



CONTRIBUTION OF CAMPUS TEACHING PROGRAMS IN IMPROVING THE STUDENTS' NUMERACY LITERACY COMPETENCE IN PARTNER SCHOOL

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ABSTRACT

The research in this paper was conducted on Campus Teaching 5 (KM5) activities as a form of Independent Learning Kampus Merdeka (MBKM) in partner schools. It aims to provide opportunities for students to carry out activities outside the lecture class as a self-development experience. The research aims to determine the effectiveness of increasing literacy, numeracy, and students' character as a result of the transformation conducted by students in campus teaching activities toward the quality improvement of learning services in partner schools. The expected transformation is an increase in literacy, numeracy, and students' character competencies through a learning process that is innovative, creative, and fun. The research was conducted by using mixed methods between quantitative and qualitative descriptive methods. The research data were obtained from weekly reports of students' activities at the assisted school as a partner school, namely Perti Islamic Private Elementary School in West Jakarta. Two types of data are weekly reports, which are qualitative and quantitative data based on the results of the Pretest and Posttest Minimum Competency Assessment (AKM). Based on the results of qualitative data analysis of weekly reports, the transformation process has an impact on improvement changes in literacy, numeracy, and students' character competencies. It is also shown from the results of the AKM, there is a positive difference in the mean score of pre-test and post-test. It means that there is a competence improvement in literacy, numeracy, and students' character. Hence, it can be said that the Teaching Campus is effective in improving students' literacy, numeracy, and students' character competencies.

Keywords: teaching campus program, literacy, numeracy, students' character, competencies

KONTRIBUSI PROGRAM PENGAJARAN KAMPUS DALAM PENINGKATAN KOMPETENSI LITERASI NUMERIK SISWA DI SEKOLAH MITRA

ABSTRAK

Penelitian dalam artikel ini dilakukan pada kegiatan Kampus Mengajar 5 (KM5) sebagai bentuk Mandiri Belajar Kampus Merdeka (MBKM) di sekolah mitra. Ini bertujuan untuk memberikan kesempatan kepada mahasiswa untuk melakukan kegiatan di luar kelas perkuliahan sebagai pengalaman pengembangan diri. Penelitian bertujuan untuk mengetahui efektivitas peningkatan literasi, numerasi, dan karakter mahasiswa sebagai hasil transformasi yang dilakukan oleh mahasiswa dalam kegiatan pengajaran di kampus menuju peningkatan kualitas layanan pembelajaran di sekolah mitra. Transformasi yang diharapkan adalah peningkatan kompetensi literasi, numerasi, dan karakter siswa melalui proses pembelajaran yang inovatif, kreatif, dan menyenangkan. Penelitian dilakukan dengan menggunakan metode campuran yaitu deskriptif kuantitatif dan kualitatif. Data penelitian diperoleh dari laporan mingguan kegiatan siswa di sekolah binaan sebagai sekolah mitra yaitu SD Swasta Islam Perti Jakarta Barat. Dua jenis data yaitu laporan mingguan yang merupakan data kualitatif dan hasil Asesmen Kompetensi Minimum (AKM) *Pretest* dan *Posttest* sebagai data kuantitatif. Dari hasil analisis data kualitatif laporan mingguan, proses transformasi berdampak pada perubahan peningkatan kompetensi literasi, numerasi, dan karakter siswa. Hal ini juga ditunjukkan dari hasil AKM terdapat perbedaan rata-rata skor *pretest* dan *posttest* yang positif. Artinya terjadi peningkatan kompetensi literasi, numerasi, dan karakter siswa. Sehingga dapat dikatakan Kampus Mengajar efektif dalam meningkatkan kompetensi literasi, numerasi, dan karakter mahasiswa.

Kata Kunci: program kampus mengajar, literasi, numerasi, karakter mahasiswa, kompetensi

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INTRODUCTION

The numeracy literacy skills of students at the Elementary School (SD) and Junior High School (SMP) levels are the foundation of basic needs. As an educational at the elementary

education level, numeracy literacy is the foundation for basic cognitive abilities for the development of other abilities. Mastery of numeracy literacy material is also an important

factor in meeting educational needs in the current era of the industrial revolution 4.0 (Syahidin, 2020). Literacy is an important competency skill and must be possessed by every student. The educational process is strongly influenced by awareness and literacy skills. The success of a learner both in undergoing the learning process and in everyday life in society is highly dependent on the culture of literacy that is ingrained in him. The importance of literacy is also shown by the Ministry of Education and Culture (2016) which states that a literacy culture that is embedded in students will be able to increase success and develop their ability to respond to all information received critically, analytically, and reflectively.

Numeracy literacy is known as knowledge, individual skills related to basic mathematics usually using numbers and symbols. This skill is often used in solving practical problems in the form of interpreting information data analysis for predictions and decision making. Another explanation was provided by Ekowati et al. (2019), the definition of the term numeracy literacy is the competence to analyze and understand an event or someone's statement which is formulated in the form of an activity that transforms and manipulates language or symbols that are often obtained in daily life and expresses these opinions using pictures or writing. Mahmud & Pratiwi (2019), explained that numeracy literacy is a form of one's skills to be used as a way of solving problems. Thus, the term numeracy literacy is understood in the form of applying the concept of numbers or numbers and the ability to count from individuals in interpreting data information in the form of surrounding environmental phenomena in the form of quantitative data. Hwang & Ham (2021) stated, there are three aspects of real ability from numeracy literacy, counting, relations between numbers, and arithmetic operations. Counting can be interpreted as a form of verbal ability in calculating the existence of an object and identifying the number of these objects.

Based on the report on the results of the 2018 PISA (*Program for International Student Assessment*) showed the results of studies conducted by member countries that are members

of *The Organization for Economic Co-operation and Development* (OECD) which evaluate the education system. This activity was attended by more than 70 countries. The assessment was carried out once every three years, as the object or target of the participants are junior high school students aged 15 years, representatives of schools who were randomly selected to carry out a test with three areas of competency being measured, namely literacy or reading, mathematics, and science. In literacy competence, Indonesia ranks 62nd out of 70 participating countries. This means that in terms of literacy competence, Indonesia's rank was at the bottom. In terms of numeracy competency, Indonesia's ranking was also low, Indonesia's children's mathematical ability was still below the average of OECD member countries, where in mathematics competence, Indonesian children rank 73 out of 80 countries. On the other hand, numeracy ability was closely related to sensitivity to numbers or known as the *skill of number sense* as a form of understanding numbers (Setyaningsih & Ekayanti, 2019). Competence of students who have sensitivity to numbers, will have more ability in problem solving skills. Problem solving skills are the ability to provide answers to problems through a thought process that combines concepts so that results are obtained in the form of the right answers to problems (Nurfadillah & Suhendar, 2018). In every process of thinking activity, someone with numeracy skills is easy to solve problems, indirectly it will also hone critical thinking skills. This is what reinforces the idea that it is very important to improve numeracy skills in order to form a learning process that has an approach that makes it easier to count or carry out students' numeracy activities.

Much research on literacy and numeracy competencies has been carried out, but these efforts are still limited, they have not been carried out thoroughly. For this reason, efforts must be made thoroughly through regulation of policy makers. For example, the Merdeka Learning Campus Program (MBKM), which was initiated by the Ministry of Education and Culture, is the Teaching Campus, known as KM. This program aims apart from providing opportunities for students to gain learning experience and carry out

self-development, it is also expected to have an impact on the transformation of learning in partner schools. The transformation process is carried out by means of pioneering activities in the form of student collaboration with teachers and the school in improving the quality of learning services. Improving the quality of learning with innovative, creative, and fun learning approaches. The approach through improving the quality of learning is expected to have an impact on increasing students' literacy and numeracy competencies. Research on teaching campus activities has not been carried out much, therefore it is interesting for researchers to explore and find out more deeply. Teaching Campus has the main objective to provide provision to students who have various expertise and skills. Students as teacher collaborators in partner schools in the application of innovative learning models are expected to be able to foster creativity and innovation in learning. Another expected result is an impact on strengthening students' literacy and numeracy competencies.

Based on this explanation, it can be explained that the numeracy literacy skills of students in various regions in Indonesia still need attention. The efforts and hard work of all components of education in improving literacy and numeracy competencies must be continued. As a field supervising lecturer (DPL) in KM activities, This research was conducted to determine the effect of Campus Teaching activities on the transformation of learning in partner schools. The application of innovative learning models, technology adaptation programs, and administrative assistance in KM activities are programs that are considered effective in carrying out transformation as an effort to increase students' literacy and numeracy competencies. The purpose of this study was to explore and find out the effectiveness of the contribution of campus teaching to improving students' literacy and numeracy competencies in partner schools.

LITERATURE REVIEW

Several studies that have been conducted in Indonesia are related to efforts to explore the

learning process that has an impact on increasing the competence of numeracy skills with various research perspectives. Ambarwati & Kurniasih (2021) have studied the effect of using YouTube as a learning medium on *problem-based learning*; Dantes & Handayani (2021) have studied the impact of applying blended learning *models*; Jamil & Khusna (2021) have succeeded in developing an evaluation process that is oriented towards context-based mathematics learning. The use of the *quizizz* application as implemented by Utari et al. (2021), and to find out the effect of implementing a problem-based learning model with the help of the Cabri 3D V2 application carried out by Widiastuti & Kurniasih (2021). Nirmalasari et al. (2021), has conducted a study on the impact of the Science Technology Engineering Arts and Mathematics-based learning model (STEAM). Based on the results of several studies that have been conducted, it is evident that numeracy literacy skills can be improved through the application of innovative, creative, and fun learning processes.

Numerical literacy skills as special and important skills that students must have, this can be obtained through a process of increasing cognitive competence based on readiness and ability to accept, translate, apply, and express number symbols or symbols related to basic mathematics as tools used to solve problems in everyday life and the ability to analyze various information (narrations, graphs, tables, and charts) as a basis for decision making (Mahmud & Pratiwi, 2019). The current ability of Indonesian students is not yet skilled in applying or linking their mathematical knowledge to every situation. They are also not skilled enough to interpret mathematical symbols and sentences, as well as show or explain the data information obtained (Tasyanti et al., 2018).

The implementation of the KM program has become a tool in efforts to improve the quality of higher education through providing facilities, assisting, and accelerating the achievement of higher education goals, that is the achievement of the eight Main Performance Indicators of Higher Education (IKU PT) in accordance with Kepmendikbud Number 754/P/2020 concerning IKU PTN and LLDikti which is implemented

within the Ministry of Education and Culture. In particular, PTN and LLDikti KPIs in the KM Program are related to: 1) Student readiness to have experience in off-campus activities (IKU no-2), namely student teaching activities; 2) Willingness of lecturers to carry out activities outside the campus in an effort to improve the competence and quality of lecturers (IKU no-3) in the form of a number of outputs of research and community service that have received international recognition or are useful for the welfare of society (IKU no-5); 3) Readiness of study programs to receive international accreditation standards through improving curriculum standards in the form of implementing learning programs in tertiary institutions that apply group-based learning models (*team-based projects*), *case methods*, and assessment processes related to the implementation of KM programs at the elementary and junior high levels, and 4) Willingness of tertiary institutions to collaborate with stakeholders starting from schools, education offices, and all related elements as partners who contribute to the implementation of KM programs. The KM program activities can be used as a reference in the process of program preparation, development, planning, and implementation based on the 2020 MBKM Handbook and the Higher Education Curriculum Development Guidebook in the Industrial Age 4.0 as a form of implementing the 2020 MBKM implementation.

METHOD

This research method used a mixed method, which used a descriptive-qualitative approach and statistical analysis of quantitative data descriptions. A qualitative-description approach was appropriate to be applied in describing the facts and problems obtained during the activity, focusing on research that seeks to reveal the contribution of literacy, numeracy and character improvement programs. That was accordance with Moleong (2018), the data collection process carried out in qualitative research is in the form of words, pictures, but not in the form of numbers. Meanwhile, quantitative data was obtained from the results of the Pre-test and Post-test Minimum Competency Assessment

(AKM) which were carried out at the beginning and at the end of the activity. The location of the research was conducted at Perti Islamic Private Elementary School, West Jakarta as a partner school in Campus Teaching 5 (KM5) activities. This school was selected based on a special appointment from the Ministry of Education and Culture, where the researcher was placed as a field supervising lecturer (DPL). Qualitative data was obtained from the results of weekly student reports which were carried out for 16 weeks starting from 20 February 2023 to 9 June 2023. The reports were descriptive in nature which explain student activities during the activity process. Meanwhile, quantitative data was obtained from the results of the AKM, pre-test and post-test of students' literacy and numeracy competencies and student character surveys. Both types of data were analyzed qualitatively and quantitatively using a statistical analysis of the differences in the mean pretest and posttest results. A minimum competency assessment for literacy, numeracy, and a character survey was conducted for all fifth grade students as data samples.

RESULTS AND DISCUSSION

Teaching Campus Activities

The Teaching Campus Activities Program (KM5) was started on 20 February 2023 until 9 June 2023 with the duration of the program being 16 weeks. The activity began with the release by the West Jakarta City Education Sub-Department, sending students to the location of the target schools which were simultaneously carried out. One of the partner schools that became the target school was SDS Islam Perti, West Jakarta. At this school, five students from various universities were placed and collaborated with field supervising lecturer. The KM program has the goal of providing students with various skills and expertise as teachers and school partners to develop learning models, increase creative power, and learning innovations that will have an impact on literacy and numeracy in schools that are getting stronger.

A qualitative description of the process of campus teaching activities was obtained from weekly student reports, with aspects reported

including; 1) Daily activities in collaboration with partner schools, 2) Implementation of plans for numeracy literacy and technology adaptation programs, and 3) Constraints and challenges

faced and program results or achievements. Table 1 is a resume of student reports during the activity, selected on a week that has certain activities from placement to pick-up.

Table 1. Weekly Student Reports

No	Numerical Literacy	Technology Adaptation
1	The literacy program offered is <i>English Day</i> which was held one day every week for three types of abilities; listen, write, and read. The numeracy program was a quiz activity that challenged students to compete against general and special abilities in arithmetic/numerical	Implementation of a computer-based Minimum Competency Assessment, to determine literacy and numeracy abilities and a student character survey. The use of computers was one of the introductions to student technology adaptation
2	Running the Literacy and Numeracy collaboration program was carried out simultaneously with the Scout Actualization and Novel Reading Literacy schedule as a weekly activity	Social media content by creating social media accounts as school accounts based on knowledge and technology such as charades and general knowledge
3	The numeracy literacy activities carried out are 1) Empowering wall magazines (madding) which were filled with students' works in the form of paintings and 2) Implementing a literacy tree program using tree-shaped banners and a sheet of leaf-shaped paper.	1) The learning video program was in the form of a short video about subject matter as a visual form and students' voices as voiceover and 2) The English day program with the concept of memorizing vocabulary which was held every Friday.
4	Literacy and numeracy collaboration programs implemented by students this week include; the Literacy Tree program which was previously hampered, this week can be implemented, after the second break.	Collaborate with scout coaches to carry out scout actualization activities, and with ICT teachers to do computer practice for grade 7 students in the Computer Lab.
5	Literacy and numeracy this week were carried out in the form of a flash boarding school activity. Students received material and guidance on reading the Koran, making calligraphy works, and watching films together followed by recording the essence of the film.	The return ticket program was a favorite literacy activity by utilizing the Quiziz application, students were enthusiastic about getting a return ticket by preparing themselves to be able to answer questions as a condition for getting tickets.



Figure 1. Campus Student Activities Teaching

Students made reports every week that provide an overview of the teaching process of

campus activities in collaboration with teachers at partner schools. Quantitative data obtained from

the results of the Minimum Competency Assessment (AKM) of literacy and numeracy abilities and student character surveys, provide information as quantitative data. The results of the

pre-test and post-test AKM were analyzed based on changes that occurred collectively from all students in partner schools. In more detail, the data obtained is shown in Table 2.

Table 2. Initial Test and Final Test of AKM Students

Competency Type	Average Score		
	Preliminary Test	Final Test	Change
Literacy	56.70	62.30	5.60
Numeration	48.18	51.22	3.04
Character survey	67.00	87.50	20.50

The results of the students' AKM based on the changes that occurred between before the process and after the process of teaching campus activities were shown by the differences in the results of the initial and final tests. In the three types of competencies tested, the character survey has the highest change value, which is equal to 20.50. This can be explained that KM activities which involve interactions between students and students have had an impact on improving students' character abilities. Communication skills, sense of responsibility and independence are more trained through intensive activities in collaborative learning. In other conditions, the numeracy ability had been the lowest change value. This situation shows that to increase the basic numeracy value students really need intensive coaching. However, there are interesting changes, even though they are not significant, still prove that teaching campus activities have been an impact on increasing students' numeracy competence. Literacy competence, the results of the AKM also experienced an increase of 5.60 higher than the increase in numeration competence which was 3.04. As a basic ability to read, campus teaching activities with library and reading activities programs for 30 minutes at the beginning of learning have had an impact on increasing this competency. Thus, KM activities as a whole have had a positive impact on the literacy, numeracy, and character abilities of students in partner schools.

Discussion

The summary of student reports as shown in Table 1, illustrates that the program of activities offered is more focused on student learning activities. Learning activities are more interesting and provide challenges to students so that they are more active in learning. The use of innovative, creative and technology-adapted media has an impact on students' enthusiasm for participating in learning. This resulted in students' literacy and literacy abilities also increasing. The effectiveness of student activities in the KM program is also shown by the fun and joy of students which is reflected in the photo documentation of evidence of student weekly reports. In Figure 1, shows the various activities of students doing fun activities, thinking and learning paradigms do not always have to be shifted in class to a learning model that invites students to directly learn with learning objects.

Quantitative analysis, the positive differences in the results of the pretest and posttest of the Minimum Competency Assessment in literacy competencies shown a number that is not yet significant. Changing the value of 5.60 can only be the hope that campus teaching activity programs will have an impact and change in improving student literacy competencies. Likewise with numeracy competence, an increase of 3.04 only differentiates that numeracy competence had more severe cognitive characteristics than literacy skills. The hope of increasing literacy and numeracy competencies through teaching campus activities must remain an important part and a recommendation that this

program has good potential. In contrast to the literacy and numeracy competencies, the results of the character survey show a significant change, which was a change of 20.50. This illustrates that quite intensive activities between students and students have had an impact on changes in the positive character of students. This further strengthens the hope for changes in increasing literacy and numeracy competencies, bearing in mind that student character will be a process that changes habits and behavior to positive habits and behaviors that can support increasing literacy and numeracy competencies.

CONCLUSIONS AND RECOMMENDATION

The teaching campus program was conducted at partner schools, SDS Islam Perti, West Jakarta, had had a positive impact on increasing students' literacy, numeracy, and character competencies. After going through the process of activities with various programs that focus on improving learning, that were innovative, creative, and fun learning, it has also had an impact on students' learning habits. In literacy competence there was an increase of 5.60. There has been an increase in numeration competence of 3.04 and in the character survey an increase of 20.50.

In accordance with the objectives of the teaching campus program conveyed by the Ministry of Education and Culture, the researchers recommend strengthening the program in 4 aspects related to activities, that are: 1) strengthening the aspects of student readiness to carry out activities outside the campus (IKU no-2), 2) strengthening the aspects of lecturers' willingness to carry out activities outside the campus, research and community service (IKU n0-3 and no-5), 3) strengthening the aspects of the willingness of study programs to improve curriculum standards equivalent to international curricula through the implementation of innovative learning models, and 4) strengthening the aspects of higher education institutions' willingness to play an active role and collaborate with all stakeholders.

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