The Role of Expectancy Theory in Improving Research Performance: The Case of Midwifery Lecturers

Budi Astyandini[1*], Suwito Eko Pramono[1], RR Sri Endang Pudjiastuti[2], Arief Yulianto[1]

[1]Post Graduate School, Universitas Negeri Semarang, Indonesia
[2]Faculty of Nursing; Kemenkes Poltekkes Semarang, Indonesia

*Corresponding Author: asty.budi@yahoo.com

Abstract. Lecturers need motivation to conduct research that serves as the best teaching material for students. However, in the educational sector, common issues such as lack of motivation, inadequate information systems, and weak supervision often result in poor research performance. This study aims to examine the simultaneous influence of motivation, information systems, and supervision on the research performance of lecturers. The study involved 78 lecturers from the midwifery department. A quantitative approach was employed, using validated questionnaires and multiple regression analysis. The results indicate that Information systems (X1) has a t-value of -4.106, which is greater than the t-table value of 1.9917, with a significance level of $0.000 < 0.05$, indicating a positive and significant effect on research performance (Y). Supervision (X2) have a t-value of 3.531, exceeding the t-table value of 1.9917, with a significance level of $0.001 < 0.05$, indicating a negative and significant effect on research performance (Y). motivation (X3) has a t-value of 4.719, greater than the t-table value of 1.9917, with a significance level of $0.000 < 0.05$, indicating a positive and significant effect on research performance (Y). The F-value is 42.037, exceeding the critical value of 3.1203, with a significance level of $0.000 < 0.05$, showing a significant simultaneous effect of these variables on research performance. The key finding of this study is that lecturers' research performance needs to be supported by effective information systems, high motivation, and robust supervision to enhance research quality and productivity.

Keywords: expectancy theory, information systems, motivation, supervision, performance

INTRODUCTION

Lecturers in Indonesia and around the world need to improve their competence in conducting research. Lecturers in the midwifery department need to conduct research because the development of knowledge and service is spurred towards research results that demand the value of integrity and honesty in carrying out research (Handayani, 2018) .Research activities are often carried out 100% only in odd semesters and publication achievements are only 40% as a form of lecturer research performance to prepare lecturer workload reports and Law Number 14 of 2005 concerning teachers and lecturers(Eka Vasia Anggis, 2022). The research shows that the motivation to conduct research is based on lecturers having a sense of pleasure in conducting research, being responsible for developing science as well as to fulfill lecturers' obligations for continuous professional development and a supportive research environment to improve the quality of academic research.(Kosasih, 2012) Lecturers need encouragement in the form of motivation in lecturers to conduct research (Lukitaningtias, 2018). Efforts to improve lecturers' research competence require a holistic approach that includes training, financial support, and guidance. The Hope Theory or Hope Theory proposed by Victor Vroom is a framework that explains how an individual's motivation is influenced by their belief that their efforts will produce the expected performance and that this performance will produce the desired results.

In the context of education management, this theory provides important insights into how to increase lecturer motivation to achieve optimal performance through fair management of expectations and outcomes. The use of expectation theory in assessing lecturer performance can help educational institutions understand the factors that encourage lecturers to excel and contribute optimally. Midwifery lecturers as professionals must develop midwifery knowledge through the latest developments through research. Several studies related to lecturer performance Lecturer research performance is influenced by competence in lecturers, support from management and organizations (Kurniati & Fidowaty, 2017). Vroom's expectation theory explains that giving rewards can increase work motivation through the encouragement to be more productive supported by organizational situations (Eddi, 2016) From various studies, no one has developed the influence of information systems, motivation, and supervision to improve the research performance of midwifery lecturers.

The purpose of this study is to describe the influence of information system (X1) on

performance (Y), the influence of supervision (X2) on performance (Y), the influence of Motivation (X3) on performance (Y), the influence of motivation, information system and supervision on the research performance of midwifery lecturers. This research offers several significant new aspects in the context of higher education management and lecturer performance. First, this study integrates Vroom's Expectations theory with in-depth empirical analysis to evaluate the influence of motivation, information systems, and supervision on lecturer performance. This approach not only strengthens theoretical understanding but also provides empirical evidence that is relevant in the context of higher education in Indonesia. Second, this study conducts a quantitative analysis to get a comprehensive picture of the factors that affect the research performance of midwifery lecturers. This research will identify specific mechanisms on how motivation, information systems, and supervision interact and affect lecturer performance. Third, this study introduces a more holistic and contextual model of lecturer performance evaluation, taking into account variables that were often overlooked in previous studies, such as institutional support and lecturer self-efficacy. In addition, the results of this research are expected to provide practical recommendations that can be applied by university leaders to improve lecturer research performance, with applicable laws and regulations. Thus, this research not only contributes to the academic literature but also has a practical impact that can improve the quality of higher education in Indonesia.

METHOD

This study uses a quantitative approach by analyzing data in the form of numbers that have been collected using statistical tests to find out the influence of motivation, information systems, and supervision on the research performance of lecturers in the Department of Midwifery, Semarang Polytechnics. The population in this study is a lecturer in the Department of Midwifery at the Semarang Polytechnic who has had research. The research sample was selected with the total sampling technique so that the entire population was used as a sample in the study. The 78 lecturers involved consisted of lecturers majoring in midwifery who served at the Semarang campus, Purwokerto Magelang, Blora and Kendal consisting of 78 lecturers who were randomly selected from all midwifery lecturers at

the Semarang Ministry of Health Polytechnic. The independent variables consisted of information systems, motivation, and supervision while the dependent variables were the research performance of midwifery lecturers. The questionnaire has been tested for validity and reliability. The data collection technique was carried out using a questionnaire shared through Google Forms including motivation, information systems and supervision designed on a 4-point Likert scale (1 = strongly disagree, 4 = strongly agree). The data analysis technique is multiple linear regression aiming to see 3 dependent variables affecting the dependent variable using SPSS which consists of a partial hypothesis test with a t-test, a simultaneous hypothesis test using the F test, and a determinant test (R^2) .

RESULTS AND DISCUSSION

Based on the results of the research that has been collected and tested statistically, the data is obtained as follows:

Multiple Regression Analysis:
According to Ghozali in (Joswati Joswati et al., 2021) regresi linear vberganda adalah satu model regersi dengan melibatkan variabel independen lebih dari 1 variable. The analysis of multiple regression in this study aims to analyze the influence of information systems (X1), motivation (X2) and supervision (X3) on the research performance of lecturers in the Department of Midwifery at the Semarang Polytechnic (Y) can be formulated as follows:

$Y = a + \beta1X1 + \beta2X2 + \beta3X3 + e$
$Y = 7,421 + 0.609 (X1) + 0.710 (X2) + 1,113 (X3)$
Y = Lecturer performance
a = Constanta
$\beta1$-3 = Regression coefficient of independent variables
X1 = Information system
X2 = Motivation
X3 = Supervision
e = Error term (10%)

The multiple linear regression equation is interpreted as follows: the value of the constant (a) is 7.421. This value describes a constant number that means that if the value of the variable of information system (X1) and Motivation (X2) and supervision (X3) is zero (0), then the consistency value of the variable of research performance of lecturers in the Department of Midwifery of the Semarang Polytechnic (Y) is 7,421. $\beta1$ is the value

of the regression coefficient of the information system variable (X1) which is 0.609 with a positive direction. This shows that there is a harmonious relationship between the information system variable (X1) and the research performance of lecturers in the Department of Midwifery of the Pseudonymous Polytechnic (Y). This means that if the value of the information system (X1) increases by one unit, then the performance of lecturers conducting research in the midwifery department of the Semarang Polytechnic (Y) increases by 0.609. Likewise, vice versa assuming the values of other independent variables, motivation (X2) and supervision (X3) are considered constituent (0). β2 is the coefficient value of the regression of the motivation variable (X2) which is 0.710 with a positive direction, this indicates the relationship between the motivation variable (X2) and the research performance of lecturers in the Department of Obstetrics and Gynecology of the Semarang Polytechnic (Y). This means that if the motivation value (X2) increases by one unit, then the research performance of lecturers in the Department of Obstetrics and Gynecology of the Semarang Polytechnic (Y) also increases by 0.710. Likewise, vice versa assuming the value of the variable information system (X1) and Supervision (X3). β3 is the regression coefficient value of the Supervision variable (X3) which is 1.113 with a positive direction. This shows that there is a harmonious relationship between the supervisory variable (X3) and the research performance of lecturers in the Department of Midwifery at the Semarang Polytechnic (Y). This means that if the supervision value (X3) increases or increases, then the research performance of lecturers at the Semarag Polytechnic (Y) increases by 1,113. Similarly, vice versa by assuming that the value of the other independent variables, information systems (X1), motivation (X2), is considered constant (0).

Partial Parameter Hypothesis Test (T-test)

According to Ghozali in (Joswati Joswati et al., 2021)Partial test (t-test) is a technique to test how the influence of each independent variable on the bound variable by comparing the tcount value to the ttable value and the resulting significance value. The results of the information system hypothesis test on the performance of lecturers conducting research in the Department of Midwifery of the Semarang Polytechnic (Y) obtained a tcal value of 4,106 and a ttable value at the degree of freedom (df=n-k=78-2=76) and α

= 5% (0.05) is 1.9917 so that the tcal value is greater than the ttable value (4.106>1.9917) and the resulting significance value of 0.000 is smaller than 0.05 (0.0000 <0.05). Thus, it is said that the information system partially has a positive and significant effect on the research performance of lecturers in the Department of Midwifery of the Semarang Polytechnic. Based on the results of the motivation test (X2) on the research performance of lecturers in the Department of Midwifery of the Semarang Polytechnic (Y), a tcount value of 3,351 was obtained and a ttable value at the degree of freedom (df=n-k=78-2=76) and α = 5% (0.05) was 1.9917 so that the tcount value was greater than the ttable value (3.351>1.9917) and the resulting significance value of 0.001 was smaller than 0.05 (0.001 <0.05). Thus, it is said that motivation partially has a positive and significant effect on the research performance of lecturers in the Department of Midwifery of the Semarang Polytechnic. Based on the results of the supervision test (X3) on the research performance of lecturers in the Department of Midwifery of the Semarang Polytechnic (Y), a tcount value of 4.719 was obtained and the ttable value at the degree of freedom (df=n-k=78-2=76) and α = 5% (0.05) was 1.9917 so that the tcount value was greater than the ttable value (4.719>1.9917) and the resulting significance value of 0.000 was smaller than 0.05 (0.0000 <0.05). Thus, it is said that partial supervision has a positive and significant effect on the research performance of lecturers in the Department of Midwifery of the Semarang Polytechnic.

Stimulant parameter hypothesis test (Test F)

According to Ghozali in (Joswati Joswati et al., 2021) simultaneous test (Test F) is used to find out whether all independent variables have a simultaneous influence on the dependent variable. The test was carried out by the distribution test F. The results of the F test in this study were to determine whether there was a simultaneous influence of independent variables, namely information systems, motivation and supervision on variables bound to the research performance of lecturers in the Department of Midwifery at the Semarang Polytechnic. Based on the results of the simultaneous hypothesis test, it can be found that the F value $_{is\ calculated}$ as $42,037 > F_{table} 3.1203$ with a significance of 0.000 < 0.05 Thus, it can be said that the information system, motivation and supervision simultaneously have a significant effect on the research performance of lecturers in the Department of Midwifery of the Semarang

Polytechnic.

Determination Coefficient Test (R2)

According to Ghozali in (Joswati Joswati et al., 2021)The determination coefficient (R2) test aims to measure how far independent variables are able to explain the variation in the change of dependent variables from the research model. The value of the determinant coefficient (R2) is between 0 (zero) and 1 (one) indicated by *the Adjusted R-Square* value. In this study, it can be seen from the contribution of independent variables consisting of information systems, motivation, and supervision to influence changes in the performance variables of midwifery lecturers. The results of the determination test (R2) are presented as follows: the value of the determination coefficient (R2) indicated by the Adjusted R-Square value of 0.630 with the medium category. These results can show that the variables of information systems, motivation and supervision have a great ability to influence the improvement of research performance of lecturers in the Department of Midwifery at the Semarang Polytechnic by 63%, the remaining 37% is influenced by other variables that are not studied.

The influence of information systems on Lecturer Research Performance

An information system is a set of components that are interconnected with the purpose of collecting, prosecuting, storing and distributing information so that it can be used as a material for the leadership to make decisions in Husein's (Puturuhu, 2022)

Based on the results of the analysis, it is known that the information system has a positive effect on the research performance of lecturers at the Semarang Polytechnic, which means that the better the information system that supports the research of lecturers, the better the research performance of lecturers. Lecturers feel more effective and efficient when the information system supports and facilitates research work so that it does not spend a long time on administration. Information systems are also motivational factors that come from outside the individual which is related to the expectation of improving performance. There are still aspects of the information system that are currently implemented that are ineffective or even hinder the research performance of lecturers. This may include but is not limited to, complex and non-user-friendly systems, lack of adequate training in using information technology, or systems that do

not correspond to the specific needs of the lecturer in the context of their research. According to Vroom's theory of expectations, motivation to act is reinforced by the belief that actions will produce the desired outcome (hope) and that the outcome will bring a rewarded reward (valence). In this context, if the information system is perceived by lecturers as unhelpful or even burdensome, then their expectations for the positive results of using the system will be reduced, thus reducing their motivation to engage in research, which ultimately negatively impacts their performance.

This is in accordance with previous research in lecturer research activities Research information systems, publication activities and lecturer service need solutions to manage and organize data on research results, publications and service from lecturers based on information technology (Setiaji et al., 2011). Therefore, the results show that universities need to conduct an in-depth evaluation of the information systems used in the context of research, taking into account their effectiveness from the user's point of view. Adopting a more tailored approach that supports specific research needs may be more beneficial and, according to the theory of hope, more likely to improve faculty motivation and research performance.

The Influence of Motivation on Lecturer Research Performance

According to Wlodkowski in (Fatkuroji, 2018)Motivation is. conditions that cause certain behaviors, as well as providing direction, resistance to certain behaviors.

Based on the results of the data analysis that has been carried out, motivation is partially found to have a positive and significant effect on the research performance of lecturers in the Department of Midwifery at the Semarang Polytechnic. This means that the motivation of lecturers in conducting high research will improve research performance. The high motivation of each lecturer will increase the desire to conduct research and which is part of the tridharma of higher teachers. With strong motivation, lecturers will not consider research as a burden but rather spur to improve achievements, including skills related to research and publications. This underscores Vroom's concept that valence and positive expectations of an expected outcome increase an individual's motivation to perform a particular action. Higher motivation in an academic context is often associated with greater involvement in research, higher effort, and better

fulfillment of research objectives.

This is in accordance with a study that the motivation of lecturers to conduct research to meet the performance set as a lecturer's obligation and publicity in the form of textbooks and journal articles. (Fitri Oviyanti, M. Hasbi, 2018). Academic performance, with an emphasis that good incentives and moral support from institutions are directly related to research productivity.

The Effect of Supervision on Lecturer Research Performance

Supervision in carrying out research can be in the form of controlling activities so that the process of carrying out tasks can be monitored properly and correctly, Harras, et al. (Sugiarti et al., 2021). From the results of the analysis, it was found that supervision had a positive and significant effect on the research performance of lecturers at the Semarang Polytechnic. This means that the better the supervision carried out in conducting lecturer research will improve the research performance of lecturers in the Department of Midwifery of the Semarang Polytechnic. Supervision carried out on the basis of a research contract is carried out in accordance with the research stage. Supervision is carried out by internal and external revieuwers. to ensure that the implementation of the research does not experience problems. It is consistent with Vroom's theory of hope, which states that individuals will be more motivated if they believe that there is a system that supports and monitors their progress to achieve clear goals. Effective monitoring can facilitate constructive feedback, aid in better planning, and ensure that resources are used efficiently. Performance monitoring of lecturers This research emphasizes the importance of effective leadership and supervision in the academic context as a performance driver.

The influence of information systems (X1), Supervision (X2), and Motivation (X3), on the performance (Y) of lecturer research.

Factors that affect lecturer research performance are information systems, motivation and supervision.

Based on Vroom's Harapan theory, high motivation is predicted to improve performance, because motivated lecturers have higher expectations for positive results from their research efforts. The results of the correlation coefficient (R) data analysis obtained were 0.794, which showed a strong relationship between independent variables (information systems, supervision, and motivation) and dependent variables (lecturer performance). The value of the determination coefficient (R^2) shows that about 63% of the variation in lecturers' research performance can be explained by these three independent variables. These results show the significant effectiveness of the factors studied in influencing the performance of lecturers in conducting research. An F grade was obtained simultaneously with a significant influence from information systems, motivation, and supervision on research performance.

Previous research, the factors that affect the research performance of lecturers of the PAI FITK UIN Raden Fatah Palembang study program are quite varied. There are at least several factors, namely ability (competence), achievement motivation, economic motivation, policy, and there is also a personality factor. However, of the five factors, it seems that only three factors dominate, namely competence, achievement motivation, economic motivation, and policy.(Fitri Oviyanti, M. Hasbi, 2018) Vroom's theory of expectations also supports these findings. This study adds to the evidence that the effective use of information systems and constructive supervision can increase lecturers' motivation, thus having a positive impact on their performance. In the context of Vroom's expectation theory, the motivation of lecturers to improve their research performance can be increased through the implementation of a fair supervision system and a supportive information system. Lecturers tend to be more motivated to improve research performance when they believe that the efforts they put in will produce the desired results and that they will be rewarded according to those achievements. This is directly related to the components of the theory of expectations, namely valence, expectations, and instrumentality. Therefore, the integration of efficient information systems and effective supervision strategies is very important in forming a conducive environment for lecturer research, as evidenced by the high determination coefficient in this study. This emphasizes the importance of policies that strengthen research infrastructure and human resource management in higher education to optimize academic performance. Overall, these findings confirm and expand our understanding of motivation and performance dynamics in an academic context, while offering practical insights for university managers in designing and implementing information systems that support

faculty research performance.

CONCLUSION

Based on the results of the analysis and discussion of the study, it can be concluded that motivation partially has a positive and significant effect on the performance of lecturers in conducting research at the Department of Midwifery, Semarang Polytechnic; the information system partially affects the research performance of lecturers in the Department of Midwifery, Semarang Polytechnic; partial supervision has a positive and significant effect on the research performance of lecturers in the Department of Midwifery, Semarang Polytechnic; motivation, information systems and simultaneous supervision have a significant effect on the research performance of lecturers in the Department of Midwifery of Potekkes Semarang; Motivation, information systems and supervision have a great ability to influence the improvement of the performance of dose i research in the Department of Midwifery of the Semarang Polytechnic, which is 63% while the remaining 37% is influenced by other variables that are not studied in this research model.

ACKNOWLEDGEMENT

REFERENCE

Eddi. (2016). Pengembangan Model Teori Ekspektasi Vrom Dalam Meningkatkan Motivasi Kerja Pegawai LPMP Sumatera Utara. 1–11.

Eka Vasia Anggis. (2022). Evaluasi Mutu Beban Kinerja Dosen Bidang Penelitian Berbasis Knowledge Conversion Oleh. Jurnal Penjaminan Mutu Lembaga Penjaminan Mutu Universitas Hindu Negeri I Gusti Bagus Sugriwa Denpasar, 8(November), 183–191.

Fatkuroji, F. (2018). Analisis Determinasi Minimnya Minat Dosen Dalam Penelitian.

MAGISTRA: Media Pengembangan Ilmu Pendidikan Dasar Dan Keislaman, 4(1), 33–50.

Fitri Oviyanti, M. Hasbi, I. (2018). Faktor-Faktor Yang Mempengaruhi Kinerja Penelitian Dosen Prodi PAI. Journal of Islamic Education Management, 4(1), 14–34.

Handayani, L. T. (2018). Pedoman Dan Standar Etik Penelitian Dan Pengembangan Kesehatan Nasional. In The Indonesian Journal of Health Science (Vol. 10, Issue 1). Badan Penelitian Dan Pengembangan Kesehatan Kementerian Kesehatan RI. www.litbang.kemenkes.go.id

Joswati Joswati, Agustina, D., & Ilhamsyah, A. W. (2021). Pengaruh Efektivitas Sistem Informasi Akuntansi Dan Role Stress Terhadap Kinerja Pegawai Selama Pandemi Covid-19. IJAB Indonesian Journal of Accounting and Business, 3(1), 28–43.

Kosasih, A. Y. (2012). Analisis Motivasi Dosen Dalam Melakukan Penelitian Di Lingkungan Universitas Singaperbangsa Karawang. Solusi, 10(21), 1–11.

Kurniati, P. S., & Fidowaty, T. (2017). Faktor-Faktor yang Mempengaruhi Kinerja Penelitian Dosen di Universitas Komputer Indonesia. Jurnal Ilmu Politik Dan Komunikasi, 7(2), 191–206.

Lukitaningtias, F. (2018). Analisis Faktor Yang Mempengaruhi Kinerja Penelitian Dosen Perguruan Tinggi Swasta (Pts) Kluster Madya Di Kota Malang. 20(2), 117.

Puturuhu, V. (2022). Sistem Informasi Manajemen Penelitian Dan Pengabdian Pnpb Pada Politeknik Negeri Ambon. Jurnal Simetrik, 12(1), 553–560.

Setiaji, H., Kom, S., Kurniawan, R., & Penelitian, R. L. (2011). Sistem Informasi Penelitian Dan Pengabdian Dosen Guna Aktivitas Tridharma Perguruan Tinggi Adapun yang termasuk disiplin ilmu NLP antara lain : 2011(Snati), 17–18.

Sugiarti, E., Mukrodi, M., & Mawardi, S. (2021). Monitoring Kineja Dosen :Manfaat Dan Dampaknya Terhadap Perguruan Tinggi. Scientific Journal Of Reflection : Economic, Accounting, Management and Business, 4(4), 816–822.