with children.

Another barrier is motivating and encouraging children to study and do their assignments at home. This barrier is related to parenting style. Several parents are difficult to overcome and control the child's mood when the child is asked to do his or her homework. Quarrels between parents and children occur, when parents run out of time, while children still don't want to do their work. This finding reflects that many children are less independent in carrying out their responsibilities, and it will affect the level of children's school readiness. This finding is in accordance with the results of Insani's et

al., (2021) research, which shows that there is a relationship between parental involvement and children's independence during the Covid-19 pandemic.

4.2.2.2 *The Role of Kindergarten Teachers*

In Bronfenbrenner's Bio-Ecology theory, the Kindergarten-B teacher is a microsystem's environment, which directly affects children's development (Cohen & Friedman, 2015). In this pandemic period, with changing learning models, Kindergarten-B teachers are required to carry out effective, innovative, and creative learning activities, based on digital technology. The more prepared and competent Kindergarten-B teachers in implementing distance learning, the children will be more ready to attend Elementary School.

Figure 4 and 5 shows that teacher's competence rate is in the high category. This finding reflects that Kindergarten-B teachers have the necessary competencies in implementing distance learning. Thus, respondents have confidence that Kindergarten-B teachers can prepare their children for Elementary School well. The results of the correlation test between the teacher competence's rate and children's school readiness show a moderate correlation between the two variables (correlation coefficients = 0.484, at significant level 0.05). This finding reflects that the children's school readiness is influenced by teacher's competence.

Although teachers have high competence in implementing distance learning, many parents rate that learning activities carried out by teachers are monotonous and less fun for children. This makes children bored quickly and lack of focused on learning. These findings are consistent with the research by Sibagariang and S. Pandia (2021), which showed that during this pandemic, learning activities in several kindergartens in Jakarta were dominated by one-way and monotonous activities. It reflects that kindergarten teachers are less competence to develop innovative, creative, and interesting distance learning activities and materials for children. This is in accordance with the opinion of Gayatri (2020), which states that there is a need for more interactive methods to make young children focused in online learning. The same matter happened to kindergarten teachers in Hong Kong, where distance learning increased teachers' burden of making relevant materials (Lau & Li, 2021). This finding suggests that kindergarten teachers need to enrich their competence in designing innovative, creative, and interesting learning activities for children, based on digital technology.

4.2.2.3 *The Interaction Role of Kindergarten-B Teachers and Parents*

In Bronfenbrenner's Bio-Ecology theory, the interaction between parents and teachers is a mesosystem environment, the more frequent and the more quality the interactions between parents and teachers, the children more ready to attend Elementary School (Cohen & Friedman, 2015). As shown in Figure 4 and 5, respondents' rate that the interaction between parents and teachers during the Covid-19 pandemic has been well established. Routinely, Kindergarten-B teachers send lesson plans and assignments to be submitted. Kindergarten-B teachers also provide feedback on each task given to children,

so that parents can participate in understanding children's development in the learning process. However, only a few parents discuss their child's developmental problems with the kindergarten-B teacher. Parents asked more about subject matter and assignments that they did not understand. It shows that parents have a regular frequency of communication with Kindergarten-B teachers, but the quality of the interaction itself does not support the child's development (Cohen & Friedman, 2015). This finding is consistent with the results of research by Gayatri (2020) which shows the importance of having good communication between parents and teachers to support early childhood online learning during the Covid-19 pandemic period.

Therefore, parents and teachers need to meet regularly and discuss the child's development and readiness for Elementary School. For teachers, this can help them to get additional information about children's growth and development at home. Teachers can also motivate and provide input to parents in dealing with children's behavior. For parents, this can be a support in educating children and implementing distance learning at home.

4.2.2.4 *The Role of School*

In Bronfenbrenner's Bio-Ecology theory, school is an ecosystem's environment. It does not involve children directly. However, if something happens in this system, it will affect the environment in which the child is live (Cohen & Friedman, 2015). During the Covid-19 pandemic, school's policies in implementing distance learning indirectly affected the children's readiness. Based on the results of the Independent T-Sample test, it appears that there is a significant difference between the perceptions of the parents and teachers on school's policies in designing and implementing distance learning. Kindergarten-B teachers think that the school's policies are correct. Otherwise, parents state that distance learning does not meet their expectations. This finding reflects parental dissatisfaction with the distance learning policies implemented by schools. Dissatisfaction with distance learning is also experienced by parents in various countries, such as Hong Kong, China, and Poland (Dong et al., 2020; Lau et al., 2021; Lau & Li, 2021; Parczewska, 2021)

The low parents' perception is caused by distance learning tends to be monotonous activities and only emphasized literacy-numeracy skills. Respondents also considered that distance learning did not encourage children to learn in a fun way. It reflects that distance learning is less child-oriented and able to encourage children to learn in a pleasant playing atmosphere. This finding is consistent with Lau and Li (2021) research, which show that the online learning for young children should be more interactive with a clear learning concept. Parents wanted more interactive online learning to facilitate children's learning and desired better learning support from schools, flexible work arrangements, and government subsidies (Lau & Lee, 2021). A research by Sibagariang and S. Pandia (2021), show that during this pandemic, learning activities in several kindergartens in Jakarta were dominated by one-way and monotonous activities, and could not develop all aspects of child development.

This difficulty arises because learning in first grade requires children to be fluent in reading, writing, and counting. The differences between Kindergarten and Elementary School's learning concepts, coupled with the limitation's distance learning, encourage Kindergarten-B and first-grade teachers to prioritize teaching literacy and numeracy over other learning activities. As a result, by the time the children attend Elementary School, many children are only ready for literacy and numeracy abilities, while other aspects of their abilities are not developed well, especially their socio emotional skills. So, learning activities in kindergarten, has shifted from its essence as early-childhood education. Learning in TK-B, which tends to meet learning needs in Elementary School by emphasizing only literacy and numeracy skills, makes teachers less can develop the other potential abilities of children (Bassok et al., 2016).

Based on this finding, the school needs to evaluate and review every strategy, planning and implementation of distance learning in their respective schools. Kindergarten boards need to design carefully so that distance learning remains child-centered oriented, encourages children to learn in a fun playing atmosphere, and can optimize all children's development aspect, without having to emphasize reading, writing, and counting. The findings also suggest the need for schools to work on a balance of types of distance learning during pandemic by introducing diversified on- and off-line activities (Lau & Lee, 2021). Continuity Of learning is not only on the side of kindergarten, which is tasked with preparing children for Elementary School, but also must exist in the first-grade learning system in providing smooth transitions for children to adapt well in Elementary School (Britto, 2012).

4.3 *Limitation*

This research was conducted in 16 private kindergartens in Semarang. These kindergartens generally have sufficient resources (educators, infrastructure, and finance) to provide distance learning, especially online models. In addition, parents of students in these schools generally have a high educational background and upper-middle socio-economic conditions, so they have good resources to assist children in studying at home. Thus, the results of this study cannot be generalized because they cannot represent all the characteristics of schools, children, and parents in Semarang in carrying out early childhood education during the Covid-19 pandemic. Further research is needed to involve more schools, especially public kindergartens and private kindergartens that do not have Elementary School, to provide more information on the differences in school readiness in Semarang.

5 CONCLUSION

The findings in this study indicate that distance learning is less effective in promoting children's school readiness, especially in socio-emotional skills. The role of the ecological system also influences distance learning in promoting school readiness, so for promoting school readiness, both children's skills and the roles of systems should be emphasized. Based on these findings, the school needs to evaluate and review every strategy, planning

and implementation of distance learning in their schools. That distance learning remains child-centered oriented, encourages children to learn in a fun playing atmosphere, and can optimize all children's development aspect. Kindergarten teachers need to enrich their competence in designing innovative, creative, and interesting learning activities for children, based on digital technology. Parents need to improve their pedagogic skills, apply appropriate parenting styles in assisting their children to study at home and to establish better quality interactions with teachers.

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