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Optimization of Microsoft Excel as a Data Processing Tool for Letter Making in Indonesian Correspondence Learning

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Abstract

This study aims to optimize the use of Microsoft Excel as a data processing tool in making letters in learning Indonesian correspondence. Learning Indonesian correspondence, which involves the skill of writing official and personal letters, often faces challenges in terms of time efficiency and difficulties in organizing information. Microsoft Excel, with its data processing and template creation features, is believed to help simplify and speed up the process of creating letters. This research was conducted using an experimental method with a total of 106 student respondents in the Office Administration Education study program, Universitas Negeri Semarang, involving two groups: an experimental group with a total of 53 students using Microsoft Excel and a control group with a total of 53 students who used the manual method in making letters. The results showed that students who used Excel were more efficient in completing letter-making tasks, with an average shorter letter-making time compared to the control group. In addition, the quality of the letters produced by the experimental group is also better, with a more structured and rule-based format. The results of the questionnaire and observation showed that the majority of students felt helped by the use of Excel, although there were several obstacles faced related to understanding formulas and formatting settings. Overall, Microsoft Excel can be optimized in correspondence learning to improve students' efficiency, quality, and skills in letter creation.

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INTRODUCTION

Indonesian language education, especially in correspondence learning, plays an important role in preparing students to master the ability to write letters in accordance with the correct and effective language rules. Correspondence is an integral part of written communication that is widely used in professional life, such as in the creation of official letters, personal letters, and other documents. In today's digital era, the use of technology in education, especially in learning Indonesian correspondence, is very important to improve students' skills in composing letters appropriately and efficiently. One of the tools that can be used to optimize this process is Microsoft Excel. Microsoft Excel enables the processing of large amounts of data quickly and efficiently. In the context of learning Indonesian correspondence, Excel makes it easier for students to compile a database of addresses, contacts, and other important information needed for letter creation (Cahyani & Hadi, 2019). Microsoft Excel can be used in learning Indonesian correspondence by managing the data and information needed in making letters. For example, Excel can be used to compile address databases, manage mail delivery schedules, or as a template for creating bulk mail (mail merge) (Setiawan & Rahayu, 2020). With Excel's ability to systematically store and manage information, students can easily access data and use that information to write letters that fit their communication goals. Although Excel is often considered as a software for number processing, this application has great potential in the field of correspondence, especially in the creation of letters, whether personal letters, official letters, or business letters.

One of the studies shows that the use of Microsoft Excel-based learning media significantly improves students' ability to make letters in the Indonesian correspondence course (Al Fikri, Mufidah 2020). Other research revealed that the effective use of Microsoft Excel-based learning materials can improve

students' ability to plan, organize, write, and revise letters systematically. (Handayani, Jan-nah 2020). Therefore, the skill in compiling a good and correct letter must be mastered by students, especially in the context of learning Indonesian. In addition, Excel can also be used to teach students how to properly manage data, which is very important in writing official or business letters. The use of Excel as a tool in making letters can increase efficiency in compiling letters, speed up the process of making bulk letters, and minimize typing errors that often occur in making manual letters. Thus, the use of Microsoft Excel in learning Indonesian correspondence can help students master practical skills in the professional world (Sari & Iskandar, 2021). Excel features can also help students in learning Indonesian correspondence, for example Excel Tables allow structured and systematic data management, such as a list of addresses or contact information used in making letters (Setiawan & Rahayu, 2020). Another feature is that the filter and sort feature in Excel allows users to filter and sort data according to their needs, such as sorting the list of mail recipients by name or region. Students can use filters to select mail recipients from a specific city or based on delivery priority, making it easier to create customized letters (Anwar 2018). In addition, Excel provides a ready-to-use template feature that can be used to create letters or other correspondence documents, helping students with the formats that are already available. Students can use Excel templates to create invitation letters, offer letters, or reminder letters with pre-set formats, thus saving more time (Prabowo & Harsono, 2018).

However, in the practice of correspondence learning, there are often difficulties in terms of processing mail data and organizing the information needed to create letters efficiently. Students often have difficulty in compiling letters with the right format, choosing appropriate words, and managing the information needed in making letters. The use of Microsoft Excel-based learning media can also help students improve grammar, spelling,

formatting, and letter layout accurately and consistently (Asih, 2018). Another challenge Students often have difficulty managing a large amount of mail recipient data, such as names, addresses, and contact information, Students can create tables in Excel to organize mail recipient data, such as names, addresses, and phone numbers. This data can be sorted or filtered based on certain criteria (Fitria, 2020). In terms of handling business letters, the use of Microsoft Excel in teaching business cor-

respondence can improve the effectiveness of learning and students' ability to write business letters (Liao, 2018). Therefore, a tool is needed that can simplify and speed up the process of creating letters, while helping students to organize data in a more structured and effective way. The following are the difficulties of students based on the results of the research summarized in a table (Lestari & Wijayanti, 2021), (Santosa & Wulandari, 2022), (Waluyo & Suryani, 2020).

Table 1. Students' Difficulties in Learning Indonesian Correspondence

It	Student Difficulties	Problem Description	Solutions with Excel	Examples of Concrete Use
1	Difficulties in Managing Mail Recipient Data	Students have difficulty compiling and managing the recipient's information consisting of a lot of data.	Excel helps with table and data formatting features.	Use Excel tables to manage mail recipient data by name, address, and contact information.
2	Difficulty Writing Mass Letters	Write a bulk letter with different information for each recipient.	Use Mail Merge to create bulk mail.	Combine recipient data from Excel with a letter template in Word to create a personalized letter.
3	Difficulty in Maintaining Data Accuracy	Students often make mistakes in entering inaccurate data, such as typos.	Data validation feature in Excel to ensure correct formatting.	Use data validation to ensure phone numbers and emails are entered correctly and in the right format.
4	Difficulties in Drafting Letters with the Right Format	Students do not know how to structure a letter in the correct format (e.g., address writing, greetings).	Excel provides a standard template or format for letters.	Use a letter template in Excel that has been formatted correctly according to the type of letter you need.
5	Difficulties in Speeding Up Letter Making	The process of making letters manually takes time and effort, especially if the number of letters is large.	Mail Merge in Excel speeds up the creation of bulk mail.	Create bulk mail for hundreds of recipients using Excel to manage data and Microsoft Word for mail creation.
6	Difficulty Sorting Mail Data	Students have difficulty sorting and sorting mail recipient data based on certain criteria.	Use the sort and filter feature to sort and select data.	Sort mail recipient data by city or type of mail to be sent (example: sort by city).
7	Difficulty in Evaluating Mail Delivery	Students cannot track the status of mail delivery, whether it has been sent or not.	Excel can be used to record and track the status of shipments.	Create a mail delivery tracking table that records the delivery date and status (already/not delivered).

It	Student Difficulties	Problem Description	Solutions with Excel	Examples of Concrete Use
8	Difficulty in Making Letters with Many Variables	Students have difficulty adjusting letters to different variables (e.g., name, address).	Use the VLOOKUP or Mail Merge formula for automatic replacement.	Use the VLOOKUP formula to replace variables in the mail such as name, address, and phone number.
9	Difficulty Managing Large Numbers of Letters	Students have difficulty managing letters for hundreds of mail recipients.	Excel can handle big data easily and helps with bulk mail generation.	Use Excel to manage bulk mail recipient data and send bulk mail using Mail Merge.
10	Difficulty Choosing the Right Letter Format	Students are confused in choosing the right letter format for different types of letters (official, application).	Excel provides a letter format template that suits your needs.	Select the official letter template or request letter that matches the type of letter you want to create in Excel.

Source: Processed Data, 2024

Microsoft Excel, known as data processing software, has great potential to be used in this context. Excel has an important role in business communication. Therefore, it is recommended for business practitioners (in this case, students as prospective practitioners) to master the use of Excel as a tool in business communication (Patra, Sahu 2018). Another thing that supports the use of excel can help students in managing the data and information needed in business letters (Huang, 2017). Excel provides features such as data processing, table creation, information filtering, and formulas that can be optimized to systematically compile mail data. By using Excel, students can manage mail recipient data, dates, types of letters, as well as other relevant information more easily. Another finding mentions that it is recommended for lecturers and lecturers in the business field to use Excel as a tool in teaching business correspondence and to consider including assignments that require the use of Excel (Zhang, 2017). Additionally, Excel allows for the creation of letter templates that can be changed quickly, making it easy to create a large number of letters without having to rewrite from scratch. Another advantage is revealed that Microsoft Excel can

play an important role in improving the ability to write business letters in English. Therefore, it is recommended to integrate the use of Microsoft Excel in the teaching of business correspondence (Al-Busaidi, 2016).

However, although the potential for using Excel in making letters is very large, until now, the use of Excel in the context of learning Indonesian correspondence is still limited. Many teachers and students are not fully aware of how Excel features can be optimally utilized in supporting the correspondence learning process. It is necessary to fill the gap by investigating the development of the Microsoft Excel feature as a complete letter making database to support Indonesian correspondence learning (Saputra et al, 2019). Therefore, this study aims to optimize Microsoft Excel as a data processing tool in making letters in learning Indonesian correspondence, as well as explore how Excel features can increase efficiency and effectiveness in making letters in accordance with the desired standards. The use of technology-based media in correspondence helps students to master the skill of writing letters in a more structured and professional manner (Ariasa, Santyadiputra, Sindu 2017).

Through this research, it is hoped that practical solutions that can be applied in the classroom can be found, which not only help students in mastering letter writing skills, but also introduce technology as a tool that supports Indonesian learning more effectively and efficiently.

METHODS

This study uses a descriptive qualitative method with an experimental approach to optimize the use of Microsoft Excel as a data processing tool in making letters in learning Indonesian correspondence. This method was chosen because the research aims to explore and describe the potential and effectiveness of using Excel in supporting correspondence learning through data analysis and conversations obtained from direct application in the classroom. The number of participants in this study is 108 office administration education students Class of 2021 who take the Indonesian correspondence course. Participants were selected from two classes that had similar educational backgrounds and followed the same curriculum in the correspondence course. The number of participants was divided, namely the Experimental Group: 53 students, and the Control Group: 53 students. With this large number of participants, it is hoped that representative data and reliable results can be obtained regarding the influence of the use of Microsoft Excel in correspondence learning. The selection of samples for this study was carried out by paying attention to several specific criteria, namely: Age and Gender: The participants of this study were students aged 19 - 21 years, who were at the university level. These students already have a basic understanding of Indonesian and letter writing skills. The next criterion is Activeness in Learning: Selected students are those who are active in learning activities and have previous experience in writing correspondence letters (both official and unofficial letters). The next criterion is Experience with Technology: Given the use of Microsoft Excel, the students selected

are those who already have basic knowledge about the use of data processing applications, such as Microsoft Excel, but are not yet very skilled in using it for letter creation. And the last criterion is a group of students with diverse writing skills: The selection of the sample also considers the ability to write letters that vary, both among students who are already proficient and those who still need development.

The researcher designed the instruments used in this study, which include: Letter Template in Excel: The researcher created a letter template that can be changed automatically by entering certain data, such as the recipient's name, address, date, and type of letter. This template will be tested on students; The questionnaire will be given to students and teachers after they use Microsoft Excel in creating the letter. This questionnaire will consist of questions that measure their perception of the ease of use, benefits, and obstacles faced when using Excel. The questionnaire data will be recorded in the form of written answers or Likert scales which will be interpreted to analyze the attitudes and perceptions of students and teachers towards the use of Excel. These questionnaires can also be analyzed through qualitative data analysis software to identify key themes in respondents' perceptions; Observation: Researchers will make observations during the learning process to evaluate the use of Excel in the classroom and students' interaction with the tool. Observation is carried out during the learning process, both in person. Hands-on observations were made by researchers in the classroom to observe how students interact with Excel, as well as how they take advantage of features such as templates and mail merge. Where possible, the use of video recordings can also be applied to document the process of using Excel by students, which allows for a more in-depth analysis of the strategies students are using and the obstacles they face. Researchers recorded field notes in detail, including students' behavior, their reactions to Excel features, and difficulties faced. If using video recordings, research-

chers will record students' activities in using Excel, which is then analyzed to evaluate the effectiveness and difficulty of using the tool. Letter Documentation : Letters generated by students during the learning process will be collected as documents for analysis. The researcher will evaluate whether the student can produce a letter with the correct format in accordance with the rules of official correspondence. Researchers will also note formatting errors or other errors that arise, as well as the extent to which the use of Excel affects the quality of the letter created. Letters will be collected in hard copy or digital form and analyzed based on predetermined criteria, such as formatting accuracy, neatness, and common errors. This analysis will be carried out qualitatively, with the researcher assessing the resulting letter and compiling a report based on the findings

The researcher conducted an experiment in the classroom with students who had been selected as research subjects. This research was carried out in several stages, including: Introduction to Microsoft Excel: The lecturer provided an introduction to Microsoft Excel and basic ways to process data in Excel. Application of Letter Creation: Students will be given the task of creating a letter using the template that has been provided in Excel. They will fill in the data of the recipient of the letter, date, and content of the letter according to the existing format. Practice and Discussion: Students will be guided in practicing letter creation using Excel, followed by a discussion to evaluate the difficulties they face and how Excel helps make the process easier. Moreover

The data that will be collected in this study includes: Direct Observation: The researcher will record how students use Microsoft Excel during learning, including the obstacles found as well as the perceived convenience. Questionnaire: A questionnaire filled out by students that reveals the level of effectiveness of using Excel in learning Indonesian correspondence using a scale of 1-5. Letter Docu-

mentation: Letters made by students using Excel will be analyzed to assess the quality of letter making, the accuracy of the data used, and the suitability of the letter format with the correct rules.

The data collected will be analyzed qualitatively. The researcher will conduct an analysis of: Questionnaire Results: Data from the questionnaire will be analyzed to find out the perception of students and teachers towards the use of Excel in making letters. Observation Results: Observations will be analyzed to see the extent to which students can make good use of Excel features, as well as the obstacles they face during the learning process. Letter Documentation: An analysis of the student's letter will see if they can produce a letter in the right format, common mistakes, and the extent to which the use of Excel is helpful in composing the letter.

After all the data was analyzed, the researcher compiled a report containing findings, conclusions, and recommendations for optimizing the use of Microsoft Excel in learning Indonesian correspondence. The report will also include suggestions for the implementation of Excel in Indonesian classrooms more broadly.

Microsoft Excel can be an effective solution to the problems faced in learning Indonesian correspondence by providing tools that allow students to create letters with a neat, consistent, and correct format. The use of templates that have been provided in Excel makes it easier for students to compose official letters without having to worry about complicated layout or formatting settings. Additionally, features such as Mail Merge allow students to process data efficiently, speed up the mail creation process, and improve the quality and accuracy of the resulting mail. Thus, Microsoft Excel supports the research goal of optimizing data processing tools in making letters, improving students' office administration skills, and accelerating the learning process of Indonesian correspondence as a whole.

RESULTS AND DISCUSSION

Data Description

This research involved 106 students from the Office Administration Education Study Program Class of 2021 at Semarang State University who have diverse backgrounds and abilities in correspondence learning. During the experiment, students were divided into two groups: a group that used Microsoft Excel for letter creation and a control group that used traditional methods without the help of data processing tools. Experimental Group: 53 students who used Microsoft Excel to create letters. Control Group: 53 students who made letters using manual methods (typing directly in the document).

Application of Microsoft Excel in Learning

At the beginning of the experiment, students in the experimental group were given a short training on how to use Microsoft Excel, including how to create a letter template, input mail recipient data, date, and choose the appropriate format. After the training, they were given the task of creating different types of letters (official letters, personal letters, and invitation letters) using Excel.

Data Collection

The data collected in this study includes the results of questionnaires, observations, and analysis of letters made by students.

Questionnaires, Questionnaires are distributed to students and teachers after the implementation of experiments to measure perceptions of the use of Microsoft Excel in correspondence learning. Table 2 shows the results of the questionnaire filled out by 53 students of the experimental group.

The data above shows that Point number 1 received a high rating because of the ease of use of Excel, more structured data management, and the ability to increase efficiency in making letters. The automation features and students' familiarity with this application are the main reasons why they find it easier to use Excel to create letters. While point number 4

Table 2. Perception of using Microsoft Excel Experimental Class

Question	Grade Average (Scale 1-5)
1. Do you find it easier to create a letter using Excel?	4.5
2. Does the use of Excel reduce the time it takes to create a letter?	4.3
3. To what extent do you feel the use of Excel improves the quality of your mail?	4.4
4. Do you find it helpful with the letter template provided?	4.6
5. Do you feel more confident in creating letters after using Excel?	4.2

Source: Processed Data, 2024

gets the highest rating because the letter template provides great advantages in terms of efficiency, speed, and quality. Templates allow students to take advantage of existing formats and only need to adjust specific information. This helps students reduce confusion and speed up the letter-making process while still maintaining the correct quality and formatting, which is highly valued in correspondence learning.

The results of the questionnaire above, it can be concluded that the use of Microsoft Excel in making letters in learning Indonesian correspondence is very effective. The majority of students feel easier, faster, and more confident in making letters using Excel, and feel the improvement in the quality of the letters produced. Excel helps in organizing the format of letters and speeding up the creation process, which makes it a very useful tool in correspondence learning.

Observation, Observation is made by the researcher during the implementation of the experiment to record how students use Microsoft Excel in creating letters. Some of the observations include:

Students can complete the letter-making task in less time compared to the manual method.

The majority of students feel more confident in creating letters after learning the use of Excel, as they can easily format the letters and update the necessary data.

Some students have a little difficulty at first in understanding the formula or formatting, but after being given further explanations, they can master it well.

Documentation, from the analysis of the letters made by the students, it can be seen that there are significant differences in quality and format between the experimental group that uses Microsoft Excel and the control group that uses manual methods. The letters produced by the experimental group tended to be neater and more consistent, with a format that was in accordance with the rules of official and personal letters. The use of the templates provided in Microsoft Excel allows students to organize the structure of the letter more easily, such as automatically adjusting parts such as the sender's address, recipient, date, and body of the letter. For example, in the creation of official letters, almost 90% of the students of the experimental group were able to produce letters with the correct layout, in accordance with the applicable rules.

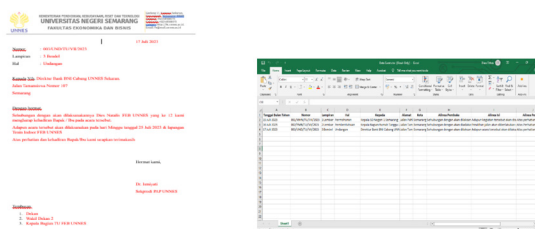


Figure 1. Example of a Letter Result Created through Microsoft Excel

On the other hand, the letters generated by the control group using manual methods show variation in terms of format conformity. About 30% of the students in the control group had difficulties in structuring the parts of the letter correctly, especially in the arrangement of addresses and dates, which caused the resulting letter to appear less structured

and not up to standard.

Overall, the letter documentation shows that the use of Microsoft Excel is very helpful in improving the quality and consistency of letter creation results, as well as speeding up the process of preparing letters that are in accordance with correspondence standards.

Analysis of Letters Made, The researcher also analyzed the results of letters made by students. Here are some of the results found:

Experimental Group: Of the 53 students who used Excel, 90% were able to create letters in the appropriate format (according to the rules of official and personal letters). The use of templates in Excel helps them to format letters automatically, fill in the required information quickly, and ensure a consistent layout.

Control Group: Of the 53 students who used the manual method, only 70% managed to make the letter according to the correct format. Some students still have difficulty in structuring parts of the letter, such as the sender's address, date, and paragraph arrangement.

The time taken by students to create a letter is calculated and compared between the experimental group and the control group. Here is the average time it takes to create a single letter:

Table 3. Average Time to Make a Letter

Type of Letter	Experiment Group (Microsoft Excel)	Control Group (Manual)
Official Letter	10 minutes	20 minutes
Personal Letter	8 minutes	15 minutes
Invitation Letter	12 minutes	25 minutes

Source: Processed Data, 2024

The difference in time required between the experimental group using Microsoft Excel and the control group using the manual met-

hod showed a significant impact on the efficiency and time management in correspondence learning.

In the official letter, the experimental group only took 10 minutes, while the control group took 20 minutes. This shows that the use of Excel speeds up the process of creating letters with the right and neat format, because students can immediately use the templates that have been provided without having to think about formatting manually. This faster time allows students to focus on the content of the letter rather than spending time putting together elements such as date writing, addresses, and margin settings that would normally be time-consuming if done manually.

Likewise in personal letters, the experimental group only took 8 minutes, while the control group took 15 minutes. Excel facilitates students in composing letters faster without having to format them from scratch, which allows them to complete tasks more efficiently. In addition, the use of Excel reduces the potential for technical errors in formatting that can occur when writing personal letters manually.

In the type of invitation letter, the time difference was even more obvious with the experimental group only taking 12 minutes, while the control group needed 25 minutes. Invitation letters often require the arrangement of certain elements such as layout, design, and information arrangement. With Excel, students can take advantage of pre-formatted invitation letter templates, reducing the time spent designing letters from scratch. This increases efficiency and allows students to complete assignments faster without sacrificing the quality of the letter format.

Overall, this time difference illustrates that the use of Microsoft Excel not only speeds up the process of creating letters but also improves learning efficiency. With a shorter time to produce a letter that complies with the correct rules, students can focus more on the content of the letter and reduce technical errors in writing the format. It also provides space for students to develop writing skills and

make decisions regarding the content of the letter without being burdened by formatting issues. This reduction in work time has a positive impact on productivity and overall learning, so that students can be more optimal in mastering correspondence skills.

Difficulties Students Face

There are several difficulties faced by a small number of students, including:

Although many students find it easier to create letters using Excel (with an average score of 4.5), some students reveal that they find it difficult to understand the functionality of Excel at first, especially when it comes to managing data and creating bulk letters. Some students find it difficult to take advantage of the Mail Merge feature in Excel which allows the creation of bulk letters with different data for each recipient. They are confused about how to connect data and mail templates, and make the correct settings. This can be seen from the results on the questionnaire, namely 45% of students answered 'often', 40% answered 'sometimes', and 15% answered 'rarely'

Although most students feel that using Excel can reduce the time it takes to create a letter (with an average score of 4.3), some students complain that they still feel that the process of creating a letter takes longer at the beginning, especially when they have to learn to use Excel first. While Excel allows for overall time savings, new students who are not familiar with Excel find it necessary to spend more time learning basic functions such as data management and using templates, so in the early stages they find letter creation more time-consuming than manual methods. This can be seen from the results on the questionnaire, namely the results: 50% of students answered 'often', 40% answered 'sometimes', and 10% answered 'rarely'.

Although most students feel that using Excel improves the quality of their letters (with an average score of 4.4), some students reveal that they find it difficult to format letters aesthetically in Excel. They feel Excel focuses more on data processing than attractive letter

design. Students find letter templates in Excel very practical for organizing data and organizing letters formally, but they find it difficult to customize the design or make the letter look more personal and aesthetic compared to using other applications such as Microsoft Word. Some students mentioned difficulties in changing the appearance and graphic elements in Excel. This can be seen from the results: 55% of students answered 'often', 30% answered 'sometimes', and 15% answered 'rarely'.

Although many students found the letter templates provided helpful (with an average score of 4.6), some students admitted that they felt that the templates were too limited and could not fit all the types of letters they needed. Some students feel that the letter templates provided by Excel are not flexible enough for different types of letters. They often find it difficult to tailor the template to the specific needs of the letter they want to create, such as a longer letter or a non-standard format letter. This can be seen from the results: 60% of students answered 'often', 25% answered 'sometimes', and 15% answered 'rarely'.

Students who have limited experience with Excel (with an average score of 4.2) find it difficult to master advanced features of Excel, such as using formulas to validate mail recipient data or automatically arranging columns. Students feel that they are not yet familiar with concepts such as formula functions or further data processing in Excel. Therefore, they find it difficult to ensure that the information entered in the letter (such as the recipient's name or address) is accurate and error-free. This can be seen from the results: 40% of students answered 'often', 40% answered 'sometimes', and 20% answered 'rarely'.

However, after being given further guidance and explanation, students can overcome these difficulties well.

The results of this study show that the use of Microsoft Excel in learning Indonesian correspondence provides many benefits, including:

Time efficiency: Students who use Excel can complete letter-making tasks faster compared to manual methods.

Improved letter quality: By using Excel, students can create a neater letter and according to the correct rules, because they can easily organize the letter format using templates. This is in accordance with research conducted by Hadi, S (2017) which revealed that the use of Excel in data processing is not only limited to calculating numbers, but also very helpful in the preparation of documents. In this study, it was stated that the templates provided by Excel help users, including students, to produce more structured and neat documents, as well as avoid formatting errors that often occur in manual writing. The use of templates in Excel makes it easier for students to follow the rules of writing official letters, especially in terms of the arrangement of addresses, dates, and other important elements. In line with the research by Kusumawati, E. (2019) also explored the application of letter templates in teaching correspondence in the classroom. This research shows that the use of templates in Excel allows students to quickly produce official letters that conform to the correct formatting standards. Students no longer need to think about the technical aspects of the letter format and can focus more on the content of the message they want to convey. Thus, the template not only saves time but also improves the quality of the resulting mail.

Ease of use: The majority of students find the use of templates in Excel very helpful in making it easier to create letters.

However, there needs to be more attention to some students who have difficulty understanding Excel features. Therefore, further training and mentoring throughout the learning process need to be provided to ensure that all students can make optimal use of this tool.

Although many studies support the results of this study, there are several studies that have different views on this. For example, research by Tariq, M. & Santosa, S. (2018) suggests that for students who are not familiar

with technology, the use of Excel can add an additional learning load. They have to learn various features and functions of Excel, such as Mail Merge and data management, which can lead to confusion. Instead of saving time, students have difficulty understanding the technical steps in Excel, so they take longer to complete the letter assignment than using the manual method. And also the results of research from Husnidar, H. (2020) highlighted that the use of templates in Excel, although useful for ensuring consistency in letter format, can actually reduce students' creativity in compiling more personal and interesting letters. Uniform templates can make students feel constrained and have no freedom to develop a writing style or letter design according to their communication goals.

The first factor that affects is the level of skill and experience of students in using Excel. Research that shows positive results related to the use of Excel often involves students who already have basic experience or ability in using Excel. Conversely, students who are less familiar with Excel or computer technology in general may find it difficult to take advantage of Excel features, such as Mail Merge or data management, which can lead to the use of Excel not being as effective as expected. Students who are already familiar with Excel or have a background in office administration are more likely to adapt to the use of templates and advanced features, while students who are not yet familiar may feel overwhelmed, so using Excel can actually slow down their work.

Another influential factor is the type of letter made. Microsoft Excel, with the templates available, is better suited for creating formal letters in a standard format that does not require a lot of graphic design. However, for non-formal letters, creative letters, or letters that require more flexible design elements, Excel may be considered less suitable due to the limitations of design features. This leads to differences of opinion regarding the effectiveness of Excel, depending on the type of letter being worked on. For formal letters such as invitations, announcements, or assignment letters, Excel is very useful in ensuring a con-

sistent format. However, for personal letters or letters that require a more creative design touch, Excel has proven to be less effective and hinder student creativity.

The results of the research can also be influenced by the guidance given to students in using Excel. Research that shows positive results often occurs in an environment that provides adequate training or instruction regarding the use of Excel, either through courses or hands-on tutoring. Without enough training, students may not fully understand the potential of Excel or even find it difficult to cope with more advanced features. Students who receive intensive guidance regarding the use of Excel features such as Mail Merge or table data processing will be more effective in using Excel to create letters. Meanwhile, students who are only given basic instruction without practice or more in-depth teaching will have difficulty in understanding how Excel can make it easier to create letters.

Demographic characteristics and student conditions also affect the effectiveness of using Excel. Students with more tech-savvy backgrounds (having better tech skills) may be more comfortable using Excel, while students with simpler backgrounds in technology may find it difficult and stressful to learn Excel.

Students in large cities who use technology devices more often in their daily lives may master the use of Excel more quickly, while students in areas with less access to technology may feel more inhibited in using Excel to create letters.

CONCLUSION

Based on the results of the study, it can be concluded that Microsoft Excel can be optimized as a data processing tool in making letters in learning Indonesian correspondence. The use of Excel improves time efficiency, letter quality, and students' understanding of letter formatting. Therefore, the use of Microsoft Excel in correspondence learning is highly recommended as an effective alternative to speed up and simplify the process of creating letters in the classroom.

One of the key findings is that the use of Excel can improve efficiency in the creation of official letters. Students feel that by using the available letter templates, they can format their letters faster and more neatly, according to the correct rules. This also has an impact on improving the quality of the resulting letters, as students no longer need to worry about technical errors in writing formatting, such as writing dates, addresses, and margin settings.

Most students revealed that using Excel reduced the time it took to create a letter compared to using manual methods. With existing templates, students can focus on writing the content of the letter without worrying about setting the format of the letter.

Although the use of Excel provides convenience for most students, there are also students who have difficulty operating Excel features, especially for those who are not familiar with computer technology or Microsoft Excel. Some students feel overwhelmed with the technical steps required to take advantage of Excel templates and features like Mail Merge. Some students report difficulties in understanding how to properly organize letter templates, which causes them to find it difficult to use Excel optimally.

The use of Excel also presents design limitations, especially for non-official letters or types of letters that require graphic elements or creative designs. Many students feel that using Excel with rigid templates limits their creativity in composing more personal or visually appealing letters. Most students feel more confident in drafting a formal letter after using Excel. With a clear template guide, they feel that the letter they create will be in accordance with the official letter format standards, thus increasing their confidence in producing a professional document.

One of the main advantages of using Excel is the ease of accessing customizable letter templates. This template allows students to avoid technical errors in letter writing and provides a clearer and more organized structure. However, some students feel that relying on templates reduces the freedom to draft letters

according to their personal style.

Overall, the results of the study show that the use of Microsoft Excel in learning Indonesian correspondence provides significant benefits in terms of efficiency, neat formatting, and improved letter quality. However, there are several challenges, such as difficulties for beginner students, design limitations, and influence on students' creativity in making letters. Nonetheless, for students who already have better computer skills, Excel has proven to be very helpful in making it easier to create letters that meet formal standards.

Based on the findings of the study, several recommendations for increasing the use of Microsoft Excel in learning Indonesian correspondence include overcoming the difficulties faced by beginner students, it is recommended that intensive training be given to students regarding the use of Excel, especially in utilizing letter templates and advanced features such as Mail Merge. This can improve students' technical skills and reduce confusion when using Excel. In order for students to be more creative in making letters, it is necessary to provide more varied and customizable letter templates. The template should include a more flexible design, so that students can apply their writing style without being limited by rigid formatting. To increase the effectiveness of using Excel, schools need to strengthen the teaching of basic computer skills for students, especially at the early levels of learning. This will help students more easily adapt to the software and make optimal use of Excel in various correspondence tasks. Alternatively, it is recommended to choose a type of letter that is more suitable for Excel usage. Formal letters with a standard format are more suitable for Excel, while for non-official letters or those that require creative design it is better to use other tools such as Microsoft Word or graphic design tools. In order to support the optimal use of Excel, schools are advised to improve technological facilities, including adequate computer equipment and stable internet access. This will support students in accessing and practicing using Excel better. By imple-

menting these recommendations, it is hoped that the use of Microsoft Excel in learning Indonesian correspondence can be more effective, efficient, and support the development of students' office administration skills more comprehensively.

This study has several limitations that need to be considered, including This study only involves students from one or several specific schools, which limits the generalization of results to the entire student population. Variations in students' skills and backgrounds outside of the sample studied could affect the results obtained. The study did not consider in depth the level of individual technological skills of each student. Differences in Excel skills can affect the experience and results of the study, so the findings are not fully representative of all students with different skill backgrounds. This study did not control the variables of the learning environment in depth, such as technology facilities in schools or the level of support provided by teachers. These factors can affect the effectiveness of using Excel in creating letters and produce results that vary from school to school. The study did not compare the use of Excel with other tools, such as Microsoft Word or other letter-making applications. Therefore, the existing findings cannot fully reflect whether Excel is the best tool for letter-making purposes compared to other tools. Keeping these limitations in mind, it is recommended to conduct further research with a wider sample and stricter control of the factors that affect the use of technology in learning.

For future research, it is recommended to expand the sample by involving various schools with more diverse student backgrounds, as well as considering the individual technological skill levels of students. Further research should also compare the use of Microsoft Excel with other tools, such as Microsoft Word or other mail-making applications, to evaluate the relative effectiveness of each tool in learning correspondence. In addition, future research needs to pay attention to learning environment variables, such as

technological facilities and teaching support, that can affect the results of using Excel. This will provide a more comprehensive picture of technology optimization in correspondence learning.

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