



## Research article

## Unprepared management decreases education performance in kindergartens during Covid-19 pandemic

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## ABSTRACT

The Covid-19 pandemic has disrupted the education sector, including kindergartens. Kindergarten principals and teachers make extra effort to maintain their education performance. This research aims to identify problems of the “learning from home” policy in kindergarten education and formulate possible solutions to overcome them. It involved 15 respondents from different regions in Indonesia. Data were collected through several methods, including face-to-face interviews, phone interviews, and online interviews through messaging services. The research result showed that many kindergarten management boards encountered difficulties in fulfilling planned education schedules and had the low achievement of objective targets. The problems existed in teachers, parents, and mainly students. Most teachers faced problems in creating interactive education materials and conducting an evaluation. Parents had hard times in assisting their children due to their busy activities and low pedagogical competence. Children had hard times due to limited resources for online learning. This research suggests solutions such as improving the mastery of information and communication technology (ICT), especially for teachers, parents, and children. However, the education system's long-term reform is needed to prepare for facing the possible catastrophe that affects the education system. It may include integrating online learning in the traditional education system and the development of supporting infrastructure and facilities.

## 1. Introduction

The Coronavirus (COVID-19) pandemic has changed people's way of interaction. Accordingly, it has had a massive impact on society's psychology [1]. People are forced to change their way of life to hinder the threat of the disease. In order to reduce physical contact, the government promotes a “stay-at-home” policy [2]. The policy is expected to slow down the spread of the unstoppable disease.

The Covid-19 pandemic has shown its impact on various sectors, such as business and education [3]. In particular, in terms of education, school closure is a policy made by many school management boards during the Covid-19 pandemic. The government suggests the implementation of “learning from home” to reduce crowds and physical contact. However, the term “learning from home” in Indonesia is interpreted as “online learning” [4].

School closure to prevent the transmission of the virus is implemented in many countries worldwide [5]. Some countries show the successful implementation of online learning [6]. Unfortunately, more researchers

report the failures of online learning implementation [7, 8, 9]. Failures in carrying out online learning activities are also monitored in Indonesia.

Several obstacles are reported regarding the implementation of “learning from home” activities [10, 11]. Teachers' limited technological engagement skills and students' limited access to engage online learning activities are among the issues that fail in delivering education during the Covid-19 pandemic. Those obstacles reduced education performance.

Kindergarten education is one of the important sectors that require serious attention regarding the “learning from home” policy. Children need social interaction to develop their skills [12, 13]. Children learn from experience, which will affect their future life [14]. Therefore, having a positive experience is important for children.

Regarding the importance of kindergarten education for children's skill development, there is a need further to understand the performance of education during the Covid-19 pandemic to obtain accurate information to formulate possible options in managing kindergarten education. This research aims to identify the problems of the “learning from home” policy in kindergarten education and formulate possible solutions to overcome them.

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## 2. Literature review

Coronavirus disease (COVID-19) was initially identified in Wuhan, China, in December 2019, while in Indonesia, the first case was confirmed in March 2020 [15]. The outbreak of Covid-19 has caused significant changes in the social life of the society. Various activities are strictly controlled to hinder virus transmission.

In order to slow down the infection rate of COVID-19, the government addressed the “stay-at-home” policy [2]. People without essential errands are expected to stay at home and not to gather at one place. It applies to every sector, such as offices, schools, places of worship, etc. The consequence of implementing the “stay at home” policy in education is the closure of schools for learning activities [10]. Therefore, education activities are carried out through distance learning or online learning.

The results of “learning from home” policy implementation does not seem to be satisfactory. Although the policy could effectively reduce the transmission rate, many stakeholders do not seem to enjoy the condition. The Covid-19 pandemic impact on the education sector affects how the education is delivered and how teachers and students interact. Accompanying effects emerge due to the changes in the education model. Some related stakeholders such as the government, parents, and the community also receive the impact [3].

Several reports indicate that students experience difficulties in learning. Limited resources and parents' incompetence were revealed as factors that cause students' difficulties in learning [10]. Moreover, parents also face difficulties in managing their schedule and finance [16].

Many countries implement the “learning from home” policy to avoid contact with the infected people [5]. Unfortunately, the “learning from home” activity requires parents to assist their children. Therefore, they need to stay at home or work from home. Unfortunately, not every job can be done from home. Hasan et al. [17] found that only 10% of jobs can be done at home. Therefore, parents cannot assist their children during online learning. Moreover, low-income families face other obstacles in supporting their children to learn due to limited resources such as smartphones and internet access.

The transition of the education system from traditional to internet-based learning is one of the most challenging processes [18]. Pajarianto et al. [19] suggested that the “learning from home” activity requires teachers' and parents' support. The government, on the other side, needs to provide supporting facilities. Unfortunately, due to teachers' and parents' unpreparedness, students do not receive appropriate support from their teachers and parents. Teachers cannot provide optimal support to their children due to their lack of technology mastery in the online learning system [20]. In addition, Garbe et al. [7] found that parents also find difficulties supporting their children. Balancing responsibility between their demands of work and children's needs is the most dominant experience encountered by parents.

Although full school closure effectively prevents virus transmission, Viner et al. [5] suggested that it should not be prolonged. Full school closure is not suggested because it may cause psychological harm to students [5, 21]. Therefore, schools should be reopened when possible.

Although distance learning has vast possibilities to improve students' development, it still cannot replace the direct instruction model [22]. Bao et al. [9] reported that “learning from home” reduces kindergarten students' reading ability. Wulandari and Purwanta [8] found a similar trend that the achievement of children's social-emotional skills decreased during the Covid-19 pandemic.

## 3. Methods

The research was conducted using the qualitative method designed as a phenomenological study. Fifteen kindergarten principals from different regions were involved as respondents in the research, namely respondent 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15. Convenience sampling was carried out in the respondent selection. The respondents were the authors' acquaintances who cooperated with the author to observe,

evaluate, develop, and solve the problems faced in kindergarten education. They were from 14 regencies from 9 provinces, namely Aceh Jaya (Aceh), Bandar Lampung, Pringsewu and South Lampung (Lampung), Bogor (West Java), Grobogan, Purworejo, and Rembang (Central Java), Sidoarjo (East Java), Yogyakarta City and Sleman (Yogyakarta), Indragiri Hilir (Riau), Pali (South Sumatera), and Serdang Bedagai (North Sumatera). The respondents represented different circumstances, such as environment, availability and quality internet facility, as well as students' and teachers' familiarity toward smartphone.

Data were collected through interviews using pre-determined questions. The interview was done through various methods, including face-to-face, phone calls, and online using WhatsApp. Data was recorded through direct noting when the interview was carried out face to face or through phone call, and rewriting when the interview was carried out through WhatsApp messaging.

There were seven open-ended questions focusing on the response and performance of kindergarten education during the Covid-19 pandemic. The issues studied in this research were kindergarten management during the Covid-19 pandemic, standard operational procedures, achievement of time allocation for learning service, accomplishment of learning objectives, congeniality of teaching plan and achievements, supervision of learning activities, and reporting method of education performance. The questions were developed as a preliminary view of the impact of Covid-19 pandemic on early childhood education management practice. The questions were arranged as follow:

1. Does your institution implement a uniform management scheme that is regulated by government officials during the Covid-19 pandemic?
2. Is there any uniformity in terms, methods, and procedures of managing kindergarten during the Covid-19 pandemic?
3. Can educational service be provided according to the planned schedule during the Covid-19 pandemic?
4. Are learning objectives achieved according to the educational plan during the Covid-19 pandemic?
5. Do educational plans meet the expected target during the Covid-19 pandemic?
6. How are the supervision activities implemented during the Covid-19 pandemic?
7. How is the written reporting delivered to the authorities during the Covid-19 pandemic?

The obtained data were then analysed quantitative and qualitatively to describe the general and/or specific impact of the Covid-19 on kindergartens' education activities. Quantitative data analysis was specifically used to interpret the first to fifth questions. Qualitative analysis was carried out through thematic analysis to further explore the problems and institutional adaptation method used by kindergarten management boards to overcome the “learning from home” problems. In addition, fifteen kindergarten principals approved of this study's activities. Furthermore, the Ethics Committee of Institute of Research and Community Services, Universitas Islam Negeri Sunan Kalijaga, Yogyakarta, also approved the implementation of this research with more attention should be given to the confidentiality of the respondents. There are six items of the research ethics approved by the committee. The first and second items inform about the general information of this research and the information of the research team, such as the research title, the project leader, the researcher expertise field, the information of the researcher, and the length of research. Next, the third and fourth items state about the research participant and this research procedure, including the narration in informed consent of participant approval. Lastly, the fifth and sixth items discuss the confidentiality of participants and the researcher's statement about their responsibility towards the research implementation based on research protocol and all the contents.

## 4. Results

The respondents represent various educational environments. Ten respondents lived in the village area, a three in the urban area and two in the city area. Eight respondents had good internet service quality, three with fair quality, and two with inappropriate quality. Five respondents stated that their students were unfamiliar with smartphone while the other ten were familiar. Thirteen respondents stated that teachers in the area were familiar with smartphones, while the remaining were not. The combination of all the factors created ten groups of respondents with different characteristics that describes the sample composition.

Based on the data obtained from the research, the result showed that, in addition to the government-related activities, the kindergarten management boards had different methods to solve the problems of education activities due to the Covid-19 pandemic. The following section describes kindergarten management boards' response concerning the management and actual condition of the education process during the Covid-19 pandemic.

### 4.1. Management scheme

The first point of this study explores the management scheme applied by schools. The question was "Does your institution implement a uniform management scheme that is regulated by government officials during the Covid-19 pandemic?" According to the results, all the respondents (100%) stated that their institutions (kindergartens) adopted the government's regulation regarding management schemes during the Covid-19 pandemic. Respondents comments are shown as follow:

*"The education practice follows the government's instruction since schools are forbidden to carry out offline education. Therefore, our school applied the long-distance education and provide hand washing facility" (Respondent 1).*

*"We followed the government's instruction after the socialization of joint decree of four ministries" (Respondent 2).*

*"We carry out education according to government's suggestion" (Respondent 3).*

*"We followed the government's instruction, while the technical guideline is provided by school owner" (Respondent 4).*

*"During the Covid-19 pandemic, parents come to school to take the assignments for their children, while teachers once in a while visit students to monitor their learning progress" (Respondent 5).*

*"We followed the protocol which was socialized by the officials. However, we also collaborate the management policy from the foundation" (Respondent 6).*

*"We follow the regulation issued by the regent and education service" (Respondent 7).*

*"Since our school refers to the curriculum from the education service, during the Covid-19 pandemic is carried out through distance learning" (Respondent 10).*

*"We implement the emergency curriculum as suggested by the Ministry of Religion specifically during the Covid-19 pandemic" (Respondent 11).*

*"We follow the regulation form the education service as the issuer of the license of school establishment" (Respondent 12).*

*"Since the Ministry of Religion and Regency Education Service issued the same regulation regarding the education management during Covid-19 pandemic" (Respondent 14).*

*"During the Covid-19 pandemic, education is performed using emergence curriculum where teaching and learning activity is carried out by combining the online and offline model" (Respondent 15).*

### 4.2. Management practice/procedure

The second item explored school management practice by the question "Is there any uniformity in terms of, methods of, and procedures of managing kindergarten during the Covid-19 pandemic?" The whole respondents (100%) also stated that during the Covid-19 pandemic, there was a standardized procedure in learning activities. As the summary, hygiene facilities and online learning activities are among the procedures of education management during the Covid-19 pandemic. The following statements were expressed by the respondents:

*"There was an appeal from the education service to cut off the Covid-19 transmission by carrying out distance learning" (Respondent 1).*

*"The methods and procedure of education practice is adjusted according to the condition of respective region" (Respondent 2).*

*"The methods and procedure follow the protocol determined by the education service" (Respondent 3).*

*"The methods and procedure are adjusted according to the condition" (Respondent 4).*

*"The education practice is carried out through distance learning and home visitation" (Respondent 5).*

*"The school management apply certain rules and standard operational procedure" (Respondent 6).*

*"The method and procedure are determined by the education service" (Respondent 7).*

*"The standard method and procedure are online teaching and through WhatsApp group" (Respondent 8).*

*"The standardized method and procedure are not obligative, just suggestion" (Respondent 9).*

*"The standard method and procedure came from the school manager to maintain the quality through issuance of weekly learning plan" (Respondent 10).*

*"We follow the protocol determined by the Ministry of Religion in carrying out education during the Covid-19 pandemic" (Respondent 11).*

*"We obtained the example of education program during the Covid-19 pandemic from the HIMPAUDI (Early Education Association) for one year" (Respondent 12).*

*"We give appeal and enforce the regulation" (Respondent 13).*

*"We followed the protocol determined by the Ministry of Religion and Education Service to face the pandemic" (Respondent 14).*

*"We implement uniform management recommended by the officials, which is implementing an emergency curriculum during the Covid-19 pandemic through online and offline learning" (Respondent 15).*

### 4.3. Schedule

The next question explores appropriateness of education arrangement. "Can educational service be provided according to the planned schedule during the Covid-19 pandemic?" Regarding the education activities, the results showed that several kindergartens had difficulties

during the Covid-19 pandemic. Approximately 73.33% (11 of 15 kindergartens) found difficulties managing the schedule because learning activities did not meet the planned schedule. The in-depth review identified several factors that caused the obstacles in delivering education service, including limitation of time, dependency of time management to parents, parents' activities, limitation of human resource, and technical problems when parents did not have smartphones or internet service subscription. The following are the statements of the respondents:

*One of the respondents who showed the obstacles in delivering online learning, stated that "there are several obstacles in delivering online learning, such as parents' activities, and students' indiscipline in finishing their assignments" (Respondent 1).*

*"Since education is performed from home, education delivery cannot be accomplished according to planned schedule" (Respondent 2).*

*"Not all of the teaching/learning materials could be delivered due to time limitation" (Respondent 3).*

*"Due to the obstacles from parents or children, such as shortage of internet access, the education cannot be accomplished according to the schedule" (Respondent 4).*

*"The schedule is disrupted since the time for online class is limited according to the agreement between teachers, parents and education service" (Respondent 5).*

*"Some parents who do not have smartphone frequently became the cause of delayed schedule" (Respondent 8).*

*"Education plan could not be met because time management for students' learning activity is obliged to parents" (Respondent 9).*

*"Since the education should be delivered online, the education schedule could not be accomplished accordingly" (Respondent 12).*

*"There are various obstacles from students and parents that are unsolved that make the education could not be accomplished according to the schedule" (Respondent 13).*

*"The planned schedule could not be met because teaching/learning practice is ineffective due to Covid-19 pandemic. Early children education should be carried out face to face" (Respondent 14).*

*"Not all of the teaching plan could be delivered due to the limitation of human resource and time shortage. However, education planning still goes on appropriately" (Respondent 15).*

However, some kindergartens showed their ability to manage the schedule planning properly. Some efforts to overcome the problems were adjusting learning duration, teachers' adaptation, and reminding parents via WhatsApp or video calls. Respondents' expressions are shown as follow:

*"During the Covid-19 pandemic, we adjusted the lesson duration from 900 minutes per week to only 720 minutes per week as the result of consolidation during the arrangement of emergence curriculum with the education service" (Respondent 6).*

*"The planned education schedule could be achieved since teachers frequently remind parents of their children's assignments" (Respondent 7).*

*"Since students are studying from home with their parents, the schedule for learning activity is flexible, depend on child's mood and parents' business" (Respondent 10).*

*"Teachers spirit and effort in arranging education make it possible to carry out administration, teaching/learning plan, evaluation, and students guiding according to planned schedule" (Respondent 11).*

#### 4.4. Objective achievement

Objective achievement became one of our concern in this research. The question was expressed as follow: "Are learning objectives achieved according to the educational plan during the Covid-19 pandemic?" Most of the respondents (66.67%) stated that their institutions could not achieve the planned learning objectives during the Covid-19 pandemic. Several problems were identified from the respondents' statements, including limited learning duration, limited meeting frequencies, poorly delivered learning materials, absence of minimum completeness criteria, teachers' harder work, and lack of evaluation process. The following statements were expressed by the respondents:

*"Some objectives could not be achieved due to time shortage and inadequate class frequency" (Respondent 1).*

*"Not all the learning objectives were fulfilled due to time limitation that distracted students understanding" (Respondent 3).*

*"The achievement of learning objective is not maximum due to the obstacles faced by teachers and parents. Teachers need to give extra effort while parents are obliged to accompany their children to learn at home" (Respondent 5).*

*"The learning objectives could not be achieved because teaching/learning was not carried out face-to-face" (Respondent 9).*

*"The objectives were not achieved because the learning materials were not well delivered" (Respondent 12 and 13).*

*"The learning objectives were not achieved because the education was performed online" (Respondent 14).*

*"The objectives were not achieved since the principle of education was to keep the students learning and happy. Minimum learning accomplishment criteria were neglected along with the absence of evaluation" (Respondent 15).*

The remaining respondents stated that the achievements of learning objectives were supported by several methods to overcome the problems, including adaptation of curriculum, extra effort made by the institution in providing learning media and properties that could be taken home, and well planning, documentation, and evaluation of "learning from home" activities. Here are respondents' comment on their achievement:

*"The learning objectives are met because we make suitable teaching/learning plan specified for study from home activity which is documented and evaluated regularly" (Respondent 2).*

*"The objectives could be achieved because our school had arranged appropriate curriculum to be carried out during Covid-19 pandemic which included relevant topics without neglecting the main learning objectives" (Respondent 6).*

*"The objectives were achieved since our school always prepare learning media for the students along with appropriate learning plan" (Respondent 8).*

*"The objectives could be achieved but not maximal as if before the pandemic" (Respondent 10).*

#### 4.5. Target fulfilment

Instead of the objective achievement, target fulfilment also became our concern. "Do educational plans meet the expected target during the Covid-19 pandemic?" Referring to the obtained information, although most of the respondents stated their difficulties in managing the schedule and achieving the objectives, fewer stated that the education plan did not meet the expected target. Approximately, 46.67% of the respondents



suggested that their target was fulfilled. The following statements were expressed by those respondents:

*“The education plan was not completely right on target because parents frequently involved in working their children's assignments” (Respondent 1).*

*“Sure, because we still provide service to the students even though the education is carried out from home” (Respondent 2).*

*“Yes, the educational plans were right on target because the learning objectives were given directly to the students either online or offline” (Respondent 3).*

*“Most of the time, yes. But, sometimes the plan is not right on target because there is no learning assistance as of the normal education practice” (Respondent 4).*

*“In order to maintain the education performance, we carry out teaching plan arrangement bi-weekly along with the preparation of teaching materials, educational video, and activity examples so that the educational plan is right on target and children could follow up” (Respondent 6).*

*“Yes, it is right on target because we give assignments that should be collected each week. However, the learning achievement is not maximal because the education is performed online which is strongly dependent to children's mood and parents' activity” (Respondent 10).*

*“Yes, it is right on target because we monitor the students every day through video calls. Moreover, we create attractive videos to support students' mood. We also carry out weekly meeting with parents along with the students so that we can assist the students directly” (Respondent 11).*

The remaining respondents stated their failure or doubt toward their target fulfilment. In summary, several factors that caused the failures were teachers' absence so they could not guide children and monitor children's activity, parents' incompetence in guiding children, parents' activities, children's indiscipline during learning at home, children's tendency to cheat while doing their assignments, children's preference to play, and learning activity that did not correspond to the topics. On the other hand, the remaining respondents stated that their success was due to various factors, such as parents' support during children's learning activity, teachers' active effort to deliver learning objectives through offline and online methods, higher frequency of education planning in once every two weeks to prepare learning materials, video education and examples of activities, creation of interesting learning media, weekly meeting between parents and teachers, and monitoring via video calls or zoom meetings. Here are the statements of the respondents:

*“Not completely, because the teachers were troubled in adjusting the current education environment. Moreover, parents' lack of understanding and incapability of assisting and helping their children to learn had been an obstacle in performing education during the Covid-19 pandemic. Therefore, the well-arranged educational plan could not be applied by parents” (Respondent 5).*

*“Currently it is not right on target because education is carried out through WhatsApp group, radio, and collection of assignments are not right on schedule. Parents also have difficulties in assisting their children due to they are busy working” (Respondent 7).*

*“Not right on target because education is only delivered through WhatsApp group and collection of assignments is carried out weekly. Parents are busy working. Therefore, students do their assignment by cheating on other friends' works or is done by their parents. Some parents also do not have smartphones and incompetent to teach their children, while children are indiscipline during their study hour” (Respondent 8).*

*“Teachers do not know whether the students themselves or their parents did the assignment” (Respondent 9).*

*“Our educational plan did not right on target because students are getting used to play at home and only do their assignment” (Respondent 12).*

*“Probably. Since teachers and school cannot monitor the students directly. Thus, who did the assignment is unclear” (Respondent 13).*

*“It is not right on target because the arranged plan could not be implemented comprehensively, only some of the plan could be carried out” (Respondent 14).*

*“No. The education practice during Covid-19 pandemic is not right on target. Our school can only carry out one to two activities each learning session, which are frequently inappropriate to the planned topic. The topic is adjusted to current condition, hoping the students are still able to study even during the Covid-19 pandemic” (Respondent 15).*

#### 4.6. Supervision

Supervision become an important aspect of school management during the pandemic to maintain education quality. Therefore, we tried to explore the changes of supervision activity, expressed in the question: *“How are the supervision activities implemented during the Covid-19 pandemic?”* In addition to the management aspect, the supervision and reporting activities still go as usual. However, there are adaptations to both processes during the Covid-19 pandemic. The supervisions were carried out through several methods, including general visitation by implementing health protocol, home visitation, and online supervision using WhatsApp and Zoom. The following are the responds of the respondents:

*“Supervision is carried out online” (Respondent 1).*

*“Supervision is carried out by school owner through WhatsApp group” (Respondent 2).*

*“Supervision is carried out through home visitation and communication” (Respondent 3).*

*“Supervision is carried out normatively, undisturbed by Covid-19 pandemic” (Respondent 4 and 13).*

*“Supervision is carried out through visitation to the institution and distance monitoring through WhatsApp group” (Respondent 5).*

*“Supervision is carried out by school owner or supervisor according to the schedule” (Respondent 6).*

*“Supervision is carried out by school principal and foundation managers” (Respondent 7).*

*“Supervision is carried out as usual where supervisors come to school by obeying the health protocol” (Respondent 8).*

*“Supervision is carried out once in three months, focusing on the administration and teaching/learning activity” (Respondent 9).*

*“Schools are obliged to fill supervision online form from the district office” (Respondent 10).*

*“The supervisors visit the school once in a month to discuss the problems in education practice and together find the solution” (Respondent 11).*

*“Visitation was carried out in August 2020” (Respondent 12).*

*“Supervision is carried out through various methods, such as direct visitation, through zoom meeting, and through group or personal WhatsApp” (Respondent 14).*

*"Supervisors carry out supervision as usual" (Respondent 15).*

#### 4.7. Reporting

Changes on the reporting system may occur due to the physical distancing policy. Therefore, we explored that aspect as well. The question expressed was: *"How is the written reporting delivered to the authorities during the Covid-19 pandemic?"* As the result, various education reporting methods include normal reporting (delivering the report to the government offices), collective reporting through delegation, and online reporting through email were obtained from the respondents. The expression of the respondents is shown as follow:

*"Reports consist of students data as well as the condition of teachers' and personnel's", and infrastructure and facility, is delivered to education service monthly" (Respondent 1).*

*"Reporting is carried out monthly" (Respondent 2).*

*"Reporting is performed by documentation" (Respondent 3).*

*"Monthly reporting is still going on as usual" (Respondent 4).*

*"Monthly reporting is delivered to the education service" (Respondent 5).*

*"Reports regarding teachers, students, mutation, etc. are sent via email, and the hard copy is collected to the appointed officer. While other kind of reports are delivered to the education service or appointed officer by keeping the health protocol" (Respondent 6).*

*"Reports are delivered to the education service" (Respondent 8 and 9).*

*"Reporting is carried out online through the link provided by the HIM-PAUDI, which then will be delivered to the education service" (Respondent 10).*

*"Documents are sent directly to the education service office" (Respondent 11).*

*"Reports are sent online through the provided website" (Respondent 12).*

*"Monthly reporting is still effective to carry out" (Respondent 13).*

*"Delivered directly to the education service office by obeying the health protocol, or through collective delivery to avoid crowds" (Respondent 14).*

*"Reports are arranged delivered directly to the education service" (Respondent 15).*

#### 5. Discussion

The Covid-19 pandemic has caused significant changes in the educational system in Indonesia. Used to be done in class, face to face, using direct contact, the learning activities should now be done virtually. Unfortunately, Indonesia's education system has never experienced such a situation, which shocked the education stakeholders. Education institutions, students, and parents are unprepared to face the rapid social interaction and education system shifts. People are forced to adapt to a new way of life, learn, and work.

The "learning from home" policy might be the best option to apply during the Covid-19 pandemic. However, the implementation is not as simple as it may seem. The actual condition did not meet the expectation. For example, many students lacked learning resources such as internet access and parents' incompetence to support their children [10].

Kindergarten education is one of the most affected sectors by the Covid-19 pandemic. It is a unique educational phase, which aims to teach basic skills to children. Kindergarten is a part of early childhood education. In Indonesian context, kindergarten education is important to

stimulate children's physical and spiritual growth and development [23]. Early childhood education as an integral part of the formal education system. Even the government had established a particular directorate, named Directorate of Early Childhood Education to manage the education practice [24].

The implementation of study from home policy has decreased students' performance in many aspects [8]. However, this loss cannot be weighted on children. School managers, teachers and policy makers are the one responsible to provide appropriate education, even during the pandemic. Interactions are needed to guide them to learn properly. Therefore, without direct interaction, their learning achievement may decrease significantly. Besides, education institutions may experience a decline in performance, which may affect their reputation. Thus, education institutions are forced to formulate appropriate management strategies to maintain their education performance.

Online learning leads to financial problems for parents. It requires an internet service subscription, which means parents need to allocate more of their finance for it. Therefore, it is likely that low-income families cannot engage in learning activities during the Covid-19 pandemic [17].

School closure is suggested as the most effective method to prevent virus transmission. However, prolonged school closure may cause other social implications, such as occupation for teachers or caregivers and psychological harm for students [5]. Therefore, alternative solutions are needed so that schools could be reopened without having a fear of virus transmission.

Offline learning is the most appropriate learning method for kindergarten. Direct interaction is needed to promote students' learning achievement. Bao et al. [9] found that, without direct interaction, children's learning achievement decreases. Children need assistance to reveal their potentials [25]. Early childhood education is better done through play so that children have active hands-on activities [26]. Teachers' assistance is helpful to provide appropriate learning materials [27].

An important lesson is obtained from the Covid-19 pandemic that Indonesia's education system is unprepared to face such a catastrophe. It is indicated from the result of the research that most kindergartens failed to adapt to a new life and education system. Failures in managing the education schedule plan were experienced by most of the kindergarten management boards. They were unable to maintain their education performance, especially regarding schedule adjustment. Unpreparedness was shown by school management, teachers, students, and parents in facing such a crisis [10]. Consequently, stakeholders need to make extra effort to provide students' best service and learning performance [28].

In addition to the negative impact, the Covid-19 pandemic also has positive implications in Indonesia's education system. According to Maalsen and Dowling [29], the Covid-19 pandemic makes the implementation of smart home possible. Homes are forced to adopt and accept technology rapidly and massively due to the engagement of the "learning from home" policy. Engagement of information and communication technology is a prerequisite in the emergence of industrial revolution 4.0 [30].

Inability to perform education as planned schedule, low objective achievements, and low target achievements are evidence that education stakeholders are not ready to face the crisis caused by the Covid-19 pandemic. Therefore, teachers, parents, and students made extra efforts to adapt.

Distance learning seems to be a problem for the parties, as mentioned earlier. According to Pajarianto et al. [19], not all teachers, students, and parents have the tools needed for distance learning (online learning) activities such as smartphones, computers, and internet access. Teachers find it difficult to deliver education due to their lack of technological mastery [11]. They also have limited options of teaching methods, limited capability in creating learning contents, and difficulties in developing communication with parents [28].

For parents, the "learning from home" activity is time and energy-consuming. Parents' assistance, especially mothers' assistance, is needed in this activity, especially in early childhood education [31].

Unfortunately, some people take their children to kindergarten so that their children spend their time at school while their parents are working [6]. Therefore, for parents who are working, assisting their children in studying might be a burden, especially when they do not have adequate teaching skills. Children's unpreparedness in "learning from home" is shown by indiscipline behaviour [28, 32] which is also identified in this research. Another problem is that many children have low technology mastery [28].

The Covid-19 outbreak should give a precious lesson to all stakeholders in education. By experiencing sudden shifts in the education system, stakeholders should be more prepared to face future obstacles [18]. Kim [26] suggested that teachers should carry out three kinds of activities during online teaching: preparation, implementation, and reflection. Teachers should also create a report for each phase.

The Covid-19 pandemic is only one of the examples of the obstacles in carrying out direct (face to face) education [26]. There are possibilities that identical conditions may occur in the future. Therefore, each stakeholder should prepare themselves to face any possibility. Long-distance learning or online learning should be integrated as a part of the education system in the future.

The Covid-19 pandemic has opened our eyes that Indonesia's education system is unprepared for such a crisis. The difficulties encountered by the students and parents are similar to what is encountered by teachers. However, long-distance learning, home learning, or online learning should be considered one of the education systems that should be integrated into the conventional education system.

However, there must be obstacles in the implementation. Parents' activities and low-income families are among the problems that should be solved in the implementation of home learning or online learning. Hasan et al. [17] suggested Tele School TV Channel as an alternative to online learning to reduce home learning's financial burden. Another alternative method to deliver online learning is through an organized website [33].

Getting familiar with information and communication technology (ICT) is essential for students to face future challenges. Students are challenged to utilize the ICT appropriately in an era with rapid technology development and information distribution. According to Kiraly et al. [34], some individuals are vulnerable to problematic use of ICT.

Croatian teachers show a successful implementation of kindergarten education during the Covid-19 pandemic. Tokic and Vulkasinovic [6] found that kindergarten teachers in Croatia had involved virtual learning in the education system. Therefore, during the Covid-19 outbreak, the teachers had the appropriate skill to implement online education. The children involved in the virtual kindergarten seemed to have a better understanding of the educational process.

The implementation of online teaching/learning has forced teachers, students, and parents to emphasize alternative teaching/learning methods. Successful "learning from home" (online learning) activity is important to develop quality human resources despite the unfavourable condition. Technology readiness, along with the support of related stakeholders (government, school, teachers, parents, and community), plays an important role in the home (online) learning achievements [3]. According to Munastiwi [33], several factors are needed to perform optimum e-learning implementation, namely teachers' competence, students' activity and independence, infrastructure and learning aids, size and condition of class, and time for learning activity.

Teachers are the key stakeholders that determine the successful education delivery to the children. Therefore, they should be prepared with appropriate skills, such as critical thinking, creativity, collaboration, and communication [26]. In order to cope with future challenges, teachers should be engaged with proper knowledge, tools and resilience [30].

The "learning from home" activity is strongly dependent on students' personal character, teachers' support, and parents' support [19]. Even

without direct (face to face) interaction, teachers are expected to provide optimum guidance, care, and attention to the students. Also, parents need to provide their children with (emotional and spiritual) motivation and material (instrumental) support.

Finally, kindergarten's education performance is strongly dependent on the ability of school management to adapt to the changes. There is no guarantee that there would be no other events that cause identical impact. Therefore, school management should prepare a strategic management model/scheme or emergency management scheme to face an unexpected situation such as the Covid-19 pandemic. The government should also prepare a standard guideline for education emergency response and make it a competence standard for teachers and school management boards. Therefore, education practitioners would always be prepared for unexpected situations.

The Covid-19 outbreak is a global pandemic that affects many countries' educational systems, especially developing countries. Therefore, many countries might encounter similar educational obstacles. This research is only an early measure of the weakness of school management. Accordingly, a more advanced management model should be developed and management planning should be improved. It is necessary to conduct further research on the development of a responsive management model. Having a rapid response strategy on an emergency as a part of management would be useful to maintain the education process. The need for management improvement is even more significant in kindergartens because students' activities are strongly dependent on school programs/teachers. Therefore, it is necessary to improve teachers' and school management boards' competence and improve management.

This research has limitations. The education performance is not limited to the impact of school management. Parents as stakeholders play a crucial role in affecting education performance. However, they were not included in the research. This research also neglected the students' achievement that plays a significant role as an indicator of the successful implementation of education. Therefore, future research should include those variables to provide more comprehensive results.

## 6. Conclusion

Most kindergarten management boards and teachers experience difficulties in performing education activities caused by the "learning from home" policy due to their unpreparedness. Mastering information and communication technology is one of the most influential aspects that cause obstacles. Indirect learning also forces teachers, parents, and students to make extra effort to adapt to the new pedagogical culture during the Covid-19 pandemic. Possible solutions to overcome the problems are enhancing information and communication technology mastery, especially for teachers, improving parents' competence in assisting their children, and increasing children's discipline. Therefore, the performance of online education can be improved. From a future perspective, the integration of online learning into the traditional education system should be considered to improve the education system's preparedness in facing such catastrophe. It is also expected that the government develops adequate infrastructure and facilities to support the online education system.

## Declarations

### Author contribution statement

Erni Munastiwi: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Sri Puryono: Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data.

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Data included in article/supp. material/referenced in article.

### Declaration of interests statement

The authors declare no conflict of interest.

### Additional information

No additional information is available for this paper.

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