



Spreadsheet-Based TPQ Administration Efficiency: Digitization Training Program for TPQ Teachers in Tanjung Priok, North Jakarta

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Article Info	ABSTRAK
Corresponding Author: Aryo Tunjung Kusumo Email : aryo.atk@bsi.ac.id	The ability to utilize information and communication technology (ICT) is an important competency for educators in supporting the effectiveness of administration and data management in educational institutions. However, teachers and administrators of the Al-Qur'an Kindergarten/TP Working Group in Tanjung Priok District, North Jakarta, still face limitations in the use of the Microsoft Excel application so that various administrative tasks cannot be completed optimally. This community service activity aims to improve the competence of participants in operating Microsoft Excel as a spreadsheet-based administrative management medium. The implementation method includes the preparation stage, training implementation, evaluation, and reporting. The training is carried out through lectures, demonstrations, tutorials, and direct practice using modules and mentoring by a team of lecturers and students. Evaluation was carried out using questionnaires before and after training to determine the level of understanding of participants. The results of the activity showed that participants experienced an increased understanding of the use of Microsoft Excel and were able to apply the basic functions of spreadsheets in the preparation of simple administration. In addition, participants responded positively and hoped for further training with more in-depth material. This activity contributes to improving the digital competence of teachers and administrators of the Al-Qur'an Kindergarten/TP Working Group so that it can support more effective, efficient, and independent administrative management. Keywords: Microsoft Excel, digital competencies, spreadsheets, TKQ/TPQ

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INTRODUCTION

The development of Information and Communication Technology (ICT) has driven transformation in various fields, including the education sector. The use of digital technology not only plays a role in improving the quality of the learning process, but also supports the effectiveness of administration, data management, and communication between education

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stakeholders (UNESCO, 2023). Therefore, mastery of digital skills is one of the basic competencies that educators must possess in order to be able to adapt to technological developments and the demands of the digital era.

Non-formal religious education institutions, such as Al-Qur'an Kindergarten (TKQ) and Al-Qur'an Education Park (TPQ), also face the same challenges in managing administration and learning activities. The existence of the Al-Qur'an Kindergarten/TP Working Group as an organization that oversees various TKQ/TPQ institutions has an important role in improving teacher competence and supporting more effective organizational governance. However, the use of digital technology in the non-formal education environment still faces various obstacles, especially the limited ability of human resources to operate office applications (Putri et al., 2020).

One of the applications that is widely used in the management of educational administration is Microsoft Excel. This application has the ability to process data, compile reports, perform automatic calculations, and present information in the form of tables and graphs so that it can improve the efficiency of administrative work (Liza, 2022). Mastery of Microsoft Excel is also one of the digital competencies needed by educators in supporting school and organizational administrative processes (Bahar et al., 2015).

Based on the results of observations and discussions with the management of the POKJA TK/TP Al-Qur'an in Tanjung Priok District, North Jakarta, it is known that most teachers and administrators already have computer devices or laptops, but still have limited skills in using Microsoft Excel. This condition has caused various administrative work, such as compiling student lists, data recapitulation, activity reports, and organizational administrative management, to be completed independently and optimally. This problem has an impact on low administrative efficiency and dependence on other parties in completing computer-based work. These findings are also reflected in the results of identifying partner needs which show that improving digital competencies is the main need for TPQ administrators and teachers.

Various community service activities show that Microsoft Office training is able to improve the digital competence of educators and the community. Putri et al. (2020) reported that Microsoft Office training succeeded in significantly improving teachers' ICT skills so as to support the administrative and learning process. Similarly, research by Society et al. (2025) shows that Microsoft Excel training is able to improve the financial administration capabilities of spreadsheet-based educational institutions. These results show that hands-on training is more effective in improving participants' abilities than independent learning.

Based on these conditions, the Community Service team of Bina Sarana Informatika University carried out the program "Spreadsheet-Based TPQ Administration Efficiency: Digitization Training Program for TPQ Teachers in Tanjung Priok, North Jakarta." This program is designed to improve the ability of teachers and administrators of the Al-Qur'an Kindergarten/TP Working Group in utilizing Microsoft Excel as a medium for processing administrative data. The training is carried out using lecture methods, demonstrations, tutorials, and hands-on practice so that participants can apply the material according to the administrative needs of the TPQ environment.

Through this activity, it is hoped that the digital competence of participants will increase so that they are able to arrange administration more effectively, efficiently, and independently. In

addition to providing benefits for individual participants, this activity is also expected to strengthen the administrative governance of the Tanjung Priok District Kindergarten/TP Working Group in supporting Qur'anic education services that are more professional and adaptive to technological developments.

IMPLEMENTATION METHOD

This Community Service (PkM) activity is carried out with a participatory training approach that combines lecture methods, demonstrations, tutorials, and direct practice. This approach was chosen so that participants not only gain a conceptual understanding of the use of Microsoft Excel, but also be able to apply the material independently in daily administrative activities in the Al-Qur'an Kindergarten (TKQ) and Al-Qur'an Education Park (TPQ). The target of the activity is teachers and administrators of the Al-Qur'an Kindergarten/TP Working Group in Tanjung Priok District, North Jakarta, which based on the results of the identification of needs still have limitations in the use of spreadsheet applications to support the administration of organizations and educational institutions.

The implementation of the activity was carried out on Saturday, May 16, 2026, at the Secretariat Hall of the POKJA TKQ/TPQ Tanjung Priok District, North Jakarta. The implementation team consists of lecturers and students of Bina Sarana Informatika University who have their own tasks, including coordination with partners, preparation of training modules, delivery of materials, preparation of evaluation instruments, documentation of activities, and processing of evaluation data results.

The method of implementing activities consists of four main stages. The first stage is preparation, which includes coordination with partners, identification of participant needs, location surveys, preparation of training modules, preparation of activity schedules, and division of tasks to all team members. This stage aims to ensure that the material provided is in accordance with the needs of participants and the readiness of training supporting facilities.

The second stage is the implementation of training. At this stage, participants received material on the introduction of the Microsoft Excel interface, management of workbooks and worksheets, techniques of entering and formatting data, the use of basic formulas and functions, the preparation of administrative tables, and the application of spreadsheets in the preparation of TPQ administrative reports. The delivery of the material began with an explanation of the concept through the lecture method, followed by a demonstration of the use of the application by the tutor, then participants practiced directly using a laptop with assistance from the implementation team so that each participant gained an applicative learning experience.

The third stage is the evaluation of activities. Evaluation was carried out using *pre-training questionnaires* and *post-training* questionnaires to determine changes in participants' level of understanding of the material provided. In addition, the team also conducted observations during the practice to assess the participants' ability to operate Microsoft Excel and complete the exercises given. The results of the evaluation were then analyzed descriptively to illustrate the improvement of participants' understanding after participating in the training. Based on the results of the evaluation, the majority of participants showed an increased understanding of the use of Microsoft Excel compared to before the training.

The last stage is the reporting and dissemination of results. This activity produced outputs in the form of publications through *press releases* on the LPPM media of Bina Sarana Informatika University, photo and video documentation of activities, and the preparation of final reports of community service as a form of accountability for the implementation of the program. All of these stages are expected to be able to improve the digital competence of teachers and administrators of the Al-Qur'an Kindergarten/TP Working Group so that spreadsheet-based administrative management can be carried out more effectively, efficiently, and independently.

RESULTS AND DISCUSSION

Implementation of Community Service Activities

The Community Service activity will be held on May 16, 2026 at the Secretariat of the Al-Qur'an Kindergarten/TP Working Group, Tanjung Priok District, North Jakarta. The participants of the activity consisted of teachers and TKQ/TPQ administrators who were under the coordination of the KK/TP AL-Qur'an Working Group. The training is focused on improving participants' competency in utilizing Microsoft Excel applications as a spreadsheet-based administrative management medium. During the activity, participants followed a series of materials ranging from the introduction of the Microsoft Excel interface, worksheet management, the use of basic formulas, to the practice of compiling administrative tables that are commonly used in TPQ operational activities. The activity takes place interactively through a combination of lecture methods, demonstrations, and hands-on practice so that participants can try each material delivered by the tutor. The documentation of the activity shows the high participation of participants during the training process.

The implementation of training with a hands-on approach is in line with the opinion of Putri et al. (2020) who stated that improving ICT competence will be more effective if participants are given the opportunity to operate the application directly rather than just getting theoretical explanations. Through practical experience, participants will more easily understand the function of each menu and relate it to the administrative needs faced daily.

Increased Participant Understanding

Evaluation of activities was carried out using questionnaires before training (pre-training) and after training (post-training) to determine changes in participants' level of understanding of the use of Microsoft Excel. Based on the results of the evaluation displayed in the activity report, before the training, most of the participants stated that they did not understand the use of Microsoft Excel. After participating in the training, all participants stated that they had understood the basic material provided. These results showed an increase in the level of participants' understanding of the use of spreadsheet applications after participating in training activities.

The increase shows that the training has been able to achieve the main goal of the activity, which is to improve digital literacy and the competence of participants in utilizing Microsoft Excel to support administrative activities. These results also support the research of Bahar et al. (2015) who stated that mastery of Microsoft Excel is an important competency in administrative work because it is able to speed up the data processing process, reduce calculation errors, and improve work efficiency.

In addition to improving understanding, during the practice session participants also began to be able to compile simple administrative tables, using basic formulas such as SUM, AVERAGE, and setting the table format independently. This ability is an indicator that the material provided can be applied directly according to the needs of the administration in the TPQ environment.

Participants' Responses to the Activity

The success of the activity is not only demonstrated through the improvement of the participants' understanding, but also through the positive response given after the training. Based on the results of the evaluation questionnaire, several participants said that the training was very useful and hoped that similar activities could be carried out on an ongoing basis. Participants also appreciated the easy-to-understand method of delivering material and the opportunity to practice directly during the activity.

The positive response shows that the need to improve digital competencies in the TPQ environment is still quite high. According to UNESCO (2023), the development of teachers' digital competencies is one of the important factors in improving the quality of educational services because it not only has an impact on the learning process, but also on the administrative governance of educational institutions.

Implications of Activities on TPQ Administration

Microsoft Excel training provides real benefits for administrators and teachers of TKQ/TPQ in increasing the effectiveness of administrative work. Before training, various administrative work was still done manually or even handed over to other parties due to the limitations of the ability to operate computers. After participating in the training, participants gain basic skills that can be used to compile student lists, recap attendance, create activity reports, manage simple financial data, and compile various spreadsheet-based administrative documents. This condition is expected to be able to increase the independence of participants in completing administrative work more quickly, accurately, and efficiently.

This finding is in line with Liza's (2022) research which states that Microsoft Excel is one of the most effective software in increasing administrative productivity because it has the ability to process data automatically. Similarly, Masyarakat et al. (2025) explain that spreadsheet training is able to improve the quality of administrative management of educational institutions so that work becomes more systematic and well documented.

Overall, the results of the activity showed that Microsoft Excel training was able to improve the digital competence of teachers and administrators of the Tanjung Priok District Kindergarten/TP Al-Qur'an Working Group. The increase is not only reflected in the results of the evaluation of participants' understanding, but also from the high enthusiasm during the activity and the ability of participants to apply the material to the exercises given. Thus, this service activity has made a real contribution to improving the quality of digital-based administration in Qur'anic educational institutions in the Tanjung Priok area.

CONCLUSION

Community Service activities in the form of Microsoft Excel training for teachers and administrators of the Al-Qur'an Kindergarten/TP Working Group in Tanjung Priok District, North Jakarta have been carried out well in accordance with the goals that have been set. This program

is designed to improve participants' digital competence in utilizing spreadsheet applications as a support for the administration of Qur'anic educational institutions. The training is carried out through lectures, demonstrations, tutorials, and hands-on practice so that participants gain conceptual understanding as well as practical experience in operating Microsoft Excel.

Based on the results of the evaluation of the activity, there was an increase in the level of participants' understanding of the use of Microsoft Excel. Before the training, the majority of participants did not understand the use of the application, while after the training all participants understood the basic material provided and were able to apply it in the preparation of simple spreadsheet-based administration. In addition, participants gave a positive response to the implementation of the activity and expected further training with more in-depth material.

Thus, this activity makes a real contribution to improving the ICT skills of teachers and administrators of the Al-Qur'an Kindergarten/TP Working Group, especially in more effective, efficient, and independent administrative management. In the future, similar activities are expected to be carried out in a sustainable manner with further materials, such as the use of intermediate-level Excel functions, data processing, graph creation, and the use of other digital applications to support administrative transformation and improve the quality of educational services in the TKQ/TPQ environment.

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