



The Influence of Typing Master, Learning Motivation, and Peer Influence on Keyboarding Skills of Office Administration Students 2020 at UNNES

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ABSTRACT

Phenomenon/Issue: Keyboarding is a key competency that students of Office Administration Education must possess. However, based on the results of typing tests, many students struggle to type using the ten-finger technique.

Purpose: The purpose of this study is to analyze the influence of the Typing Master media, learning motivation, and peer influence on the keyboarding skills of 6th semester Office Administration Education students.

Novelty: This research presents novelty by combining internal, technological, and social aspects in a post-pandemic context, providing a new perspective on learning office skills.

Research Methods: This study uses a quantitative research approach. The sampling technique used is total sampling, meaning the entire population was used as the research sample. Data collection was conducted through observation, questionnaires, and typing tests. Data were analyzed using descriptive statistics and multiple linear regression with SPSS Statistics 28 software.

Results: The results show that the usage of typing master has a positive and significant effect on keyboarding skills by 39.69%. Learning motivation also has a positive and significant impact at 65.28%. Peer influence has no significant effect. Together, typing master, learning motivation, and peer influence have a collective effect on keyboarding skills, as shown by a simultaneous determination coefficient of 66%.

Research Contributions: This study contributes to several parties. For students, it raises awareness of the importance of motivation, learning media, and peer support in improving typing skills. For future researchers, it offers a reference for further studies.

INTRODUCTION

The era of globalization demands the presence of quality human resources, one of which is developed through education, which is the main foundation of individual development. Education not only transfers knowledge from one generation to the next but also serves as a process for character formation, skill development, and career advancement opportunities (Karim et al., 2024). According to Law Number 20 of 2003 concerning the National Education System, there are three education pathways: formal, nonformal, and informal education. Formal education is an education pathway organized systematically and in levels, such as Elementary School (SD), Junior High School (SMP), and Senior High School (SMA). Informal education takes place within the family and community environment.



Nonformal education is a more flexible pathway in terms of time, methods, and curriculum. Higher education is the stage after senior high school, which includes Bachelor's (S1), Master's (S2), and Doctoral (S3) programs.

Semarang State University (UNNES), known as "The Conservation University" has eight faculties as well as postgraduate programs for S2 and S3 degrees. One of the departments at UNNES is the Office Administration Education program, which equips students with practical knowledge and skills such as correspondence, office management, archiving, and information technology. Keyboarding skills are essential competencies for students in the Office Administration Education program, as they support work efficiency and productivity (Putri & Maulidina, 2021). However, students of the 2020 cohort at Universitas Negeri Semarang faced difficulties in mastering ten-finger typing techniques due to online document production learning during the pandemic. In group-based lectures, students assigned as typists often struggle with proper finger placement on the keyboard. A preliminary study conducted on October 2, 2024, involving 30 students, revealed that most had not yet mastered effective typing techniques. This is consistent with findings by Pertiwi et al. (2021), Hasanah (2020), and Nurhidayah & Syamsuddin (2020) which emphasize that typing skills are greatly influenced by hands-on practice, psychomotor involvement, and adequate instructional support. The questionnaire was developed based on Wahyuni et al. (2017) instrument and included indicators such as finger position, sitting posture, eye focus while typing, typing speed, and accuracy level. Responses were given in "Yes" or "No" choices.

Table 1. Initial Questionnaire Results

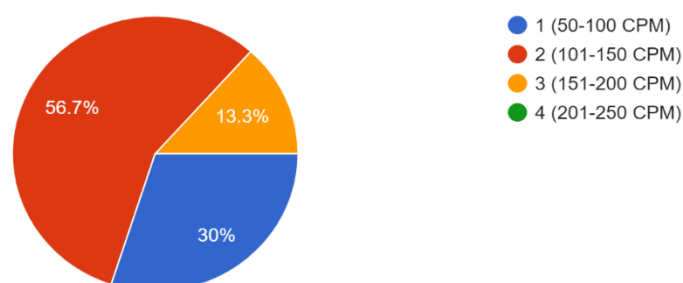
No	STATEMENT <i>Keyboarding Skill (Y)</i> (Source : Wahyuni et al. (2017))	ANSWERS	
		YES	NO
Finger Position While Typing		31,1%	68,9%
1.	I place my fingers on the home row keys when I start typing	60 %	40%
2.	I type using all 10 fingers	10%	90%
3.	I place my fingers according to their function in touch typing, left hand on ASDF keys and right hand on JKL keys	23,3%	76,7%
Sitting Position While Typing		51,1%	48,9%
1.	I understand the correct and proper sitting position for touch typing	53,3%	46,7%
2.	My body is relaxed while typing because I apply the correct position	63,3%	36,7%
3.	I do not rest my elbows while typing	36,7%	63,3%
Eye Focus While Typing		33,3%	66,6%
1.	I can type without looking at the keyboard	13,3%	86,6%
2.	I can type without looking at the monitor screen	33.3%	66,7%
3.	While typing, I focus on the text that I am typing.	53.3%	46,7%
TOTAL		38,5%	61,5%

Source: Data Processed by Researchers in 2024

Based on the table above, shows that the finger position indicator, which is explained through three statements, shows that 68.9% of respondents answered "No". The sitting position indicator while typing, represented by three statements, shows that 48.9% of respondents answered "No." The third indicator, which is eye focus while typing, represented by three statements students being able to type without looking at the keyboard, able to type without looking at the monitor, and focusing on the text being typed results in 66.6% of students answering "No".

From the three indicators above, which were developed into positive statements, it is evident that the overall average percentage of respondents tends to answer "No" with a value of 61.5%, while respondents who answered "Yes" were 38.5%. Therefore, it can be concluded that students are not yet skilled in ten-finger typing.

In addition to the three indicators above, there are also indicators of typing speed and accuracy, which can be measured through the website <https://blindtyping.com/test>. Each student has specific criteria and assessment standards in typing. Ten-finger typing speed is generally measured using CPM (Characters Per Minute) and WPM (Words Per Minute). According to Mulyana & Wahyuni (2021) CPM calculates the number of characters typed per minute, while WPM measures the number of words per minute based on a standard of five characters per word. These two indicators are commonly used to evaluate typing speed and accuracy, particularly in office administration education.



Source : Source: Data Processed by Researchers in 2024

Figure 1. Typing speed diagram

CPM (Characters Per Minute) measures the number of correctly typed characters in one minute. Most students (56.7%) have a typing speed of 101–150 CPM, indicating that their typing skills are still low. They tend to look at the keyboard or pause between keystrokes. Yusuf & Widiyanto (2021) stated that this is due to a lack of keyboard mastery and regular practice

Observations by Wahyuni et al. (2017) show that students' keyboarding skills are still considered low. From a behaviorist perspective, learning is defined as a change in behavior resulting from the interaction between stimulus and response. The behaviorist learning theor, proposed by Watson (1913), emphasizes strengthening the relationship between stimulus and response that occurs simultaneously and nearby. This theory includes several principles, such as the law of repetition or the law of exercise. Watson also argued that newer responses receive greater reinforcement through repetition compared to earlier responses. Learning is a behavior change caused by the interaction between stimulus and response (Slavin, 2000:143). The response is the reaction to the stimulus, which can be in the form of thoughts, feelings, or physical actions. Behavioral change occurs due to stimuli from the learning environment, both internal and external. The behaviorist theory emphasizes that the learning process is influenced by the environment, focusing on behavior that can be observed objectively and mechanically.

Nahar (2016) added that behaviorist theory emphasizes measurable and observable as a result of external environmental stimuli. In behaviorist theory, learning motivation, learning media such as typing master, and peer influence are considered internal and external stimuli that can shape and reinforce an individual's learning behavior. Learning motivation acts as an internal drive that encourages individuals to engage consistently in academic activities. According to Kusuma & Astuti (2023) high learning motivation encourages students to strive for better academic performance, especially when supported by a positive learning environment. The learning media used, such as typing master, also function as external reinforcers that can enhance students' skills through repetition and immediate feedback, aligning with the reward principle in behaviorist theory. Meanwhile, peer influence serves as a form of social stimulus that strengthens learning behavior through modeling or imitation. Xu et al. (2023) found that the presence of a familiar peer can enhance students' attention, engagement, and performance when learning through online media.

In addition, structured learning approaches that provide positive reinforcement, such as Direct Instruction, have been proven to guide students in responding appropriately to the given stimuli. Sari and Rahmani (2024) stated that the use of positive reinforcement strategies significantly affects the improvement of students' learning motivation and engagement. Therefore, within the behaviorist

framework, the combination of internal motivation, peer support, and instructional media such as Typing Master helps form effective learning habits and improves keyboarding skills.

According to Slameto (2010:54) motivation is one of the internal factors that can influence the learning outcomes of touch typing. With high motivation, learning outcomes tend to improve. Research by Wahyuni et al. (2017) shows that learning motivation influences touch typing keyboarding skills. The success of teaching and learning activities is also supported by the availability of adequate learning media such as typing master. Peers can also influence student learning outcomes because they often provide emotional and academic support, which motivates students to engage in learning activities. A study Suminar (2018) showed that peers influenced students' learning outcomes in Mathematics subjects. On the contrary, research by Maheni (2019) found that peer relationships significantly and positively affected students' academic performance in the economic education program. This current research aims to examine how the use of typing master software, students' motivation to learn, and peer influence contribute to the keyboarding proficiency of Office Administration Education students from the 2020 cohort at Universitas Negeri Semarang

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Typing Master Media

According to Nurrita (2018), learning involves any means that can be utilized to convey messages or information during the teaching and learning process, aiming to enhance students' focus, interest, and ability to learn in an effective and efficient manner. Typing Master is a computer-based learning software designed to train ten-finger typing techniques through interactive exercises and real-time feedback. According to Laksana (2021) the application is effective in improving the typing speed and accuracy of Office Administration students. A study from Pratiwi & Lestari (2016) also found that Typing Master provides an enjoyable learning experience and significantly enhances typing skills.

Sholikah et al. (2023) stated that the use of the 10 FastFingers application in typing instruction can enhance students' performance in the cognitive domain. The use of media is considered capable of enhancing the effectiveness of learning, particularly in practicing typing to improve keyboarding skills (Pratiwi & Tusyanah, 2024). Typing Master also helps improve typing speed, minimize typing errors, and enhance the quality of written documents. The application provides a variety of exercises to support the improvement of blind ten-finger keyboarding skills, such as the touch typing course, typing test, and various interactive and educational games. According to Rivai (2009) the indicators of instructional media usage are as follows:

1) Relevance

Instructional media must be relevant to the material and the objectives to be achieved in the learning process. When media is relevant, it can facilitate students' understanding and mastery of the material optimally. Relevance aims to ensure that the content delivered is well-targeted to achieve maximum results. The media used must align with the expected learning outcomes. As stated by Omodara & Adu (2014) the relevance of instructional media is essential to achieving learning goals efficiently.

2) Educator's Competence

Educators must have sufficient skills and knowledge in using instructional media. With strong competencies, educators can explain the material more effectively by using appropriate media. emphasizes that skilled teachers can create meaningful and innovative learning experiences through the proper use of media (Seechaliao, 2024).

3) Ease of Use

Instructional media should be easy to operate by both educators and students to ensure a smooth learning process without obstacles. Media should be designed efficiently and simply so that it is user-friendly. According to Ishola et al. (2025) ease of use significantly affects the acceptance and success of digital learning tools.

4) Availability

Instructional media should be easily accessible and readily available whenever needed so that it can be used at any time without time limitations. The media should be available in various forms such as physical (books, teaching aids) or digital and be usable according to the needs of the learning process. Nwobi (2021) notes that the availability of media plays a crucial role in facilitating active teaching and learning processes.

5) Usefulness

The usefulness of instructional media is crucial in the context of modern education, as media not only serves as a tool to deliver content but also enhances the quality and effectiveness of learning. Proper use of instructional media can accelerate the learning process, increase motivation, and enrich the learning experience. highlight that appropriate use of media can accelerate learning, boost motivation, and enrich the overall student learning experience (Gambari & Gana, 2022).

Learning Motivation

Learning motivation is a condition that drives someone to be diligent in learning. According to Rista & Ariyanto (2018). learning motivation is a key factor that influences how effective the learning process is. Students tend to learn more effectively when they are driven by strong motivation High learning motivation can be seen from the perseverance that does not easily give up on achieving success despite facing various difficulties. According to Suwartini (2016), motivation is defined as a cognitive construct based on two sources: the expectation of success and the image of the future, based on experiences in determining and achieving goals. Research conducted by Saptono (2016) explains that learning motivation is the main driving force that determines students' learning outcomes. Without motivation, students will not be encouraged to carry out learning activities effectively. On the other hand, students who have high motivation will try their best and use all available resources to achieve their goals. This level of motivation can even be used as an indicator of student quality. When students enjoy a subject, they tend to study with enthusiasm and persistence, which shows that motivation has a direct impact on learning success. In this study, the indicators of learning motivation used are based on Sardiman (2011:83), usage is as follows:

1) Perseverance in Completing Tasks

Refers to a person's willingness to continue working consistently on tasks despite difficulties. These individuals do not easily give up halfway. This trait reflects what is known as *grit* the perseverance and passion for long-term goals (Duckworth et al., 2007).

2) Persistence in Facing Difficulties

These individuals are not easily satisfied with the results they achieve. They strive to improve their skills and work quality. This trait drives them to seek solutions, sharpen their abilities, and work harder to achieve even better outcomes.

3) Interest in a Variety of Issues

These individuals have a strong curiosity and are interested in social, political, occupational, and everyday life issues. They constantly seek to expand their knowledge and mature their thinking, enabling them to make wise decisions (Herpratiwi & Tohir, 2022).

4) Preference for Independent Work

They do not rely on others' work and tend to be more productive when working alone. These individuals demonstrate high initiative and confidence in their abilities. This preference is often linked to greater self-regulation, autonomy, and intrinsic motivation, which enhance focus and efficiency in task completion (Ng et al., 2022)

5) Easily Bored with Routine Activities

Such individuals tend to lose interest when engaged in unchallenging tasks. They are more attracted to activities that stimulate creativity and critical thinking (Bruns & Long Lingo, 2023). They are always looking for new ideas and eager to learn new things.

6) Able to Defend Their Opinions

Describes someone firm in their beliefs or viewpoints. Even if their opinions differ from others, they believe their perspective is strong and valid. These individuals tend to think critically and are not easily influenced by others (Knochelmann & Cohrs, 2024).

7) Not Easily Letting Go of Their Beliefs

These individuals are confident in their principles, even when facing pressure and challenges. They hold firmly to what they believe is right and are not easily swayed by others' opinions.

8) Enjoy Solving Problems

Indicates that the individual finds satisfaction in overcoming challenges. They have a high level of curiosity and a desire to discover new things. They are creative thinkers who consistently look for effective ways to deal with obstacles. This trait is linked to intrinsic motivation and a growth mindset, which encourage persistence and innovative problem-solving (Nguyen et al., 2021)

Peer Influence

The residential environment has various influences on daily life. In this environment, humans need to interact with others because they cannot live alone without the help of others. The social environment comprises community forces and various normative systems that surround individuals or groups, influencing their behavior and interactions (Fadhilah et al., 2024). Social interaction is a continuous process that forms friendships. One form of friendship is with peers (Arifin et al., 2018). According to Utomo & Pahlevi (2022) Peers are a form of social communication interaction based on similarities in age, social status, needs, and interests, all of which are framed within the bonds of friendship or companionship. Meanwhile, Dongguan & Boiliu (2020) explains that Peers are one of the aspects that can support students' self-concept. The indicators of peers According to Khairinal et al. (2020) the indicators of the peer environment are as follows:

1) Social Interaction in the Peer Environment

A student has a strong desire to be accepted as a member of a group and may feel uncomfortable or dissatisfied when not with their peers. Zhao et al. (2021) found that perceived social support from peers enhances academic engagement through increased self-esteem and self-efficacy.

2) Individual Involvement in Interaction

One of the important functions of peers is to enhance social skills, support the development of reasoning, and help individuals learn to express emotions more maturely. Ryamoigi (2024) found that functional peer relationships play a crucial role in students' study well-being, highlighting that relatedness and empathy significantly influence academic success.

3) Peer Support

Support from peers plays a significant role in various situations, such as when experiencing difficulties in learning or personal problems. With peer support, individuals can strengthen their self-confidence in facing challenges.

4) Becoming Learning Partners

One of the common activities in the school environment is studying together, which allows peers to become effective learning partners.

5) Enhancing Students' Self-Esteem

Peers play an important role in enhancing students' self-esteem. When students receive appreciation and support from their peers, they feel more valued and acknowledged, which can positively influence their self-esteem.

Keyboarding Skill

Skills come from the word "skilled," which means capable, competent, and agile. Skills are basic abilities possessed by every individual that are then trained, honed, and continuously developed. The purpose of learning the ten-finger touch typing system is to observe improvements in typing speed, accuracy, and neatness (Djanewar & Sudarmin, 1999:69) Keystrokes become consistent and automatic through the ten-finger touch typing method. With regular practice using tools like typing master pro, users develop muscle memory that allows them to type accurately without looking at the keyboard, enabling full focus on the text being typed (Qalby et al., 2024). In the context of onomatopoeia, typing means pressing the keys with fingertips producing a "tik-tik" sound. The indicators of keyboarding skills are outlined in the 2013 Office Automation 1 subject module published by the Ministry of Education and Culture.

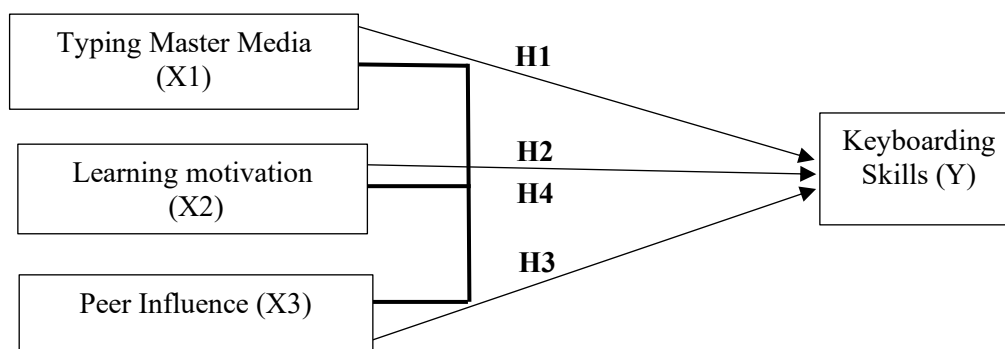
Siswanto et al. (2013) Elaborates on the indicators of keyboarding skills as follows:

- 1) **Finger Position**
The ten-finger typing method involves using each finger to press specific keys according to its assigned role. Fingers rest on the home row, with the left hand positioned on A, S, D, and F, and the right hand on J, K, and L. Both thumbs are placed on the space bar. During typing, attention should remain on the source text, while fingers move in response to the letters being read..
- 2) **Sitting Posture**
A good posture while typing is essential for improving workflow and reducing the risk of fatigue that can arise from careless sitting. A proper sitting posture includes arms aligned with the body, wrists, and fingers curved naturally over the keyboard, thumbs placed correctly, thighs parallel and not touching each other, and the head positioned upright while viewing the text.
- 3) **Eye Focus**
Eye focus plays a crucial role in enhancing typing efficiency and accuracy. typically, the eyes should focus on the screen a method known as Touch Typing. This technique enables the fingers to automatically locate the correct keys without looking at the keyboard, allowing the typist to detect and correct mistakes more efficiently.
- 4) **Typing Speed**
Typing speed refers to a person's ability to perform typing continuously in the shortest possible time. It is usually measured in Characters Per Minute (CPM), which includes letters, numbers, spaces, and punctuation marks. A person is considered to have good keyboarding skills if they can type at a speed of 200–250 CPM. The higher the CPM, the better the typing performance.
- 5) **Typing Accuracy**
Typing accuracy refers to how precisely someone can type without making mistakes. It is especially important in tasks requiring error-free documents, such as report writing, professional correspondence, and programming. A typing accuracy of over 95% is considered excellent and reflects a high level of keyboarding proficiency.

Learning outcomes are behavioral changes that include cognitive, affective, and psychomotor domains. In the context of typing skills, they fall under the psychomotor domain and are influenced by learning motivation, peer influence, and the use of media such as typing master. High motivation encourages students to practice more actively, while interactive media can enhance interest and typing accuracy. According to Hoque (2016), psychomotor learning outcomes are closely related to physical skills developed through practice and repetition. Studies by Wahyuni et al. (2018) and Anggun (2019) show that the use of typing master has a significant positive impact on improving students' keyboarding skills. Based on the explanation above, it can be concluded that the Typing Master media, learning motivation, and peers influence learning outcomes in the form of keyboarding skills. If the learning media is appropriate, the learning motivation is high, and the peer environment is supportive, then students' keyboarding skills will improve. The hypotheses derived from the above explanation are as follows:

- H1: Typing Master media have a positive and significant effect on keyboarding skills.
- H2: Learning motivation have a positive and significant effect on keyboarding skills.
- H3: Peers have a positive and significant effect on keyboarding skills.
- H4: Typing Master media, learning motivation, and peers simultaneously have a positive and significant effect on keyboarding skills.

Referring to the above discussion, the conceptual framework for this study is depicted as follows:



Source : Source: Data Processed by Researchers in 2024

Figure 2. Conceptual Framework

METHOD

Used as a data collection instrument, through several statements presented to the respondents, the respondents are individuals who respond to the statements submitted by the researcher. The data source in this study is primary in nature because the researcher obtained the data directly from the respondents. The data analysis technique is based on the data obtained from the distributed questionnaires and will be processed using the IBM SPSS Statistics 28 application. The type of research used is quantitative research, Quantitative research is a type of research that heavily involves the use of numbers, starting from data collection, interpretation of the data, to the presentation of the results (Syahroni, 2022). The population consists of 108 students from the 2020 Office Administration Education program. This research is systematic, and structured, and utilizes research instruments in the form of questionnaires to collect numerical data, which are then analyzed using statistical techniques. This approach allows the researcher to objectively measure the relationships between variables and draw conclusions that can be generalized. The sampling method used is a saturated sample, meaning the entire population is used as the research sample (Effendi et al., 2022).

Data collection was conducted through observation, questionnaires distributed via Google Forms, and a typing test using the website blindtyping.com, targeting students of the 2020 Office Administration Education cohort at Universitas Negeri Semarang. The data analysis methods used in this study include descriptive statistical analysis and multiple linear regression, processed using the SPSS Statistics 28 software. Data analysis is the process carried out once all data from respondents and other sources have been collected. The steps in data analysis consist of two groups, one of which is descriptive data analysis. The measurement of this descriptive percentage analysis is conducted with the help of Microsoft Excel. All variables in this study typing master media, learning motivation, peer influence, and keyboarding skills along with their sub-variables, are totaled and compared with their ideal scores to obtain a percentage score. Based on this descriptive percentage, the results will then be compared with the predetermined criteria to determine the level.

RESULTS AND DISCUSSIONS

1. Instrument Testing

a. Validity Test

Validity testing is used to ensure that a research instrument accurately measures the intended variable (Sugiyono, 2017). Based on the data obtained using SPSS Statistics 28, the results show that all research instruments are declared valid. A total of 65 statement items were tested and processed. The data are considered valid because the significance values are less than $0.05 < 0,05$

b. Reliability Test

Reliability testing is used to ensure that a measurement instrument can produce consistent and stable results under similar conditions, such as through internal consistency (Cronbach's alpha), test-retest, parallel forms, or inter-rater reliability (Subhaktiyasa, 2024). Variable can be considered reliable if it yields a Cronbach's Alpha value greater than 0.70. The reliability test results of each research variable are presented in the following table:

Table 2. Reliability Test

No	Variable	<i>Cronbach's alpha Based on Standardizes items</i>	<i>Taraf Cronbach's alpha</i>	Description
1.	Typing master media	0,914	0,7	Reliable
2.	Learning Motivation	0,915	0,7	Reliable
3.	Peer Influence	0,894	0,7	Reliable
4.	Keyboarding Skills	0,907	0,7	Reliable

Source: Data Processed by Researchers in 2025

Based on the reliability test shown in the table above, it can be concluded that Cronbach's Alpha values for each indicator are greater than 0.70. Therefore, it can be concluded that all indicators used in this study are reliable and can be used for further analysis.

2. Classical Assumption Test

Classical assumption testing is an analysis conducted to assess whether there are classical assumption problems in an Ordinary Least Squares (OLS) linear regression model. OLS regression assumes a linear relationship between the two variables. If the relationship is not linear, OLS regression is not an ideal tool for research analysis, and modifications to the variables or the analysis are required (Mardiatmoko, 2020).

a. Normality Test

Normality testing is used to determine whether the data follows a normal distribution, making it suitable for parametric statistical analysis (Priyatno, 2018). The normality test was conducted using the Kolmogorov-Smirnov test and P-Plot graph. Based on the results, the Asymp. Sig. (2-tailed) value was 0.200, meaning the p-value of $0.200 > 0.05$. Therefore, it can be concluded that the data in this study are normally distributed, making it appropriate to use regression analysis techniques because the assumption of normality is met.

b. Multicollinearity Test

Multicollinearity testing aims to examine whether the regression model has identified any correlation among the independent variables (Effiyaldi et al., 2022). The multicollinearity test shows that the tolerance values for all variables typing master media, learning motivation, and peer influence are greater than 0.10, and the VIF values are less than 10.00. Specifically, the typing master media variable has a tolerance value of $0.460 > 0.10$ and a VIF of $2.176 < 10.00$. The learning motivation variable has a tolerance value of $0.361 > 0.10$ and a VIF of $2.771 < 10.00$. The peer influence variable has a tolerance value of $0.414 > 0.10$ and a VIF of $2.414 < 10.00$. Therefore, it can be concluded that there is no indication of multicollinearity in the regression used.

c. Heteroscedasticity Test

The heteroscedasticity test was conducted using the Glejser test. The Glejser test is one of the most commonly used statistical tests. It proposes regressing the absolute value of the residuals on the independent variable (Ghozali, 2011). The decision-making basis for the Glejser test is that if the significance value of the absolute residual is greater than 0.05, then the regression model does not contain heteroscedasticity, and vice versa. The results of the Glejser test show that the typing master media variable has a significance value of 0.897, the learning motivation variable has 0.656, and the peer influence variable has 0.319. All independent variables in this study have significance values greater than 0.05, so it can be concluded that there is no indication of heteroscedasticity in the regression model.

3. Multiple Linear Regression Analysis

According to Ghozali (2016), multiple linear regression is a method used to identify the direction and magnitude of the effect that independent variables have on a dependent variable. In this research, multiple linear regression analysis was applied to assess the extent to which typing master media (X1), learning motivation (X2), and peer influence (X3) impact students' keyboarding skills (Y).

Table 3. Results of Multiple Linear Regression Analysis

		Coefficients			t	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	1.546	2.190		.706	.482
	Typing master media	.097	.043	.181	2.230	.028
	Learning Motivation	.315	.036	.758	8.716	.001
	Peer Influence	-.061	.049	-.104	-1.238	.218

a. Dependent Variable: Keyboarding Skill

Source: Data Processed by Researchers in 2025

Based on the results of the multiple linear regression test, the following regression equation was obtained: $Y = 1.546 + 0.097X_1 + 0.315X_2 - 0.061X_3 + e$. The constant value of 1.546 indicates that when the three independent variables typing master media (X_1), learning motivation (X_2), and peer influence (X_3) are equal to zero, the keyboarding skill score is 1.546. The coefficient of typing master media is 0.097 with a significance value of 0.028, indicating a positive and significant effect on keyboarding skills. This means that the more effectively typing master media is used, the higher the students' keyboarding skills. The coefficient of learning motivation is 0.315 with a significance value of 0.001, also showing a positive and significant influence. This suggests that higher student motivation leads to improved keyboarding skills. Meanwhile, the peer influence variable has a coefficient of -0.061 with a significance value of 0.218, indicating that it does not have a significant effect on keyboarding skills. Therefore, it can be concluded that Typing Master media and learning motivation have a significant effect on keyboarding skills, while peer influence does not have a significant effect.

4. Results of Hypothesis Testing

a. The Simultaneous Test (F-test)

Ghozali (2016) states that the F-test is used to determine whether the independent variables included in the equation have a joint or simultaneous effect on the dependent variable. In this study, the independent variables are typing master media, learning motivation, and peer influence. The dependent variable is

keyboarding skills. The basis for decision-making in the F-test is that if the significance value (Sig) is less than 0.05, then the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected. The results of the simultaneous test are presented as follows.

Table 4. The simultaneous test (F-test)

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1639.090	3	546.363	12.148	<.001 ^b
	Residual	4722.360	105	44.975		
	Total	6361.450	108			

a. Dependent Variable: Keyboarding Skills

b. Predictors: (Constant), peer influence, typing master, learning motivation

Source: Data Processed by Researchers in 2025

Based on Table 3, the results of the F-test show that the significance value is <0.001 , which is less than 0.05 ($0.001 < 0.05$). Therefore, it can be concluded that Hypothesis 4 (H_4), which states that "The variables Typing Master media (X_1), learning motivation (X_2), and peer influence (X_3) have a positive and significant simultaneous effect on the variable (Y) keyboarding skills," is accepted.

b. Partial Test (t-test)

According to Ghozali (2016:171), the partial test or t-test is used to determine whether each independent variable individually affects the dependent variable. The following are the results of the partial test (t-test) in this study:

Table 5. Partial Test (t-test)

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
		<i>B</i>	Std. Error	Beta		
1	(Constant)	1.546	2.190		.706	.482
	Typing master media	.097	.043	.181	2.230	.028
	Learning Motivation	.315	.036	.758	8.716	.001
	Peer Influence	-.061	.049	-.104	-1.238	.218

Dependent Variable: Keyboarding Skills

Source: Processed by Researchers in 2025

Based on the results of the t-test, it is known that the Typing Master media variable (X_1) has a t-value of 2.230 with a significance of $0.028 < 0.05$, thus H_1 is accepted. This indicates that Typing Master media has a positive and significant effect on students' keyboarding skills. The learning motivation variable (X_2) has a t-value of 8.716 with a significance value $< 0.001 < 0.05$, so H_2 is accepted. This proves that learning motivation also has a positive and significant effect. Students with high learning motivation tend to have better keyboarding skills. Meanwhile, the peer influence variable (X_3) has a t-value of -1.238 with a significance value of $0.218 > 0.05$, so H_3 is rejected. This means that peer influence does not have a significant effect on students' keyboarding skills.

c. Simultaneous Coefficient of Determination Test (R^2)

The coefficient of determination (R^2) indicates how much the independent variables collectively explain the dependent variable in a regression model. A higher R^2 value suggests a better model fit ((Halin et al., 2017) The results of the simultaneous coefficient of determination test (R^2) show that the Adjusted

R Square value is 0.660 or 66%. This indicates that the variables Typing Master media, learning motivation, and peer influence collectively affect keyboarding skills by 66%, while the remaining 34% is influenced by other factors not included in this study. Meanwhile, based on the results of the partial determination test (r^2), the Typing Master media variable has a partial correlation value of 0.630. When squared, this results in 0.3969 or 39.69%. This means that typing master media (X_1) contributes 39.69% to keyboarding skills when other variables are held constant. The learning motivation variable (X_2) has a partial correlation value of 0.808. When squared, this results in 0.6528 or 65.28%. Meanwhile, the peer influence variable (X_3) has a partial correlation value of 0.549. When squared, this becomes 0.301 or 30.1%, although its contribution is not significant in affecting keyboarding skills.

Descriptive percentage analysis aims to describe each indicator of every variable in a way that is easy to understand. Based on the results of the descriptive analysis, the Typing Master media variable has a minimum score of 32 and a maximum of 75, with an average of 57.88 and a standard deviation of 8.03. The average percentage reached 75.74%, which is categorized as high, with all indicators ranging between 74.68%–78.90%. The learning motivation variable has a minimum value of 46 and a maximum of 115, with an average of 87.04 and a standard deviation of 11.42. The average percentage is 85.24%, which falls into the very high category, and its indicators are in the high range (72%–78.34%). The peer influence variable has a minimum score of 25 and a maximum of 75, with an average of 58.59 and a standard deviation of 7.82. The average percentage is 77%, classified as high, with all indicators ranging from 75.11% to 79.45%

Discussions

Based on the results of the hypothesis testing in this study, the overall outcomes are known. Out of the four hypotheses proposed, three hypotheses were accepted, and one hypothesis was rejected.

The use of Typing Master media has a positive and significant effect on keyboarding skills.

Based on the results of this study, show that the use of typing master media positively and significantly influences the keyboarding skills of students in the Office Administration Education program at Universitas Negeri Semarang. This is evident from the partial test (t-test) results, which yielded a t-value of 2.230 with a significance level of 0.028, indicating a positive effect. Therefore, Hypothesis 1 (H_1), which states that there is a positive and significant effect of Typing Master media on the keyboarding skills of 6th semester Office Administration Education students, is accepted. Meanwhile, the contribution of the typing master media variable is 39.69%. The use of learning media such as typing master has been proven effective in enhancing students' typing skills. Research by Marwan & Wardani (2022) showed that implementing Typing Master in typing practice lessons significantly improved students' speed, accuracy, and pass rates, with notable increases in both performance and precision. Permana (2021) also concluded in his study conducted in Sukabumi that the Typing Master media effectively improved student learning outcomes beyond the minimum competency standards. Furthermore, (Yuliza, 2020) found that students who used Typing Master intensively demonstrated overall improvement in keyboarding skills. These results align with the research conducted by Ikhsananto & Sutirman (2018) who found that the use of interactive learning software can significantly improve students' technical skills. Their study also showed that students who frequently use this media tend to have better typing skills. According to Mayer (2009), students who learn enjoyably can remember information better compared to those who learn in a boring manner.

Learning motivation has a positive and significant effect on keyboarding skills.

Learning motivation is the driving force behind a person's persistence in studying and serves as a key factor influencing the effectiveness of the learning process. Research by Hidayati et al. (2022) showed that the application of the Direct Instruction learning model can increase students' learning motivation to a high–very high category. This demonstrates that structured learning approaches can provide a significant motivational boost for students. Furthermore, intrinsic learning motivation has been proven to be a strong predictor of academic achievement. In a study by Liang et al. (2023) both learning

motivation and environmental support influenced learning outcomes, but intrinsic motivation had the greatest impact, with a coefficient value of $\beta = 0.494$ ($p < 0.001$). This confirms that internal drive plays a vital role in academic success, especially among first-generation college students. In addition, the implementation of a Problem-Based Learning model supported by interactive multimedia has also been shown to be effective in increasing elementary school students' learning motivation. (Rahman et al., 2024) found that student engagement improved along with the use of relevant media and problem-solving-based learning methods. Based on the results of this study, learning motivation positively and significantly influences the keyboarding skills of students in the Office Administration Education program at *Universitas Negeri Semarang*. The data analysis from the partial test (t-test) shows a t-value of 0.330 with a significance level of <0.001 , indicating a positive effect. Therefore, Hypothesis 2 (H2), which states that learning motivation has a positive and significant effect on the keyboarding skills of 6th semester Office Administration Education students, is accepted. The contribution of the learning motivation variable is 65.28%. This finding aligns with the research conducted by Amilatus & Kurniawan (2016) which showed that high learning motivation is positively correlated with academic achievement. In this context, students with high motivation tend to master basic techniques faster, such as proper finger placement and typing speed. Furthermore, research by Anggryawan (2019) found that students with high motivation tend to feel challenged to understand the material delivered by the teacher. Based on study by Hidayati & Saputra (2022) Learning motivation enhances students' independence in acquiring digital skills, including typing.

Peer influence has a positive and significant effect on keyboarding skills.

Based on the results of this study, peer influence was found to have a positive and significant effect on the keyboarding skills of Office Administration Education students at *Universitas Negeri Semarang*. However, the t-test results show a t-value of -1.238 with a significance level of 0.218, indicating that although there is a significant effect, the influence is negative on the keyboarding skills of 6th semester Office Administration Education students. Therefore, Hypothesis 3 (H3), which states that "There is a positive and significant effect of peer environment on the keyboarding skills of 6th semester Office Administration Education students," is rejected. This may be caused by several factors, such as differences in learning styles, where not all students feel comfortable learning in groups or in the same way. Peers can also have a negative influence if students associate with friends who have bad habits; such friendships can reduce motivation and shift mindsets negatively, which can affect learning outcomes. The studies by Kasidi & Kumalasari (2022) and Adoe & Pani (2023) show consistent results, indicating that the peer variable does not have a significant effect on learning outcomes. Kasidi found no influence in the context of Economics learning, while Treesly reported a very small contribution (6.6%), suggesting that the effect of peers on academic achievement is minimal. This finding is similar to the study conducted by Sitorus (2023) which showed that peer influence was weak and not significant.

Typing Master media, learning motivation, and peer influence have a positive and significant effect on keyboarding skills.

The results of the data analysis reveal that typing master media, learning motivation, and peer influence have a positive and significant impact on the keyboarding skills of students in the Office Administration Education program at *Universitas Negeri Semarang*. The findings from the simultaneous (F-test) analysis indicate a significance level below 0.001 with an F-value of 12.148. This supports the acceptance of Hypothesis 4 (H4), which proposes that "Typing Master media, learning motivation, and peer influence affect the keyboarding skills of 6th semester Office Administration Education students." Hence, when Typing Master media, learning motivation, and peer influence increase together, students' keyboarding skills tend to improve. On the other hand, a simultaneous decrease in these three factors is likely to result in lower keyboarding performance.

CONCLUSION

Based on the research results the following conclusions can be drawn:

- 1) Typing Master media has a positive and significant effect on keyboarding skills, with a coefficient of 0.097 and a significance level of 0.028 (< 0.05), contributing 39.69%.
- 2) Learning motivation also has a positive and significant effect, with a coefficient of 0.315 and a significance level of 0.000 (< 0.05), contributing 65.28%.
- 3) Peers do not have a significant effect on keyboarding skills, indicated by a coefficient of -0.061 and a significance level of 0.218 (> 0.05).
- 4) Simultaneously, typing master media, learning motivation, and peers influence keyboarding skills, with a combined contribution of 66% to the dependent variable.

This means that in the future, students should practice typing more regularly using the typing master media, as its use has been proven to have a positive and significant effect on improving keyboarding skills. Regular practice can help students improve their typing speed and accuracy. Moreover, by practicing frequently, students can develop good typing habits, which can reduce typing errors. Students can also enhance their learning motivation by seeking additional references, either from books or relevant journals and by adopting approaches that match their interests and characteristics. Therefore, future research is expected to analyze other variables related to keyboarding skills, such as learning styles or facilities.

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