Vol. 14, No. 03, pp. 1627-1639, 2024 DOI: 10.23960/jpp.v14.i3.2024111

Jurnal Pendidikan Progresif

e-ISSN: 2550-1313 | p-ISSN: 2087-9849

http://jurnal.fkip.unila.ac.id/index.php/jpp/

Exploration of Supporting Factors for Achieving Academic Achievement in Doctoral Programs in Higher Education

Nunuk Hariyati[1*], Yatim Riyanto[1], Amrozi Khamidi[1], Ayu Wulandari[1], Nia Islamiah[1], & Raihand Ramadhani Abdul Sayeed[2]

[1]Education Management, Faculty of Education, Universitas Negeri Surabaya, Indonesia

[2]Management Bussines Administration, Mahatma Gandhi University, India

*Corresponding email: nunukhariyati@unesa.ac.id

Received: 14 November 2024 Accepted: 28 November 2024 Published: 06 December 2024

Abstract: Exploration of Supporting Factors for Achieving Academic Achievement in Doctoral Programs in Higher Education. The demands of change with the dynamics of global issues, one of which is the Sustainable Development Goals (SDGs), embody the role of Higher Education in producing competitive Human Resources. In-depth identification of academic supporting factors that influence the achievement of PLO (Program Learning Outcomes) needs to be done to determine strategic efforts in organizing education in the realm of study programs to produce competent and reliable graduates, especially for the doctoral program in Educational Management. **Objectives:** This study aims to explore academic supporting factors in the Doctoral Program in Educational Management at Surabaya State University (UNESA) to produce a description of academic support with the dynamics of the factors that influence it. **Methods:** This study used a descriptive quantitative approach with Exploratory Factor Analysis (EFA) with Jamovi Application to identify the underlying structure of a set of academic supporting variables, both from students as individuals and institutional factors. The data in this study were collected using a questionnaire instrument distributed to 75 students. **Findings:** The research results show that 3 factors are academic support factors in the UNESA Educational Management Doctoral Study Program, namely (1) Support System and Social Environment, (2) Learning Motivation, (3) Self-regulation. **Conclusion:** from the results it is interpreted that the realization of Doctoral Program students in Educational Management who can fulfil their lecture assignments and complete their studies on time is influenced by factors originating from external (support system and social environment) and internal factors (learning motivation and self-regulation).

Keywords: academic, supporting factor, higher education.

To cite this article:

Hariyati, N., Riyanto, Y., Khamidi, A., Wulandari, A., Islamiah, N., & Sayeed, R. R. A. (2024). Exploration of Supporting Factors for Achieving Academic Achievement in Doctoral Programs in Higher Education. *Jurnal Pendidikan Progresif*, *14*(3), 1627-1639. doi: 10.23960/jpp.v14.i3.2024111.

INTRODUCTION

The dynamics of changing global issues and the impacts they cause bring logical consequences for higher education to be responsive in meeting the needs of educational services according to specific criteria and specifications that develop according to the context of the needs of society in that era. Global developing issues include the 21st Century Era (with 6 C skills: computational thinking, compassion, creativity, communication skills, collaboratively, critical thinking and problem-solving), Industry 4.0, Society 5.0, and World Class University (WCU). In line with these dynamics, the demands of the Sustainable Development Goals (SDGs), higher education, especially doctoral programs in Educational

Management, are essential to realizing the development of quality and competitive human resources. Therefore, strategic efforts are needed in organizing education in the realm of study programs so that they can produce competent and reliable doctoral program graduates as leaders, managers, planners, supervisors, consultants and educators with mastery of science and technology, specialization in skills and mental readiness with values and norms and spiritual values in an integrative manner.

In this context, in-depth identification of academic supporting factors that influence the achievement of PLO (Program Learning Outcomes) that emphasize the sustainability of the learning process in an innovative, interactive, and effective manner in bridging the gap between the education process in Higher Education and the world of work and the need for innovation in the field of educational management becomes essential. However, another very essential focus is the academic performance of students as demonstrated through the completion of academic assignments and the length of study of students on time as the main problem.

Badje's research results show that internal and external factors influence students' delay in completing their studies on time (Fachrurrozie, 2018). These factors range from internal factors, such as motivation and quality of thesis guidance, to external factors and academic procrastination (Sefriani et al., 2022). Relevant research results show the quality of thesis guidance, motivation, availability of resources, and peer environment (Badje, 2021). The research results related to the influence of individual factors on student academic performance show that variables such as gender, age, and problem-solving strategies play an essential role in the academic performance of teacher-education students (Gustems-Carnicer et al., 2020). Other studies confirm that motivational factors affect academic efficacy (Alt, 2016). Motivation is also claimed to be a mediator in improving student learning outcomes in virtual learning (Hariyati et al., 2021). Regarding individual student factors, mental health, namely stress levels, is a cause of obstacles to completing student studies in doctoral programs (Mattijssen et al., 2021). Other factors, such as financial concerns, are a problem for students who must focus on completing their studies.

Student perspectives on barriers to timely graduation recommend strategies to improve academic completion and student retention in higher education (Kim, 2022). One of the supports for completing academic tasks is a good relationship between the supervisor and the student (Prazeres, 2017). Meanwhile, the quality of the supervision process in doctoral education significantly affects student success, especially in an environment with limited resources. The quality of the relationship between students and supervisors plays an essential role in the progress of studies (Omona, 2019).

Moreover, Research Experience and Involvement, which includes the experience of supervisors and students working in academic institutions, significantly impacts the successful completion of doctoral programs. The suitability of the supervisor is also a factor that influences the completion of studies in doctoral programs (Orellana et al., 2016). Experienced and intensive research supervisors influence the success of doctoral students (Belavy et al., 2020). Another factor is the clarity of direction and orientation of the supervisor, which also affects students' difficulty in managing academic research projects (Monicah, 2020).

Several studies on the time it takes for doctoral students to complete their doctoral studies have shown an increase, with the median consistently approaching six years and shorter PhD durations statistically associated with less prestigious placements (Ábrahám et al., 2022). According to the results of research in North

America, doctoral programs typically take five to seven years to complete (Hunter & Devine, 2016) in contrast to other research findings that show that the overall thesis submission rate is 83%, with a median submission time of 3.4 years for full-time candidates and a median completion time (for award of degree) of 4.1 years (Spronken-Smith et al., 2018). The results of these studies offer a global perspective in describing general trends in the length of study for doctoral students, including in Indonesia. However, the implementation depends on each country's national academic and institutional policies. The data that researchers can show as a Practical Gab in this study is related to the study time of doctoral students at Surabaya State University, which averages 3 to 7 years.

This study aims to explore the academic support factors in the Doctoral Program in Educational Management at the Universitas Negeri Surabaya (UNESA). This study is expected to describe the differences and similarities in the context of academic support and the dynamics of the factors that influence it. Previous studies have focused more on the internal aspects of individual students, so the novelty of this study is that it will comprehensively explore individual and institutional factors of students.

This research expects to identify academic supporting factors that can be recommended to the leadership of the Faculty of Education and the leadership of the University in taking strategic academic policies to improve the quality of education delivery and graduates in Higher Education. The research hypothesis is as follows.

H1: Academic support factors affect fulfilling students' tasks in the Doctoral Program in Educational Management

H2: Academic support factors affect the timely completion of students' studies in the Doctoral Program in Educational Management

METHOD

Participants

This study was conducted to explore the academic supporting factors of students in fulfilling academic tasks and completing their studies on time in the Doctoral Program in Educational Management. The study's population was 76 students with active and leave status. This is the total number of students still registered in the Doctoral Program in Educational Management. Student status is not an obstacle because this study was conducted to explore academic supporting factors for fulfilling lecture tasks and completing studies. Data that are obstacles for students are additional findings in this study.

To determine the sample, the researcher used the Item-to-Sample Ratio, as recommended, with a 5:1 to 10:1 respondent per questionnaire item. This means that if the questionnaire consists of 20 items, the number of samples needed is between 100 and 200 respondents. However, because this study was limited by the number of students with active status, the researcher used all active students as samples. The following is the respondent data according to the year of intake.

Table 1. Demographic sample

Year	Number of respondents
2017	6
2018	7
2019	11
2020	4
2021	12
2022	14
2023	19

Research Design and Procedures

This study uses a descriptive quantitative approach with the Exploratory Factor Analysis (EFA) method to identify the underlying structure of a set of academic support variables. These variables include both individual and institutional factors. This exploratory method was chosen

because the researcher still needed an initial hypothesis regarding the academic support variables that should be grouped into factors. The primary purpose of EFA is to understand hidden patterns in the data and identify latent constructs from the observed variables. This study includes six steps in the EFA analysis, followed by one follow-up step, as explained in the Exploratory Factor Analysis (EFA) procedure flow.

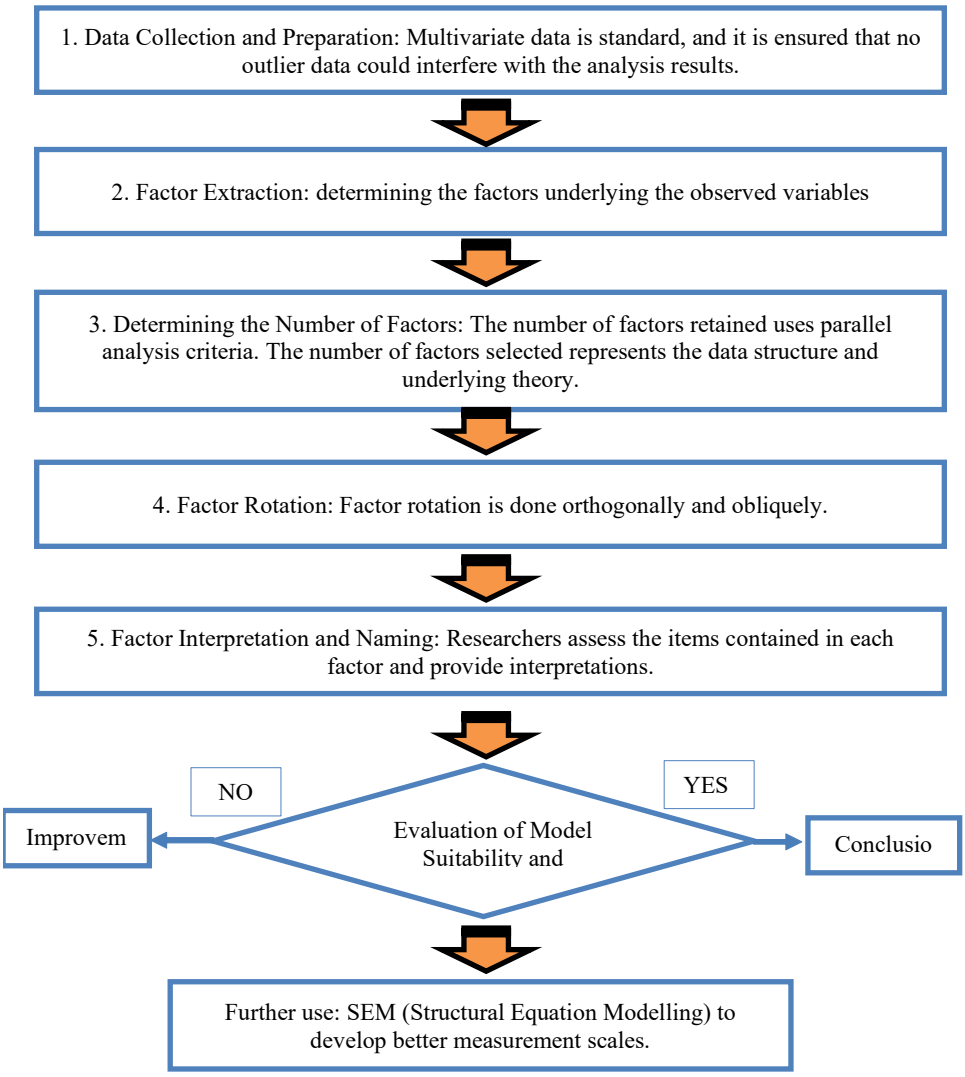

Figure 1. Exploratory factor analysis (EFA) flow

Instruments

The research data were collected using an online questionnaire, a non-test instrument with a 5-point Likert Scale: Strongly Agree (5), Agree (4), Less Agree (3), Disagree (2) and Strongly Disagree (1). In addition to reflecting the research variables, this questionnaire includes a consent form and demographic data for respondents.

The researcher elaborated several main concepts, such as motivation, efficacy, and resilience, to measure student's ability to fulfil academic tasks and complete their studies on time.

In addition, the researcher also integrated the concept of social support and institutional context, which includes the quality of academic services and lecturer performance, as external factors that can influence student success.

This questionnaire comprises 56 items developed based on research variables, with several items representing specific indicators. This instrument measures six main variables: Student Motivation, Student Resilience, Lecturer Performance, Quality of Academic Services, Social and Environmental Support, Fulfillment of Lecture Tasks, and Completion of Studies on Time. Based on the dimensions and scope of the research as determined, the conceptual frame or is illustrated in the figure on the following page.

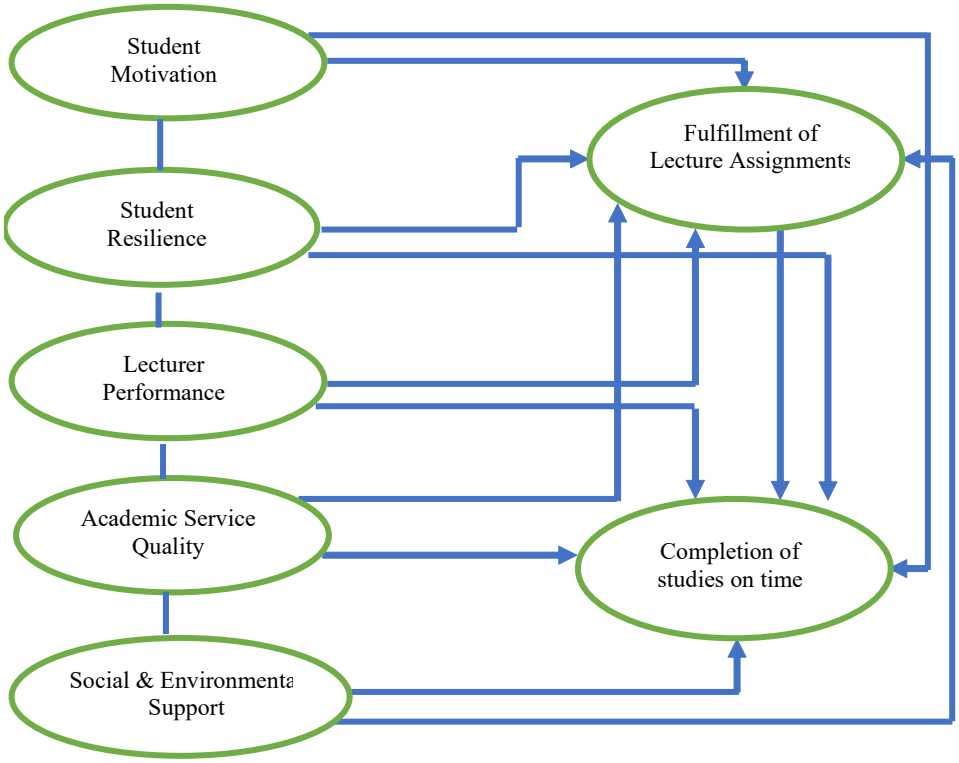

Figure 2. Conceptual framework/model of academic support factors

The instrument was developed independently based on relevant theories and modified from previous research. It was designed to measure six main variables of several dimensions, with indicators each represented by question items. The following is an explanation of each variable and its dimensions.

Student Motivation consists of several dimensions, such as learning motivation, measured by six items: "I attend lectures on time". The achievement motivation dimension has four items: "I try my best to get an A in every course". Two items, for example, represent the future aspiration dimension: "I study all courses seriously to improve my knowledge to support my work". The environmental dimension consists of one item: "I build good friendships with anyone to get relationships for future interests".

Student Resilience includes self-adjustment with two items: "I easily adjust to the friendship environment in college". The resilience dimension consists of one item: "I feel frustrated when I have

to complete college assignments and work at the same time". Two items measure the intelligence dimension in facing difficulties: "I can complete difficult college assignments". The problem-solving dimension has one item: "I am able to manage time between lectures and work".

Lecturer Performance consists of eight dimensions. Work quality is measured through two items: "The lecturer in charge of the course has good quality in delivering the material". The initiative dimension in work has one item: "The lecturer in charge of the course in the study program has great initiative by recommending lecture references". Other dimensions, such as workability, communication, pedagogical, professional, personality, and social competence, are represented by one item each: "The lecturer in charge of the course assesses student assignments objectively and on time".

Academic Service Quality includes five dimensions. The tangible dimension is represented by four items, such as "Learning facilities are suitable for both offline and online lecture processes". The reliability dimension has one item: "The assessment process (GPA) through the academic system is carried out objectively". The responsiveness dimension is measured by five items: "Academic staff are responsive in serving all student needs". The assurance dimension has one item, namely "Academic staff monitors students' academic progress through DPA (academic advisors)", and the empathy dimension consists of two items, such as "Academic staff are willing to help students who experience difficulties in academic matters".

Social and Environmental Support has five dimensions. The emotional support dimension consists of two items: "I get encouragement from those closest to me when I am in a bad condition while studying". The esteem support dimension has one item: "I get congratulations from those closest to me for my achievements (achievements) during my studies". The instrumental support dimension is represented by one item, such as "I get material notes from friends when I cannot attend lectures". The information and network support dimensions have one or three items: "I get a good support system from the campus environment (both from lecturers, teaching staff and facilities) during the study process". Fulfilment of Lecture Assignments has three dimensions, namely completeness of assignments (such as: "I submit complete assignments according to the lecturer's request"), timely submission of assignments (such as: "I submit assignments on time according to the deadline set by the lecturer"), and accuracy of assignments completed (such as: "I do assignments carefully to minimise errors").

Completion of Study on Time includes two dimensions, namely the timeliness of study (such as: "I have a high will and enthusiasm to complete my studies on time") and the comparison of actual study time with the plan (such as: "I make plans to complete my studies faster").

This instrument was developed based on previous theories and research, with content validity tested by experts and construct validity through exploratory factor analysis (EFA). The instrument's reliability was measured using Cronbach's Alpha, with a minimum value of 0.7 to ensure internal consistency. The researcher compiled the following blueprint based on the results of various relevant studies.

Data Analysis

The data in this study were analyzed using the Exploratory Factor Analysis (EFA) method to identify relationships between variables that support academics. This analysis aims to reveal correlation patterns between variables to produce latent constructs that can explain the data

Table 2. Blueprint instrument

Variable	Dimention	Point
Student Motivation	1. Motivation to learn	1.2.3.4.11.12
	2. Motivation to achieve	5.6.7.8
	3. Future aspirations	13.14
	4. Environment	15
Student Resilience	1. Adaptability	16.17
	2. Resilience	18
	3. Intelligence in the face of adversity	19,.0
	4. Problem-solving	21
Lecturer Performance	1. Quality of work	22.23
	2. Initiative in work	24
	3. Ability to work	25
	4. Communication	26
	5. Pedagogical competence	27
	6. Professional competence	28
	7. Personality competence	29
	8. Social competence	30
Quality of Academic Services	1. Tangible	31.32.33.34
	2. Reliability	35
	3. Responsiveness	36.37.38.39.40
	4. Assurance	41
	5. Empathy	42.43
Social & Environmental Support	1. Emotional support	44.45
	2. Esteem support	46
	3. Instrumental support	47
	4. Information support	48
	5. Network support	49.50.51
Fulfillment of Lecture Assignments	1. Completeness of assignments	52
	2. Timely assignment collection	53
	3. Accuracy of assignments completed	54
Completion of Studies on Time	1. Punctuality of study time	55
	2. Actual study time compared to planned study time	56

structure. As the purpose of EFA is exploratory, this study seeks to understand the underlying patterns in the data. Based on the dimensions and scope of the study, the conceptual framework of the study is depicted in a diagram that explains academic supporting factors, including relevant sub-dimensions and indicators.

As an indicator of success, this study aims to identify the basic structure of data related to academic supporting factors in the doctoral program at Universitas Negeri Surabaya (Unesa). In addition, descriptive analysis is used to describe the existing conditions of the research sample based on the factors studied.

RESULT AND DISCUSSION

Validity Instrument

This study developed an instrument consisting of 56 questions to evaluate academic support factors. After conducting a validity test using item-total correlation analysis, it was found that 6 instrument items had a P-value > 0.05, so they were considered invalid and were removed from further analysis. Meanwhile, the other 50 items had a p-value d" 0.05. Thus, only 50 items were retained for reliability analysis.

Reliability Instrument

The scale reliability in this study was measured using Cronbach's Alpha, with a result of 0.960. This value indicates that the instrument has excellent reliability, exceeding the minimum threshold of 0.7 (Nunnally & Bernstein, 1994). These results indicate strong internal consistency among the items in the research instrument.

KMO Test and Bartlett's Test

The KMO Test and Bartlett's Test were also conducted to ensure the feasibility of the data for factor analysis. The KMO value 0.5 meets the minimum threshold (e"0.5), indicating sample adequacy. Meanwhile, Bartlett's Test produces a ÷² value of 10344 with a p-value <0.001, which means a significant correlation exists between items on the scale.

Instrument Dimensionality

The instrument's dimensions are evaluated using Exploratory Factor Analysis (EFA). Based on the Scree Plot analysis, the inflexion point occurs in the third dimension, indicating that this scale is multidimensional with three main factors. As shown in the following figure.

The image shows that the Inflection point (turning point) occurs after three factors (3rd dimension), so it can be concluded that these 50 items can be grouped into three dimensions.

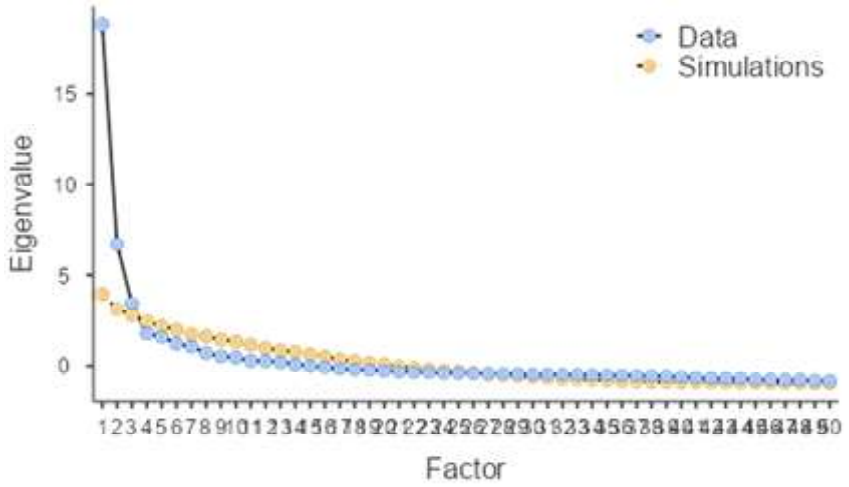

Figure 3. EFA screen plot

The factor loading value shows that the items are consistently grouped into three dimensions with a value of e" 0.4, which is by the significant threshold (Hair et al., 2017). The grouping of items in the 3 dimensions is as shown in the following factor loading. The variation of respondents' answers is shown in the following boxplot.

The boxplot shows that most variables have a distribution pattern centred on high values (skewed to higher values). However, some

Table 3. Loading factors of instruments

Factors	Instruments Item
Factor 1	Q R S T U V W X Y Z AA AD AE AF AG AI AM AN AO AP AQ AR AS
Factor 2	C B A D F AB AC AH AJ AK AL AT AU AV AW
Factor 3	G E H I J K L M N O P AX

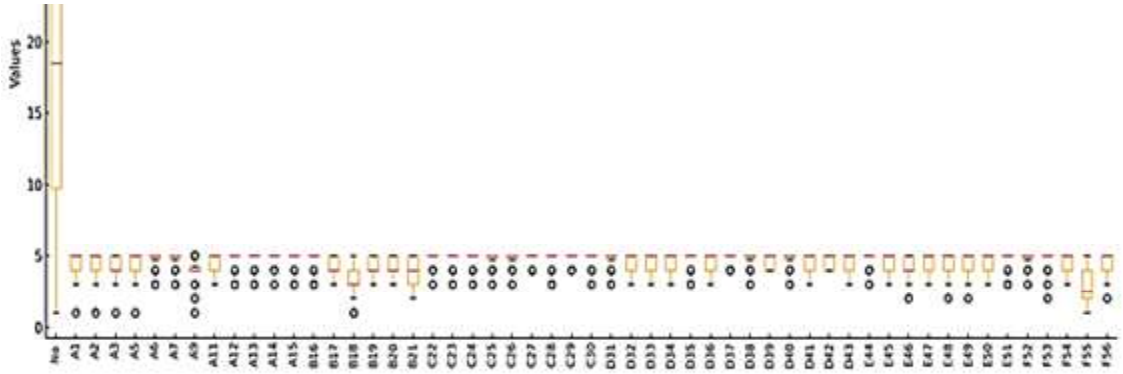

Figure 6. EFA Boxplot

variables, such as outliers, may show higher variability or anomalies. The distribution per specific variable must undoubtedly be explored more deeply for further analysis.

Descriptive Analysis

Each dimension was analyzed descriptively to describe the characteristics of the participants' existing conditions:

Factor 1: Support System and Social Environment

The most significant external factor in improving focus and task completion. This factor includes social support from family, peers, and institutions. On average, students reported high levels of support (mean score of 3.5 on a scale of 4). Items such as "I get emotional support from my family" showed the highest scores on this factor.

Factor 2: Learning Motivation

An internal factor that influences students' commitment to their studies. This factor describes the level of student motivation in learning. The average score was 3.4, with items such as "I try my best to get an A in every course" being one of the most dominant.

Factor 3: Self-Regulation

An internal factor that reflects time management and resource management strategies. This factor reflects students' ability to manage time and resources to complete academic tasks. The average score was 3.2, with items such as "I can manage time between lectures and work" essential indicators in this dimension.

Hypothesis Testing and Discussion

H1: Academic support factors affect fulfilling students' tasks in the Doctoral Program in Educational Management.

Based on the regression analysis using a structural model, it was found that academic support factors significantly influence the fulfilment of tasks ($\hat{a} = 0.68$, $p < 0.01$). Social and environmental support has the most significant contribution, showing the importance of family and institutions in supporting students. These results are consistent with previous studies that

highlight the importance of social support in increasing students' focus and academic success (Cutyasmin, 2024). A supportive environment reduces stress and accelerates task completion (Husnaini, 2021).

H2: Academic support factors affect the timely completion of students' studies in the Doctoral Program in Educational Management

The analysis shows that academic support factors also significantly affect the timely completion of studies (â = 0.74, $p < 0.01$). Learning motivation is the most dominant factor in this prediction. These results support the research of (Sidabutar et al., 2020), which shows that learning motivation is the main predictor of academic achievement. High-motivation students can better overcome obstacles like complex assignments and busy schedules. The study results show that social-environmental factors have a significant role in supporting the completion of student studies, especially at the Universitas Negeri Surabaya Doctoral Program in Educational Management. Based on the findings and supporting literature, social support is divided into several key elements: emotional support from family, administrative support from academic staff, and financial and moral support from peers. Research conducted by (Cutyasmin, 2024)showed that the social environment is critical in increasing motivation and contribution for students to complete their studies quickly. In addition, (Cutyasmin, 2024) also stated in his research that emotional, financial, and moral support from family, peers and people around them increases students' focus on completing their studies. The study's results (Husnaini, 2021) showed relevant results that social support contributed to low levels of student stress in completing their studies if they supported each other. The study's results (Trimulatsih & Appulembang, 2022) also stated that the support system and social environment contributed to reducing burnout in students when completing their final assignments. Specifically, emotional support from family increases students' academic resilience, helping them cope with academic pressure through the sense of security and motivation provided (Lady, 2021). Other studies have shown that social support can directly reduce academic stress levels. For example, positive interactions with peers have been shown to significantly impact students' resilience in dealing with academic difficulties (Trimulatsih & Appulembang, 2022). A study also identified that personalized guidance services in higher education institutions increase student motivation and productivity (Allensworth et al., 2018). The second factor is learning motivation. The analysis results show that student learning motivation is a factor that supports the completion of student studies. These results are relevant to research (Sidabutar et al., 2020) that shows that learning motivation improves students' academic achievement. The study's results (Rudaniel, 2022) also show that student learning motivation has a positive and significant effect on the completion of final assignments. The study's results (Arini et al., 2024) are also relevant to the study conducted by researchers that learning motivation influences students' commitment to completing lecture assignments.

Student learning motivation, especially at the postgraduate level, is essential in supporting the completion of studies. In addition, applying self-regulation strategies by working with doctoral students can help them face various academic challenges. Doctoral students often face additional pressure because they have to balance study and work. Strategies such as time management, priority setting, and self-evaluation effectively ensure that academic targets are achieved. For example, dividing time for work, study, and rest in a structured manner can help manage a heavy workload. A study by

(Almwalad, 2021) showed that strategies such as goal setting, task management, and learning environment structure improve students' academic performance in an online learning environment, which is relevant to the needs of postgraduate students.

■ CONCLUSION

The study's results revealed that three main factors significantly support the academic success of Doctoral Program (S3) students in Educational Management at Surabaya State University (Unesa). The three factors are (1) the support system and social environment, (2) learning Motivation, and (3) self-regulation. These findings indicate that external and internal factors influence students' ability to complete lecture assignments and their studies on time. External factors identified as part of the Support System and Social Environment include moral and material support from family or close friends, academic services provided by educational staff, and lecturers' role in providing services that support the learning process and completion of final assignments. Support from the social environment and support system is essential in creating a conducive learning atmosphere, especially for students who face various challenges during their doctoral studies. Meanwhile, the other two factors, learning Motivation and self-regulation, are internal factors that originate within the student. Learning Motivation refers to students' intrinsic drive to face and complete study challenges related to completing coursework and writing final assignments. This Motivation reflects personal ambition and involves the spirit to continue learning and achieving predetermined academic targets. On the other hand, the Self-Regulation factor describes students' ability to manage themselves effectively. This is very relevant, especially for doctoral students with dual roles, such as professional workers, family leaders, or other responsibilities outside of academics. Self-regulation includes the ability to manage time, set priorities, and utilize resources efficiently to balance academic and non-academic obligations. In this context, students who develop good self-regulation skills tend to be more adaptive and resilient in facing complex pressures during the study process. Overall, these external and internal factors reflect the synergy between environmental support and individual capacity, which is the primary key to students' optimal success in completing doctoral studies.

■ REFERENCES

Ábrahám, Á., Dengler, B., & Ziesemer, V. (2022). Economics PhD programs in Europe: Completion times and job placement. *Journal of Economic Education*, *53*(4), 325–339. https://doi.org/10.1080/00220485.2022.2111382

Almwalad, S. (2021). Self-regulation and academic motivation as predictors of academic achievement of undergraduate students in an online learning environment. 144. https://digitalcommons.andrews.edu/dissertations/1803

Alt, D. (2016). Contemporary constructivist practices in higher education settings and academic motivational factors. *Australian Journal of Adult Learning*, *56*(3), 374–399.

Arini, D. U., Khairunnisa, K., & Mualif, M. (2024). *Pengaruh motivasi belajar terhadap komitmen penyelesaian tugas luaran pada mahasiswa penerima beasiswa kartu indonesia pintar program studi teknik industri universitas pamulang. Jurnal Ilmu Disiplin*, *3*(2), 221–226.

Badje, Y. (2021). *Faktor – faktor yang mempengaruhi keterlambatan penyelesaian masa studi mahasiswa program studi pendidikan ekonomi*

universitas dayanu ikhsanuddin baubau. Jurnal Akademik Pendidikan Ekonomi, *8*(2). https://www.ejournal.lppmunidayan.ac.id/index.php/ek onomi%0APrint

Belavy, D. L., Owen, P. J., & Livingston, P. M. (2020). Do successful PhD outcomes reflect the research environment rather than academic ability? *PLoS ONE*, *15*(8 August 2020), 1–14. https://doi.org/10.1371/journal.pone.0236327

Cutyasmin, N. (2024). *Peran Lingkungan Sosial dalam Percepatan Penyelesaian Studi Mahasiswa (Studi Pada 5 Mahasiswa Cumlaude Prodi Sosiologi , Fakultas Ilmu Sosial , Universitas Negeri Jakarta)*. Universitas Negeri Jakarta.

Fachrurrozie, K. A. (2018). *Analisis kendala dan percepatan penyelesaian studi mahasiswa jurusan akuntansi. Jurnal Pendidikan Ilmu Sosial*, *28*(1), 66–85. https://journals.ums.ac.id/index.php/jpis/article/view/5396

Gustems-Carnicer, J., Calderon, C., Calderon-Garrido, D., & Martin-Piñol, C. (2020). Academic progress, coping strategies and psychological distress among teacher education students. *International Journal of Educational Psychology*, *9*(3), 290–312. https://doi.org/10.17583/ijep.2020.4905

Hair, J. F., Hult, G. T. M., & Ringle, C. M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM) (2nd ed.). SAGE Publications, Inc.

Hariyati, N., Wagino, W., & Mudjito, M. (2021). Investigating virtual learning on students learning outcomes in urban and rural areas. *Dinamika Pendidikan*, *16*(1), 54–63. https://doi.org/10.15294/dp.v16i1.28661

Hunter, K. H., & Devine, K. (2016). Doctoral students' emotional exhaustion and intentions to leave academia. *International Journal of Doctoral Studies*, *11*, 35–61. https://ijds.org/Volume11/IJDSv11p035-061Hunter2198.pdf

Husnaini, T. R. (2021). *Pengaruh social support , spiritualitas , loneliness , dan faktor demografis terhadap stress mahasiswa tingkat akhir di masa pandemi covid-19*. UIN Syarif Hidayatullah Jakarta.

Kim, J. (2022). Student perspectives on barriers to timely graduation. *International Research in Education*, *10*(1), 35. https://doi.org/10.5296/ire.v10i1.19876

Mattijssen, L. M. S., Bergmans, J. E., van der Weijden, I. C. M., & Teelken, J. C. (2021). In the eye of the storm: the mental health situation of PhD candidates. *Perspectives on Medical Education*, *10*(2), 71–72. https://doi.org/10.1007/s40037-020-00639-4

Monicah, K. R. (2020). Lethargic research projects: student-supervisor's dilemmas in managing research projects. *Higher Education Research*, *5*(2), 37. https://doi.org/10.11648/j.her.20200502.11

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory* ((3rd ed)). McGraw-Hill.

Omona, W. (2019). Supervising Phd students in a resource constrained setting: challenges and prospects. *IJSSHE-International Journal of Social Sciences, Humanities and Education*, *3*(2), 1–10.

Orellana, M. L., Darder, A., Pérez, A., & Salinas, J. (2016). Improving doctoral success by matching PhD students with supervisors. *International Journal of Doctoral Studies*, *11*(May), 87–103. https://doi.org/10.28945/3404

Prazeres, F. (2017). PhD supervisor-student relationship FILIPE. *Journal of Advances Medical Education and Professionalism*, *5*(4), 213.

Rudaniel, F. (2022). *Pengaruh motivasi*

terhadap penyelesaian skripsi mahasiswa pendidikan ekonomi universitas negeri padang (Vol. 33, Issue 1). Universitas Negeri Padang.

Sefriani, R., Nastasia, K., Sepriana, R., & Candra, Y. (2022). Time management and procrastination during the COVID-19 pandemic in higher education. *Journal of Education and Learning (EduLearn)*, *16*(4), 458–463. https://doi.org/10.11591/edulearn.v16i4.20512

Sidabutar, M., Aidilsyah, Muhammad Ridho Aulia, Y. K., Umari, I. N., Khairi, F. A., Usman, A., & Altania, E. (2020). *Pengaruh motivasi belajar terhadap prestasi akademik mahasiswa. Epistema*, *1*(2), 117–125. https://doi.org/10.21831/ep.v1i2.34996

Spronken-Smith, R., Cameron, C., & Quigg, R. (2018). Factors contributing to high PhD completion rates: a case study in a research-intensive university in New Zealand. *Assessment and Evaluation in Higher Education*, *43*(1), 94–109. https://doi.org/10.1080/02602938.2017.1298717

Trimulatsih, P. D., & Appulembang, Y. A. (2022). *Dukungan sosial terhadap burnout akademik pada mahasiswa yang sedang menyusun skripsi saat pandemi.* Psychology Journal of Mental Health, *4*(1), 36–47. https://doi.org/10.32539/pjmh.v4i1.63