

# Integrated Inclusive School Network Cluster as a Resource Center for Inclusive Education in Surakarta

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**Abstract.** An outreach or community service program was conducted in Surakarta City, Indonesia, by developing Inclusion House in collaboration with the Yayasan Lembaga Pendidikan Al-Firdaus (YLPAF, Al-Firdaus Foundation for Education), which oversees the Al-Firdaus Inclusion School. YLPAF also has a Puspa (Children's Service Center), which carries out the main task of being a model for an inclusive education resource center. However, YLPAF faces challenges related to inclusive education resource centers in carrying out its duties because the inclusive school network that formed at this time still needs to be improved. This community service is carried out with a focus on *Inclusion House*, creating an integrated, inclusive school network where YLPAF is the learning resource center. The community service team from UNS acts as a facilitator in the formation of an integrated, inclusive school network in the city of Surakarta. This inclusive school network, formed through community service, connects YLPAF as a resource center for inclusive education with kindergarten, elementary schools, and a natural school. The commitment of schools ratified in a MoU contains a cooperation agreement in assessing special needs students and establishing communication regarding curriculum adaptation and classroom management in the inclusive education cluster network organization.

## 1 Introduction

Indonesia is not yet a friendly country for people with disabilities. One of the services needed by persons with disabilities is education [1]. Inclusive education is a form of special education service that requires all children with special needs to receive an education equivalent to a regular class with their peers [2]. All children are accepted to receive an education regardless of their potential, physical, mental, emotional, social, religious, gender, or economic background. Still, inclusive education is a system that adapts to the needs of both normal and children with special needs who are placed in regular schools together [3],

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[4]. Inclusive education is classified as special education according to the Law of the Republic of Indonesia No. 20 of 2003 concerning the National Education System. Article 32 explains that special education is education for students who have difficulty attending normal learning processes due to physical, emotional, mental, or social disorders or extraordinary intelligence and talent potential [5]. The appropriate education needs to be implemented in special schools and inclusive schools.

Schools that provide inclusive education are called inclusive schools. An inclusive school is a school that accommodates all students studying in the same class as regular students, providing educational programs that are appropriate and challenging but adapted to the abilities and needs of each student, as well as assistance and support from teachers and the school in academic, social activities, and extra-curricular ([4], [6]). Based on Basic Education Data (Dapodik), as of December 2022, as many as 40,928 schools have implemented inclusive education from elementary school to high school, both public and private, with a total of 135,946 students with special needs who have implemented learning there [7].

Inclusive schools are expected to support the success of students with special needs in academic, social, and extra-curricular activities. The success of inclusive education will depend heavily on the collaboration of the government, teachers, and parents [2]. Inclusive schools require cooperation from all parties to achieve this expectation. For example, schools must modify educational programs, the government helps complete facilities and infrastructure, and social support from parents and the community to suit the needs of students with special needs. Not all-inclusive schools can run effectively due to teachers' limited understanding of inclusive education, infrastructure, and services for children with special needs. Philosophically, most educators adhere to the concept of inclusion, but pragmatically, many oppose actual practice [4]. The current condition is that several inclusive schools continue providing inclusive education with these challenges and limitations, as in Surakarta, Central Java. The city of Surakarta has been a child-friendly and inclusive city since 2013.

The implementation of inclusive education in the City of Surakarta has been regulated in the Mayor's Regulation (PERWALI) of the City of Surakarta Number 25A of 2014 concerning the Implementation of Inclusive Education. This policy was established to support Surakarta as an inclusive city. The preparations that the Surakarta City Government are being carried out in stages in several schools. Inclusive education in Surakarta in 2014 had 38 inclusive schools referring to the Decree of the Head of the Education, Youth and Sports Service in 2013 concerning the Determination of Schools Providing Inclusive Education for Surakarta City. It is recorded that 15 elementary schools, seven junior high schools, and six high schools/vocational schools open inclusive education [8]. Based on the latest data collected by *Pusat Layanan Disabilitas dan Pendidikan Inklusif* (PLDPI, Center for Disability Services and Inclusive Education) of Surakarta City in 2023, it shows 19 elementary schools, 10 junior high schools, and 5 high schools provide the service for disables [9]. Even though there has been an increase in inclusive schools, there are several obstacles faced by inclusive schools and stakeholders related to inclusive education, including the unbalanced number of inclusive schools with school-age children with special needs and the difficulty of finding special supervising teachers [10]. However, at the same time, the Surakarta City Education Office said schools cannot reject children with special needs, although they still cannot provide facilities and special education teachers [11].

Previous research results show problems in implementing inclusive education, including aspects of students, curriculum, teaching staff, learning activities, school management, facilities, and cooperation between schools, government, parents, and community views [12]. The main problem relates to teaching staff, where class teachers and special supervising teachers must understand the learning methods for children with special needs. Another problem is the need for more support from various stakeholders, such as parents and the

community, for children with special needs. In general, all the problems in implementing inclusive education are also experienced by inclusive schools in Surakarta, especially the competency of teaching staff or teachers whose numbers need to be increased to teach or guide children with special needs.

Research has been conducted regarding the implementation of inclusive education in Surakarta City, which includes the accessibility of inclusive schools for children with special needs [13], the performance of inclusive education in elementary schools [14], and special supervisor teacher support programs in inclusive schools [9]. The lack of teachers with an inclusive educational background is also faced by the YLPAF, which oversees several levels of inclusive schools, namely preschool, elementary school, and middle school. Al Firdaus Inclusion School still has a limited number of special supervising teachers accompanying children with special needs. Data on the number of children with special needs (CSN) and special supervising teachers (SST) at the Al Firdaus Inclusion School shows an imbalance where 107 CSN spread across preschool, elementary school, and middle school accompanied by 69 teachers [15].

Al-Firdaus Inclusion School is a school in Surakarta City, Central Java, with a curriculum and learning materials that adopt an inclusive education system. The management of the Inclusive School under the auspices of the YLPAF has the International Baccalaureate (IB) qualification and is the first in Central Java. YLPAF has established an inclusive, integrative, and Islamic education system. Al-Firdaus Inclusion School includes every child without distinguishing between the child's needs so that they can develop their potential. YLPAF has received the 2012 Inclusive Education Awards, which successfully attracted 150 nominees from 33 provinces in Indonesia. All educational service units at YLPAF have implemented an inclusion model to date where a special supervising teacher accompanies children with special needs during learning at school. Apart from that, the educational service unit and special supervising teachers are also supported by a special needs children's service unit called the Children Service Center (Puspa), which carries out the main task as an inclusive education support unit and as a model inclusive education resource center by developing collaboration with stakeholders or institutions to improve the quality of education for students with special needs. Increasing teacher competency through capacity building is very necessary, especially for teachers who do not have a special education or special education background. However, in carrying out its duties, YLPAF faces challenges related to inclusive education resource centers because the inclusive school network that has been formed at this time still needs to be improved.

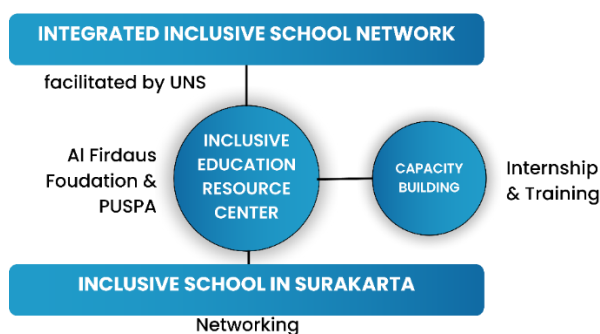
The Community Service Team from Universitas Sebelas Maret (UNS), partners from the Yayasan Lembaga Pendidikan Al Firdaus (YLPAF), and ARCHANA Psychology Bureau developed the Inclusion House to support special supervising teachers and assist children with special needs and their families. The team developed Inclusion House by establishing the Child Learning Assistance Mother Forum as a group for consultation and information sharing between parents and CSNs, teachers in inclusive schools, and experts in the social and educational fields [16]. Furthermore, establishing an Inclusion House in 2022 located at the ARCHANA Office and collaborating with YLPAF as a community service activity partner has carried out caregiver training for CSN learning assistance [15]. Inclusion as the development of an inclusive society has a role in connecting stakeholders to collaborate in implementing inclusive education, especially in Surakarta City.

A major problem in inclusive education in Surakarta City is the gap in the number of teachers who cannot meet the needs. The network of inclusive schools that already exist at YLPAF should be a solution to this problem, but its implementation has not been optimal, so the community service team from UNS has developed the Inclusion House, developing the Integrated Inclusive School Network Cluster (IISNC) program as the best solution to the two problems faced by YLPAF service partners and also inclusive schools in Surakarta City. This

community service is carried out with a focus on creating an integrated, inclusive school network where YLPAF is the learning resource center regarding assessment capacity, curriculum adaptability, and class management in the cluster network organization. The community service team from UNS acts as a facilitator in the formation of an integrated, inclusive school network in Surakarta City. Therefore, the Participatory Action Research (PAR) approach was applied in this study to answer the following research questions: (1) How is the IISNC program developed? (2) How is the IISNC program implemented? This study involved psychologists from ARCHANA, Sociologists from UNS, inclusive schoolteachers in Surakarta, and inclusive education experts from YLPAF.

## 2 Method

This study uses a Participatory Action Research (PAR) approach. PAR focuses on enabling action in this study, the IISNC program. Action is achieved through a reflective cycle, in which the researcher collects and analyzes data and then determines what steps to follow [17]. Empowerment in the PAR approach is carried out in four stages: (1) Reflection, (2) Design, (3) Implementation, and (4) Evaluation. The first stage in the PAR approach is reflection, which explores problems by collecting data and documentation in news, articles, and journals. In addition, studying the issue at the Al Firdaus Inclusive School through Focus Group Discussion (FGD) involving psychologists from ARCHANA, sociologists from UNS, schoolteachers, and administrators of the Yayasan Lembaga Pendidikan Al Firdaus (YLPAF). The Inclusion House team, including the Community Service Team from UNS, YLPAF, and ARCHANA, designed the IISNC program. The design plan for action in empowering this community is developing a school network to assist inclusive schools in Surakarta. The third stage was implementing the IISNC program, designed by forming an inclusive school network through a forum. Inclusive school networks are formed through focus group discussions (FGD) and the agreement to collaborate by a memorandum of understanding (MoU). After the team created the forum, collaborative activities were carried out, including training and internships for special supervising teachers and assessments for children with special needs from schools that are members of the forum. The final stage of this research is an evaluation where the researcher elaborates on empowering the inclusive school network. The evaluation phase is carried out to respond to the implementation that has been carried out, especially the training and internship evaluated, by comparing the participants' pre-test and post-test scores and then analyzing them using a paired t-test. Data collection was carried out to implement the four stages of the PAR using several data collection techniques, including literature studies, Focus Group Discussions, observation, and documentation. The following stages of program implementation by the UNS team are presented in Figure 1.



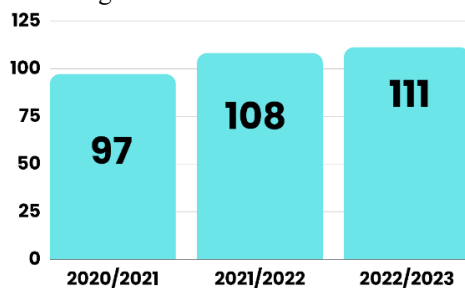
**Fig. 1.** Implementation Stage of the IISNC Program

### 3 Discussion

The community service team from UNS formulated the IISNC program based on a problem in inclusive education in Surakarta, namely, the need for more specialized supervising teachers (SST) for children with special needs (CSN) in inclusive schools. In addition, there is pressure from the Education Office, which prohibits schools from rejecting any CSN who registers to become a student at their school. Both the Education Office, government, and schools also know that their problem is not only a lack of SST resources but also related to facilities and management.

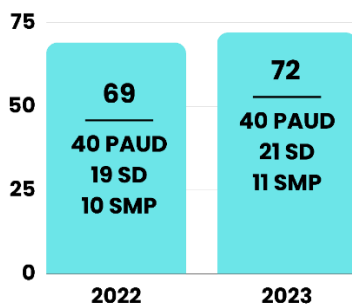
Education inclusion policies still need to be considered optimal in management and implementation. However, the supporting factor for inclusive education policies is cooperation between schools, the Education Office, and the community to support the running of inclusive education programs [18]. Even though there are still several obstacles in the implementation of inclusive education, schools, education offices, and the community continue to work together to improve management and performance to provide appropriate solutions and services for students in general and children with special needs as an effort to enhance the quality of educational services.

Cooperation in the implementation of inclusive education attempted by the service team public from UNS by developing Inclusion House and its realization in the IISNC program. The first step of the IISNC program was creating the forum. The team analyzed their situation through the forum while implementing inclusive education in Surakarta. The data about obstacles faced by schools were collected through focus group discussions, and the results included a lack of special guidance teachers to accompany children with special needs while at school and limited school facilities, which affected children's accessibility to learning. The gap in the number of special supervising teachers compared to the number of CSNs is also experienced by the YLPAF—the following data on children with special needs who attend Al Firdaus Inclusion School in Figure 2.



**Fig. 2.** Data on the Number of Children with Special Needs at YLPAF

Figure 2 shows that there has been an increase in the number of children with special needs from the 2020/2021 to 2022/2023 school year. The number of children with special needs cannot be matched by the number of special guidance teachers; currently, there are only 69 teachers available. These conditions are not ideal for implementing inclusive education because each child has different needs, so the teachers who accompany them also need special skills. The increase in the number of children with special needs who receive inclusive education is accompanied by the number of inclusive schools in Surakarta City, according to the data in Figure 3.

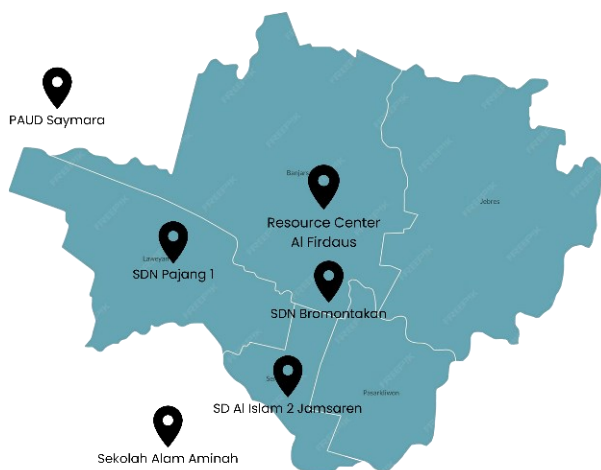


**Fig. 3.** Data on the Number of Children with Special Needs at YLPAF

Figure 3 shows that the City of Surakarta has also experienced an increase in the number of inclusive schools at several levels of education. Overall, in 2022, there were 69 schools, then increased in 2023 with a total of 72 schools. Details of inclusive school education levels in 2022 include 40 preschools, 19 elementary schools, and 10 junior high schools. In 2023, there is an increase in inclusive schools by two elementary schools and one junior high school.

Analysis of the situation at inclusive schools in Surakarta shows similarities with data collected through literature study. Observation results of accessibility of children with special needs in inclusive schools in Surakarta City have been carried out with the results of Al Firdaus High School and SDN Bromantakan Elementary School were not yet fulfilling standard accessibility for children with special needs caused by lack of knowledge or funds for making means good accessibility at the school [13]. Implementation of inclusive education at SDN Bromantakan Elementary School was also researched by Arum et al. in 2020, where there are still obstacles because there is no special curriculum for children with special needs. Schools use the Curriculum 2013 with modifications to accommodate children with special needs who attend school there [14]. The community service team from UNS once ran the Student Support Program for Children with Special Needs to support the Supervising Teacher, specifically in the Surakarta City Inclusion School, to overcome the gap in the provision of special supervising teachers [9]. In addition, YLPAF has sought collaboration through the inclusion school network. Currently, it still needs to be optimized. Based on results analysis situations and literature studies, the community service team collaborates with YLPAF to make a solution for developing the existing school network via the IISNC program.

A second focus group discussion was held to introduce the concept of an integrated, inclusive school network cluster program and equalize the perception of inclusive school representatives in Surakarta. The community service team from UNS invited seven schools, but only five agreed to join the inclusive school network cluster. The collaboration agreement involved the community service team as facilitators, with YLPAF as the inclusive education resource center and five inclusive schools as members, and was signed in a memorandum of understanding (MoU). Schools involved in this program include (1) Saymara Preschool, Kartasura, (2) Aminah Sukoharjo Nature School, (3) Al Islam 2 Jamsaren Elementary School Surakarta, (4) Bromontakan Elementary School Surakarta, and (5) Pajang 1 Elementary School Surakarta. Mapping the location of schools and centers source education inclusion in the IISNC program can be seen in Figure 4.



**Fig. 4.** Location Map of Inclusive Schools and Resource Centers in the Integrated Inclusive School Network Cluster Program

Schools that joined the IISNC program are in Surakarta City and two schools in Sukoharjo Regency. The first agreement in the MoU is to establish Puspa as a resource center for inclusive education with consideration of complete facilities for learning, therapy, and assessment for children with special needs. Apart from that, Puspa also has experts in inclusive education. Puspa, as a supporting unit at Al Firdaus, is the foundation's solution to overcoming the gap in the number of special supervising teachers for children with special needs through its function as a resource center for inclusive education by providing training for class teachers and special supervising teachers. Because of that function, Puspa as a center service for children needs to be optimized through the IISNC program, where Puspa became the center source of study for inclusive schools in Surakarta and its surroundings. The hope is that inclusive schools join the cluster network and find it easy to access the learning resource center at YLPAF.

Furthermore, the agreement in the MoU regarding program implementation includes training and internships for special supervising teachers and assessment tests for children with special needs who attend inclusive schools. Inclusive schools that joined the IISNC program must send representatives of 2 teachers from each school for follow-up training and internship in Puspa. Apart from that, the school is also expected to send two children who have gone through initial identification of children with special needs to undergo test assessment with psychologist Puspa.

Implementing training and internship activities for teachers by bringing in experts related to inclusive education is one of the capacity-building efforts of the UNS community service team. This activity aims to increase theoretical and empirical knowledge regarding education in inclusive schools. Training and internships for special supervising teachers are carried out for four days, with two days for delivering material in class and observing the Al Firdaus Inclusion School, then continuing with an internship to practice handling children with special needs in the classroom. The material in the training includes the concept of inclusive education, how to handle children with special needs at school, and early identification of children with special needs. Special supervising teacher interns are accompanied directly by pedagogues and special supervising teachers from the Al Firdaus Inclusion School. Evaluation of training and internships as capacity-building efforts is carried out by analyzing the pre-test & post-test using paired samples t-test. The results of data analysis on the pre-test and post-test are presented in Figure 5.

Paired Samples Test									
Paired Differences									
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	PRETEST- POSTTEST	-33.667	34.641	11.547	-60.294	-7.039	-2.916	8	.019

**Fig. 5.** Paired Samples T-Test Results on Evaluation of Special Guidance Teacher Training and Internships

The results show differences between the variables, so the program had influences to improve the teacher's knowledge about inclusive education. The last activity in the IISNC program is the assessment for children with special needs to analyze their capabilities for academic purposes, which can be considered for the parents to decide where their children go to study (inclusive or special education school). The community service team provided the funding to assess Puspa for ten children. In addition, the forum formed through this program is also a means for inclusive schools to intertwine communication-related to curriculum adaptation and classroom management organization network cluster education inclusion with YLPAF, which has experience in providing inclusive education and managing inclusive schools at various levels of education.

## 4 Conclusion

Implementing inclusive education in Surakarta requires cooperation between inclusion schools formed through the IISNC program. The program's legality is written in the MoU signed by five representatives from each school, including two state elementary schools, one private elementary school, one kindergarten, and one natural school. The cooperation agreed upon in the MoU includes the determination of Puspa as an inclusive education learning resource center in Surakarta, implementation of training and internships for teachers, and assessments for children with special needs from the schools of the IISNC forum. Puspa at the YLPAF is used as a resource center for inclusive education with the support of adequate facilities and professionals. The result of the training and internship made improvements in the teacher's knowledge.

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