

J I K A P

JURNAL INFORMASI DAN KOMUNIKASI ADMINISTRASI PERKANTORAN



UNS
UNIVERSITAS
SEBELAS MARET

**PROGRAM STUDI PENDIDIKAN ADMINISTRASI PERKANTORAN
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
UNIVERSITAS SEBELAS MARET SURAKARTA**

JIKAP

Jurnal Informasi dan Komunikasi Administrasi Perkantoran

Volume 10 Nomor 1, Januari 2026

SUSUNAN REDAKSI

Editor in Chief

Anton Subarno, S.Pd., M.Pd., Ph.D. (Scopus ID: 57191828251)

Associate Editors

Subroto Rapih, S.Pd., M.Pd., Ph.D. (Scopus ID: 57222593421)

Editorial Board Members

Prof. Dr. Muhyadi

Prof. Dr. Tjutju Yuniarsih, M. Pd. (Scopus ID: 57192806413) Prof.

Dr. Wiedy Murtini, M.Pd (Scopus ID: 57193251856)

Dr. Cicilia Dyah Sulistyaningrum Indrawati, M.Pd (Scopus ID: 57222179659)

Muhammad Choerul Umam, S.PdI., M.Pd.

Nur Rahmi Akbarini, S.Pd., M.Pd.

Sigit Permansah, S.Pd, M.Pd.

Winarno, S.Kom., M.Pd.

Copy Editors

Chairul Huda Atma Dirgatama, (Scopus ID: 57203089787) Arif

Wahyu Wirawan, S.Pd., M.Pd (Scopus ID: 57214136612)

Alamat Redaksi:

Gedung B Fakultas Keguruan dan Ilmu Pendidikan Universitas Sebelas Maret Jalan

Ir . Sutami 36A Surakarta 57126 Telp. /Fax. (0271) 648939, 669124

E-mail: jikap@fkip.uns.ac.id

Susunan Redaksi	Halaman ii
Daftar Isi	iii
Mail management procedures in the general affairs division of Surakarta City Regional Secretariat <i>Efi Kusumawardani, Patni Ninghardjanti, Tutik Susilowati</i>	1-7
Social media use and adversity quotient: predictors of entrepreneurial intention among university students <i>Salsabila Aurellia Putri Danuarta, Cicilia Dyah Sulistyaningrum Indrawati</i>	8-15
The influence of brand image and service quality on belift lab's brand trust <i>Dona Aprilinda Dewi, Susantiningrum Susantiningrum</i>	16-23
The influence of sustainable entrepreneurship education and economic literacy on consumptive behavior among university students <i>Ari Tri Anggraeni, Cicilia Dyah Sulistyaningrum Indrawati</i>	24-35
Flipped learning implementation to improve student learning outcomes in office management fundamentals <i>Intan Cahya Wandira, Hery Sawiji</i>	36-45
The effect of compensation and work environment on employee work motivation <i>Ilham Husni Ramdani, Tri Murwaningsih</i>	46-57
Effects of optimism and academic advisor social support on student resilience <i>Dini Nur Aisyiah, Cicilia Dyah Sulistyaningrum Indrawati</i>	58-68
Merdeka curriculum implementation and school facilities: effects on vocational students' creative thinking <i>Arvano Sahwa Riordan, Subroto Rapih</i>	69-78
The effects of entrepreneurship training and entrepreneurial practice on entrepreneurial interest <i>Dimas Nurdin Adiwijaya, Subroto Rapih</i>	78-87
Effects of project-based learning and learning independence on vocational students' archiving outcomes <i>Anggita Ayu Verawati, Tri Murwaningsih</i>	88-99
The role of psychological safety and belonging in classroom engagement among first-year undergraduates <i>Silfi Ananta</i>	100-109
Brand image and perceived education costs: effects on interest in higher education	110-122

Jendra Raihan Putra, Susantiningrum Susantiningrum

Project-based learning implementation to enhance student learning outcomes in meeting management

123-131

Akhmad Firdaus Rizal Afifi, Sekar Sabdo Wening, Yunisa Galuh Pramesti, Tri Murwaningsih, Endang Retna Palupi

Mail management procedures in the general affairs division of Surakarta City Regional Secretariat

Efi Kusumawardani*, Patni Ninghardjanti, Tutik Susilowati

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: efikusuma@student.uns.ac.id

Abstrak

Penelitian ini bertujuan untuk mengetahui prosedur pengelolaan surat masuk dan surat keluar di Bagian Umum Sekretariat Daerah Kota Surakarta. Penelitian ini merupakan penelitian deskriptif kualitatif. Sumber data yang digunakan dalam penelitian adalah informan, tempat dan peristiwa, serta dokumentasi. Teknik sampling yang digunakan adalah purposive sampling. Teknik pengumpulan data yang digunakan yaitu dengan wawancara, observasi dan dokumentasi. Validitas data yang digunakan adalah validitas internal dan validitas eksternal. Sedangkan analisis data yang digunakan yaitu dengan model analisis interaktif. Hasil penelitian: (1) Pengelolaan surat di Sekretariat Daerah Kota Surakarta berlangsung efektif, efisien, dan akuntabel melalui pembagian tugas yang jelas, dukungan regulasi, penerapan sistem digital, serta mekanisme disposisi berjenjang yang mencerminkan prinsip good governance, (2) Kendala yang dirasakan di Bagian Umum Sekretariat Daerah Kota Surakarta adalah kurangnya pemahaman Masyarakat terhadap alur dan kewenangan antar bagian, (3) Bagian Umum Sekretariat Daerah Kota Surakarta perlu menerapkan strategi komprehensif berbasis sosialisasi, digitalisasi, dan evaluasi berkala untuk membangun layanan persuratan yang efisien, transparan, dan responsif.

Kata Kunci: administrasi; pemerintah; pelayanan

Abstract

This study aimed to examine the procedures for managing incoming and outgoing mail in the General Affairs Division of the Surakarta City Regional Secretariat. A qualitative descriptive research design was employed. Data sources included key informants, direct observation of events and locations, and relevant documentation. Purposive sampling was utilized to select participants. Data collection techniques comprised interviews, observation, and document analysis. Internal and external validity assessments ensured data credibility. The interactive analysis model guided data analysis. The findings revealed that: (1) Mail management at the Surakarta City Regional Secretariat operates effectively, efficiently, and accountably through clear task distribution, regulatory support, digital system implementation, and a tiered

* Corresponding author

Citation in APA style: Kusumawardani, E., Ninghardjanti, P., & Susilowati, T. (2026). Mail management procedures in the general affairs Division of Surakarta City Regional Secretariat. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 1-7.
<https://dx.doi.org/10.20961/jikap.v10i1.106718>

disposition mechanism reflecting good governance principles; (2) The primary obstacle identified was the public's insufficient understanding of mail routing procedures and jurisdictional boundaries between divisions; and (3) The General Affairs Division should implement a comprehensive strategy incorporating public outreach, digitalization, and periodic evaluation to establish efficient, transparent, and responsive mail services.

Keywords: administration; government; services

Received September 15, 2025; Revised September 15, 2025; Accepted October 23, 2025; Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.106718>

Introduction

Correspondence serves as a vital written communication tool supporting administrative activities in both governmental and private institutions. As an official documentation medium, mail functions as authentic evidence for information transmission and provides a foundation for institutional decision-making. Arifin and Latif (2020) emphasized that mail handling constitutes a fundamental aspect of maintaining information integrity required by organizations. When managed inadequately, correspondence accumulates, becomes misplaced, or proves difficult to retrieve, thereby impeding operational effectiveness and reflecting deficient administrative management. Disorganized or accumulated mail creates disorder that disrupts workplace comfort and diminishes productivity. Consequently, effective and efficient mail management is essential for institutional operational continuity.

Furthermore, poorly organized correspondence significantly complicates information retrieval processes. When previously archived mail is required, the search process becomes time-consuming, and documents may remain unlocated entirely. Such circumstances increase workload burdens and reduce institutional efficiency. Therefore, each institution must establish a clear and reliable mail management system ensuring documents are readily accessible when needed.

Incoming and outgoing mail management within institutions ideally follows systematic procedures. According to Sedianingsih (2010), incoming mail management encompasses reception, examination, recording, routing, processing, and archiving stages. Outgoing mail must proceed through drafting, authorization, numbering, dispatch, and archive storage phases. These procedures not only maintain administrative order but also facilitate tracking of officially communicated information between work units or external parties.

The Surakarta City Government regulates mail management through Mayoral Regulation (Perwali) Number 15AA of 2011 concerning Official Document Administration Guidelines. Articles 5 and 6 of this regulation stipulate that incoming mail must be classified, distributed to relevant units, and archived systematically, while outgoing mail must undergo authorization by competent officials, administrative control, and archive storage within respective work units. These provisions demonstrate the importance of well-documented mail governance for ensuring bureaucratic accountability.

In practice, individual institutions possess distinct structures and systems for handling correspondence. Mail management functions typically involve several personnel, including record keepers, archivists, and dispatch officers. However, at the Surakarta City Regional Secretariat, three employees manage correspondence without specialized role differentiation, handling tasks from reception and recording to distribution and archiving. This situation underscores the necessity for efficient governance despite limited resources and highlights the importance of adaptable human resources capable of managing complex administrative procedures.

According to Handoko (2011), records management is defined as a process involving planning, organizing, directing, and supervising organizational members' efforts to achieve

organizational objectives. Records management has become increasingly significant in modern contexts, as it enables organizations to maintain document integrity, accessibility, and accountability. In the era of digital transformation and Electronic-Based Government System (SPBE) implementation, records management must also address digital records, interoperability, and good governance principles including transparency, accountability, and efficiency (Makmur, 2023; Hidayati & Srimoelianto, 2023; Azizah et al., 2025).

The planning process in records management requires organizations to formulate objectives, strategies, and tactics necessary for achieving institutional vision and mission while adhering to national and international archival standards, such as ISO 15489 (Novelawaty & Herawan, 2024). Organization within correspondence systems ensures that human resources, infrastructure, and technology are optimally utilized through clear organizational structures, explicit task distribution, and integrated electronic correspondence systems. Without proper organization and systems, correspondence activity coordination becomes ineffective, and mail management objectives may be compromised, particularly within digital and modern governmental contexts.

Based on this urgency, this study was conducted to examine incoming and outgoing mail management procedures in the General Affairs Division of the Surakarta City Regional Secretariat comprehensively. This research also identified encountered obstacles and efforts undertaken to address correspondence system challenges. The findings are expected to contribute theoretically to public administration scholarship while providing practical recommendations for improving mail management in regional government settings, aligned with the spirit of bureaucratic transparency and efficiency (OECD, 2020; Rahmayani & Widiyanto, 2021). Most public administration and governmental mail governance research addresses correspondence systems within institutions possessing formal organizational structures. However, the context of the Surakarta City Regional Secretariat differs, as management is conducted by limited personnel without role specialization, leaving few studies describing mail management effectiveness under minimal resource conditions.

Research Methods

This research was conducted at the General Affairs Division Office of the Surakarta City Regional Secretariat, located within the Surakarta City Hall complex at Jl. Jend. Sudirman No. 2. This location was selected for its relevance to the research focus on incoming and outgoing mail management, supported by data availability and competent informants. The researcher's prior internship experience at this institution provided adequate access and preliminary understanding. The study employed a qualitative descriptive approach to holistically describe mail management processes through direct observation, interviews, and documentation.

Data collection utilized both primary and secondary sources. Primary data were obtained through structured interviews with relevant informants, including the Head of the Administrative Affairs Subdivision and staff members, selected using purposive sampling based on predetermined criteria. Interview duration averaged 10–15 minutes per informant. Secondary data were acquired through official documents, mail archives, photographs, and other administrative records. Data collection techniques included literature review, field observation, in-depth interviews, and documentation. The observation period spanned approximately seven months, coinciding with the researcher's internship at the institution. To ensure data validity, internal and external validity tests were applied, reflecting data accuracy from both researcher and participant perspectives. Additionally, to minimize potential bias from the researcher's prior internship at the study location, member checking strategies were employed by requesting informants to review interview results, along with source and method triangulation to compare data from multiple perspectives, thereby maintaining research objectivity.

Data analysis followed the interactive analysis model developed by Miles and Huberman, comprising three stages: data reduction, data display, and conclusion drawing/verification. Data reduction filtered information relevant to the research focus, data display organized findings in narrative and supporting document formats, and conclusions were drawn based on patterns emerging from interview and observation results. All procedures were implemented systematically from

location determination and sampling techniques through final analysis to produce valid and beneficial findings.

Results and Discussion

Research Results

Mail management at the Surakarta City Regional Secretariat is divided between the General Affairs Division and the Protocol and Executive Communication Division (Prokompim). The General Affairs Division manages correspondence related to venue permits and internal matters, while Prokompim handles mail addressed directly to the Mayor or leadership. This process is supported by the 'Lapak E' digital system for government agencies, while the general public continues using manual methods.

An informant stated Regarding correspondence governance, we are divided into two divisions. Two divisions handle it: the General Affairs Division and the Prokompim Division. Correspondence governance is predominantly handled by Prokompim because more mail is addressed to the Mayor. In the General Affairs Division, we mostly manage correspondence in the form of venue permits and outgoing mail for positions from assistant regional secretary downward within the secretariat. (Interview excerpt, January 2, 2025)

All mail management processes operate according to Mayoral Regulations, technical guidelines, and well-documented Standard Operating Procedures (SOPs). As stated in an interview Regarding SOPs, all our services have SOPs. We have hundreds of them in the regional secretariat alone hundreds of SOPs. This includes SOPs for correspondence. Incoming mail, outgoing mail they all have (SOPs). We have the handbook, the Mayoral Regulation, including guidelines for document formatting consolidated into one. (Interview excerpt, January 2, 2025)

Each piece of mail is recorded by the front office and subjected to tiered disposition from the Regional Secretary, Deputy Mayor, to the Mayor. An informant explained Usually, those who already understand the flow automatically go directly to Prokompim, because almost 90% of mail entering the regional secretariat is addressed to the Mayor. For the General Affairs Division, 90% of mail relates to internal matters. However, regarding the disposition I mentioned earlier, 100% goes to the General Affairs Division when the venues managed by our division are being borrowed, since not all venues are consolidated under General Affairs. Management is separate. General Affairs manages (venues) in the City Hall complex and official residences. (Interview excerpt)

The dynamics in the disposition process demonstrate that mail management follows an efficient organizational structure aligned with official document administration standards. Generally, no significant obstacles were identified in mail management, as Regional Work Units (OPD) already understand the prevailing system. However, challenges emerged from external parties unfamiliar with proper procedures, such as misdirected mail submissions. These obstacles are administrative in nature, stemming from insufficient public education regarding functional distinctions between the General Affairs Division and Prokompim. As one informant noted There are not many obstacles because many within the OPD already understand (the system and workflow). Additionally, internally we have SOPs that are being followed, and the staff responsible, including the archivist, are already [competent]. Perhaps only the public sometimes still needs correction (their mail) should not go through General Affairs but directly through Prokompim. (Interview excerpt)

This statement indicates that insufficient public bureaucratic literacy constitutes a primary challenge in public administration services, requiring particular attention to clear and targeted information dissemination. To address these obstacles, intensive and sustained public outreach is necessary through print media, digital platforms, and infographics explaining mail classification and routing. One strategic measure requiring implementation is enhanced public outreach regarding applicable correspondence procedures. This outreach can be conducted through information dissemination via infographics, leaflets, and official regional government social media explaining mail type classifications and handling procedures. Consequently, the public can clearly understand jurisdictional distinctions between the General Affairs Division and Prokompim. Public information

management depends substantially on how well the public understands service procedures. Additionally, SOP strengthening through attached mail classifications and flowcharts, along with information technology utilization such as online forms and QR codes, can accelerate public comprehension of the system.

For mitigation strategies to function effectively, periodic monitoring and evaluation are required through public satisfaction surveys, complaint analysis, and internal audits. This is essential to ensure service processes continue improving and remain relevant to public needs. Thus, mail management at the Surakarta City Regional Secretariat can become a model for adaptive, transparent, and participatory service delivery.

Discussion

Correspondence management at the Surakarta City Regional Secretariat is distributed between the General Affairs Division and the Protocol and Executive Communication Division (Prokompim). This division is based on mail type and purpose. The General Affairs Division handles internal mail and venue borrowing requests, while Prokompim manages mail for the Mayor. Technological innovation through the 'Lapak E' digital system was implemented to facilitate Regional Work Units, although the general public continues using manual methods. This practice reflects user needs-based public service segmentation as described by Bertot et al. (2020), supporting good governance principles regarding institutional function differentiation (OECD, 2020).

The legal aspects of mail management are grounded in Mayoral Regulations and orderly SOPs. All procedures follow technical guidelines and tiered disposition mechanisms from the Regional Secretary to the Mayor before transfer to implementing units. This system supports bureaucratic accountability and efficiency, consistent with accountable governance principles (Rohman, 2020) and responsive governance frameworks (Osborne & Gaebler, 2021). These procedures strengthen standardized and digitally-based regional government administration (Mayoral Regulation Surakarta, 2021).

Although internal processes function well, obstacles persist from parties external to the institution. Many members of the public do not understand jurisdictional distinctions between divisions, causing mail to frequently reach incorrect destinations and require manual clarification. This phenomenon reflects insufficient bureaucratic literacy among the public. Kurniawan and Zain (2021) stated that inadequate public understanding of bureaucratic procedures constitutes a primary barrier in public service delivery. This issue impacts overall service time and efficiency (Widodo, 2023).

To address these obstacles, enhanced public outreach regarding correspondence procedures is required through infographics, leaflets, social media, and other digital channels. This aligns with findings from Rahmayani and Widiyanto (2021) and Handayani et al. (2022), who emphasized the importance of effective communication strategies in delivering public services. Furthermore, SOP updates should be more adaptive and communicative, as suggested by Putra et al. (2020) and Wulandari and Fatmawati (2021), consistent with ISO 9001:2015 service governance standards (BNPSDM, 2023).

Simple digitalization is also recommended, including QR code usage, online forms, and FAQ pages to facilitate information access. Wahyudi and Sari (2022) noted that lightweight digitalization significantly helps clarify information for the public, aligned with the Electronic-Based Government System program (KemenPANRB, 2022). All these initiatives require ongoing evaluation support through satisfaction surveys, service complaints, and internal audits. Efendi (2020) and Pratama and Nugroho (2021) emphasized the importance of public feedback in formulating adaptive and trustworthy service policies (Putri, 2022). Through this integrated strategy, mail management at the Surakarta City Regional Secretariat can become an administrative model that is responsive, participatory, and data-driven.

Conclusion

Incoming and outgoing mail management in the General Affairs Division of the Surakarta City Regional Secretariat has been implemented professionally and systematically through clear task distribution between the General Affairs Division and Prokompim, supported by legal foundations, SOPs, and digital innovations such as the Lapak E system to enhance service efficiency. These findings confirm that internal mechanisms align with good governance principles and effectively support organizational performance. Although internal procedures function well, external obstacles remain, namely insufficient public understanding of correspondence procedures, resulting in mail submission errors. This implies that public administration governance success depends not only on internal systems but also on public literacy and active participation. Therefore, mitigation strategies are directed toward enhanced public outreach, adaptive SOP revision, information technology optimization, and periodic evaluation to ensure responsive and accountable service delivery. This approach reflects the application of good governance, adaptive bureaucracy, and smart governance principles in inclusive public administration oriented toward community needs. This study's limitation is its scope, focusing exclusively on the General Affairs Division of the Surakarta City Regional Secretariat, precluding generalization to other institutions with different characteristics. Accordingly, future researchers are recommended to expand studies to other regional government institutions and employ quantitative approaches to obtain more comprehensive findings.

Reference

- Azizah, F. K., Safriadi, A., Pramono, S. E., & Isnanto, R. R. (2025). Implementasi kebijakan arsip digital. *Prosiding International Conference on Information Systems, Social Issues, and Economic Environment (ICoISSEE-5)*.
- Badan Nasional Pengembangan SDM. (2023). *Implementasi ISO 9001:2015 dalam manajemen layanan publik*. BNPSDM Press.
- Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2020). Digital government and public service innovation. *Government Information Quarterly*, 37(2), 101–113.
- Efendi, M. (2020). Evaluasi pelayanan publik berbasis data dan kepuasan masyarakat. *Jurnal Ilmu Administrasi Negara*, 10(2), 145–158.
- Handayani, T., Lestari, D., & Prasetya, I. (2022). Komunikasi pemerintah dalam menyampaikan informasi layanan publik di era digital. *Jurnal Komunikasi Pemerintahan*, 6(1), 88–97.
- Handoko, T. H. (2011). *Manajemen personalia dan sumberdaya manusia* (2nd ed.). BPFE.
- Hidayati, N. N., & Srimoeljanto, A. (2023). Manajemen pengetahuan untuk Sistem Pemerintahan Berbasis Elektronik menggunakan semantic thesaurus. *Jurnal Ilmu Komputer dan Informasi (JIKI)*, 16(3), 227–236.
- Kurniawan, A., & Zain, M. (2021). Sosialisasi administrasi publik dan tantangannya di era digital. *Jurnal Administrasi Publik Digital*, 3(2), 115–126.
- Makmur, S. (2023). Implementasi kebijakan digitalisasi arsip sebagai bentuk penerapan Sistem Pemerintahan Berbasis Elektronik (SPBE). *International Journal of Social Research (IJSR)*, 3(3), 612–619.
- Novelawaty, Y. D., & Herawan, L. (2024). Evaluasi Sistem Informasi Kearsipan Terpadu (SRIKANDI versi 3) sebagai Electronic Records Management System (ERMS): Aspek penciptaan menurut ISO 16175-2:2011. *Journal of Information Systems and Informatics*, 6(1), 23–35.
- OECD. (2020). *Principles of good governance in public administration*. OECD Publishing.
- Osborne, D., & Gaebler, T. (2021). *Reinventing government: The entrepreneurial spirit in modern public sector*. PublicAffairs.
- Peraturan Walikota Nomor 15-AA tentang Pedoman Tata Naskah Dinas di Lingkungan Pemerintah Daerah Kota Surakarta. (2011).
- Peraturan Walikota Surakarta Nomor 12 Tahun 2021 tentang Standar Pelayanan Publik. (2021).
- Pratama, A., & Nugroho, R. (2021). Pelibatan masyarakat dalam evaluasi layanan publik: Sebuah pendekatan kolaboratif. *Jurnal Inovasi Kebijakan Publik*, 3(2), 112–125.

- Putra, A. Y., Nugroho, T., & Latifah, S. (2020). Optimalisasi SOP dalam meningkatkan efisiensi administrasi publik. *Jurnal Manajemen dan Kebijakan Publik*, 11(1), 33–44.
- Putri, M. D., & Sari, L. R. (2022). Peran jabatan fungsional arsiparis dalam tata kelola kearsipan di pemerintahan daerah. *Jurnal Ilmu Kearsipan dan Informasi*, 7(1), 45–55.
- Rahmayani, N., & Widiyanto, A. (2021). Efektivitas sosialisasi layanan publik di era digitalisasi pemerintahan. *Jurnal Komunikasi dan Kebijakan Publik*, 5(2), 121–132.
- Ramdhani, T. I., Nurhayati, N., & Mulyani, D. (2023). Smart government dan arsip digital dalam SPBE. *Computer Science and Information Technology (CSIT) Journal*, 5(2), 101–112.
- Wahyudi, A., & Sari, N. A. (2022). Transformasi digital layanan administrasi publik tingkat daerah. *Jurnal Inovasi Pelayanan Publik*, 6(1), 56–68.
- Widodo, S. (2023). Efektivitas pelayanan surat menyurat di instansi pemerintah: Kajian pada tingkat pemerintah daerah. *Jurnal Pelayanan Publik dan Kebijakan*, 5(1), 67–78.

Social media use and adversity quotient: predictors of entrepreneurial intention among university students

Salsabila Aurellia Putri Danuarta*, Cicilia Dyah Sulistyaningrum Indrawati

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: salsabilaaurellia@student.uns.ac.id

Abstrak

Penelitian ini bertujuan untuk mengetahui (1) pengaruh penggunaan media sosial terhadap minat berwirausaha mahasiswa Pendidikan Administrasi Perkantoran UNS, (2) pengaruh adversity quotient terhadap minat berwirausaha mahasiswa Pendidikan Administrasi Perkantoran UNS, (3) pengaruh penggunaan media sosial dan adversity quotient secara bersama-sama terhadap minat berwirausaha mahasiswa Pendidikan Administrasi Perkantoran UNS. Penelitian ini merupakan penelitian kuantitatif korelasional dengan teknik pengumpulan data menggunakan kuesioner. Populasi dalam penelitian ini yaitu mahasiswa Pendidikan Administrasi Perkantoran UNS angkatan 2021 dan 2022 yaitu sebanyak 180 mahasiswa. Teknik pengambilan sampel yaitu menggunakan Purposive Sampling dan memperoleh 110 responden yang memenuhi kriteria. Teknik analisis data dalam penelitian ini yaitu analisis regresi linear berganda. Hasil penelitian menunjukkan bahwa (1) terdapat pengaruh positif dan signifikan penggunaan media sosial terhadap minat berwirausaha mahasiswa ($t_{hitung} 5,361 > t_{tabel} 1,984$), (2) terdapat pengaruh positif dan signifikan adversity quotient terhadap minat berwirausaha mahasiswa ($t_{hitung} 4,197 > t_{tabel} 1,984$), (3) terdapat pengaruh positif dan signifikan penggunaan media sosial dan adversity quotient secara bersama-sama terhadap minat berwirausaha mahasiswa ($F_{hitung} 38,693 > F_{tabel} 3,087$). Hasil uji koefisien determinasi diperoleh nilai R square sebesar 42% yang artinya X_1 dan X_2 dapat memengaruhi Y sebesar 42% dan sisanya 58% ($100\% - 42\%$) dipengaruhi oleh faktor lain yang tidak diteliti.

Kata kunci: kecerdasan adversitas; kewirausahaan; media digital; purposive sampling

Abstract

This study aimed to examine (1) the influence of social media use on entrepreneurial intention among Office Administration Education students at Sebelas Maret University (UNS), (2) the influence of adversity quotient on entrepreneurial intention among Office Administration Education students at UNS, and (3) the combined influence of social media use and adversity quotient on entrepreneurial intention among Office Administration Education students at UNS. This correlational

* Corresponding author

Citation in APA style: Danuarta, S.A.P., & Indrawati, C.D.S. (2026). Social media use and adversity quotient: predictors of entrepreneurial intention among university students. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 8-15.

<https://dx.doi.org/10.20961/jikap.v10i1.106151>

quantitative study employed a questionnaire as the data collection instrument. The population comprised 180 students from the 2021 and 2022 cohorts of the Office Administration Education program at UNS. Purposive sampling was utilized, yielding 110 respondents who met the inclusion criteria. Multiple linear regression analysis was employed for data analysis. The findings revealed that (1) social media use exerted a positive and significant influence on students' entrepreneurial intention ($t = 5.361$, $p < .001$), (2) adversity quotient exerted a positive and significant influence on students' entrepreneurial intention ($t = 4.197$, $p < .001$), and (3) social media use and adversity quotient simultaneously exerted a positive and significant influence on students' entrepreneurial intention ($F = 38.693$, $p < .001$). The coefficient of determination ($R^2 = .42$) indicated that social media use and adversity quotient collectively explained 42% of the variance in entrepreneurial intention, while the remaining 58% was attributable to other factors beyond the scope of this study.

Keywords: adversity intelligence; digital media; entrepreneurship; purposive sampling

Received July 15, 2025; Revised September 09, 2025; Accepted September 27, 2025;
Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.106151>

Introduction

In the era of globalization and increasingly competitive labor markets, securing employment in Indonesia has become a substantial challenge for many individuals. The imbalance between the number of job seekers and the limited availability of employment opportunities has resulted in numerous high school and university graduates experiencing difficulties entering the workforce. The Central Bureau of Statistics (BPS) reported that the Open Unemployment Rate (TPT) as of August 2024 reached 4.91%. Concurrently, data from the International Monetary Fund (IMF) indicated that Indonesia's unemployment rate was the highest among six Southeast Asian countries.

This situation has prompted many individuals to consider entrepreneurship as a career pathway to generate income and establish personal economic stability (Ismail & Wa'adarrahmah, 2021). Entrepreneurship has emerged as a key factor for success in the globalization era, as higher education graduates are expected not only to seek employment but also to create job opportunities (Kusumadewi, 2020). Efforts to foster entrepreneurial intention among university students represent one indicator of higher education institutions' success in supporting government initiatives to reduce unemployment (Savitri & Wanta, 2017). According to Zunaedy and Aisyah (2021), entrepreneurial intention refers to an individual's interest in engaging in entrepreneurship, characterized by a willingness to work diligently, organize and develop their business ventures, embrace risk-taking without fear, and learn from failures.

However, various studies have demonstrated that entrepreneurial intention among university students remains relatively low. Asima and Ambo (2023) explained that this phenomenon occurs because students tend to prioritize academic pursuits and focus on their fields of study. Simanihuruk and Simanjutak (2024) further identified several factors contributing to low entrepreneurial intention, including lack of family support, fear of attempting new ventures, risk aversion, limited creativity and innovation, fear of failure based on others' experiences, poor communication skills, inability to recognize opportunities, aversion to challenges, and insufficient business management capabilities. Low entrepreneurial intention was also observed among students in the Office Administration Education Program at UNS. Preliminary study results indicated that students preferred seeking employment over pursuing entrepreneurship.

Entrepreneurial intention can be influenced by internal factors originating from within the individual and external factors stemming from the individual's immediate environment (Pratiwi &

Wardana, 2016). According to Kamal and Thooyibah (2020), external factors influencing entrepreneurial intention include social media and environmental conditions. Internal factors encompass personality traits, self-efficacy, adversity quotient, and entrepreneurial motivation (Sholihah et al., 2023).

The advancement of digital technology and social media has brought significant changes to various aspects of human life, including business and entrepreneurship (Sahban, 2024). Students who utilize social media to seek entrepreneurial inspiration demonstrate interest in owning businesses, developing business ideas, managing finances, and aspiring to become entrepreneurs (Indraswati et al., 2021). Research by Rizalnurdin and Dinaloni (2023) demonstrated that social media effectively influences students' entrepreneurial intention through the efficient ease of use of these platforms. However, research conducted by Aisyah et al. (2023) yielded contrasting results, indicating that social media did not influence entrepreneurial intention, as it was primarily used as a communication tool rather than a driver of entrepreneurial interest.

Beyond social media, adversity quotient is also considered capable of influencing entrepreneurial intention, as students with high adversity quotient possess the ability to overcome obstacles hindering their goal achievement. According to Astri and Latifah (2017), adversity quotient measures the extent to which students can persist in overcoming difficulties. Research by Sari et al. (2021) demonstrated that adversity quotient influences entrepreneurial intention. However, research by Soeltanong et al. (2019) yielded different findings, indicating that adversity quotient did not affect entrepreneurial intention because students were raised in affluent families where all necessities were readily available.

Based on the aforementioned background regarding low entrepreneurial intention among students, this study examined "The Influence of Social Media Use and Adversity Quotient on Entrepreneurial Intention Among Office Administration Education Students at UNS." The novelty of this research lies in combining social media use and adversity quotient variables within a single research model to measure students' entrepreneurial intention. This study is important as it provides insights into internal and external factors influencing entrepreneurial intention while serving as a reference for higher education institutions in developing digital-based entrepreneurship programs. Furthermore, this research aligns with government efforts to encourage young entrepreneurship and offers practical benefits for students to more productively utilize social media and develop resilience in facing business challenges.

According to Rahmawati et al. (2022), entrepreneurial intention is an interest that emerges within an individual to initiate and build their own business with the objective of fulfilling needs and achieving success in entrepreneurship. Ramadhan et al. (2024) identified several entrepreneurial characteristics, including achievement motivation, future orientation, high creativity, innovative behavior, work commitment, work ethic and responsibility, independence, risk-taking propensity, opportunity seeking, leadership qualities, managerial capabilities, and personal skills.

According to Kusumadewi (2020), social media constitutes a platform enabling two-way communication where messages can be conveyed and disseminated automatically without temporal or spatial limitations. Setiadi (2016) noted that various interactive activities can be conducted through social media, including information exchange, collaboration, and relationship building in the form of text, images, and video. Social media has evolved from three fundamental principles: sharing, collaborating, and connecting. Mayfield (as cited in Monica & Rosari, 2020) stated that social media possesses several characteristics, including participation, openness, conversation, community, and connectedness.

According to Stoltz (as cited in Baharun & Adhimah, 2019), adversity quotient refers to an individual's ability to understand difficulties encountered and utilize intelligence to manage challenges, transforming them into manageable opportunities. Adversity quotient manifests in three forms: (1) adversity quotient as a conceptual framework for understanding and enhancing various aspects of success; (2) adversity quotient as a measurement tool for evaluating an individual's response to challenges or difficulties; and (3) adversity quotient as a collection of science-based methods that help improve an individual's approach to facing challenges or difficulties, thereby supporting personal effectiveness.

Research Methods

This study was conducted at the Office Administration Education Program, Faculty of Teacher Training and Education (FKIP), Sebelas Maret University. Data collection occurred from March to May 2025. This research employed a correlational quantitative approach and included three variables: two independent variables (X) and one dependent variable (Y). The independent variables were social media use (X_1) and adversity quotient (X_2), while the dependent variable was entrepreneurial intention (Y).

The population comprised 180 students from the 2021 and 2022 cohorts of the Office Administration Education Program at FKIP UNS. Using the Slovin formula, the sample consisted of 110 students who met the inclusion criteria. Respondent criteria included: (1) Office Administration Education students from the 2021 and 2022 cohorts who owned and actively used social media, and (2) Office Administration Education students from the 2021 and 2022 cohorts who used social media to seek entrepreneurship-related information. Purposive sampling was employed as the sampling technique, involving sample selection based on specific considerations and criteria. Data were collected using a questionnaire with a 5-point Likert scale.

Research instruments were tested for validity and reliability. Validity testing was conducted with 30 respondents at a significance level of 5% ($\alpha = .05$). Data were considered valid when $r_{\text{calculated}} > r_{\text{table}}$ (.361). The Product Moment Correlation method was utilized. Validity testing yielded 11 valid items for the X_1 variable, 9 valid items for the X_2 variable, and 12 valid items for the Y variable. Reliability testing employed Cronbach's Alpha, with all variables demonstrating reliability (Cronbach's $\alpha > .60$).

Assumption testing included normality testing using the Kolmogorov-Smirnov test, which yielded an Asymp. Sig. (2-tailed) value of $.200 > .05$, indicating normally distributed data. Linearity testing revealed that the Sig. Deviation from Linearity for X_1 and Y was $.102 > .05$, indicating a linear relationship between social media use and entrepreneurial intention. The Sig. Deviation from Linearity for X_2 and Y was $.828 > .05$, indicating a linear relationship between adversity quotient and entrepreneurial intention. Multicollinearity testing showed VIF values for X_1 and X_2 of $1.197 < 10.00$, indicating no multicollinearity among independent variables. Heteroscedasticity testing revealed significance values of $.530 > .05$ for social media use and $.593 > .05$ for adversity quotient, indicating the absence of heteroscedasticity. Following assumption testing, hypothesis testing was conducted, encompassing t-tests, F-tests, coefficient of determination analysis, multiple linear regression analysis, effective contribution, and relative contribution calculations.

Results and Discussion

Research Results

The t-test was employed to evaluate the extent to which independent variables influenced the dependent variable. The t-test results are presented in Table 1:

Table 1
t-Test Result

	Coefficients ^a				
	B	Std. Error	Beta		
(Constant)	.110	5.422		.020	.984
X1	.600	.112	.432	5.361	.000
X2	.579	.138	.338	4.197	.000

As presented in Table 1, the significance value for social media use (X_1) was $p < .001$, with $t = 5.361$ exceeding the critical value of 1.984 ($df = 107$, $\alpha = .05$). These results indicate a significant partial influence of social media use (X_1) on entrepreneurial intention (Y). Similarly, adversity

quotient yielded a significance value of $p < .001$, with $t = 4.197$ exceeding the critical value of 1.984, indicating a significant partial influence of adversity quotient (X_2) on entrepreneurial intention (Y).

The F-test was employed to determine whether independent and dependent variables exhibited simultaneous influence. This study utilized a significance level of 5% ($\alpha = .05$). The F-test results are presented in Table 2:

Table 2
F-Test Results

ANOVA ^a					
Model	Sum of Square	df	Mean Square	F	Sig.
Regression	1727.724	2	863.862	38.693	.000 ^b
Residual	2388.867	107	22.326		
Total	4116.591	109			

As presented in Table 2, $F(2, 107) = 38.693$, $p < .001$. This value exceeded the critical F-value of 3.087 ($\alpha = .05$, $df_1 = 2$, $df_2 = 107$), indicating a significant simultaneous influence of social media use and adversity quotient on entrepreneurial intention among Office Administration Education students at UNS.

The coefficient of determination was employed to measure the percentage of independent variable influence on the dependent variable. The coefficient of determination results are presented in Table 3:

Table 3
Coefficient of Determination

Model Summary ^b			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.648 ^a	.420	.409	4.725

As presented in Table 3, $R^2 = .420$, indicating that social media use (X_1) and adversity quotient (X_2) collectively explained 42% of the variance in entrepreneurial intention (Y). The remaining 58% was attributable to other factors beyond the scope of this study.

Multiple linear regression analysis was employed to measure the strength and direction of relationships between two or more variables. The multiple linear regression results are presented in Table 4:

Table 4
Multiple Linear Regression Results

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.110	5.422		.020	.984
X1	.600	.112	.432	5.361	.000
X2	.579	.138	.338	4.197	.000

As presented in Table 4, the multiple linear regression equation was: $Y = 0.110 + 0.600X_1 + 0.579X_2$. This equation indicates that the constant value of 0.110 represents entrepreneurial intention when social media use and adversity quotient equal zero. The regression coefficient for social media use ($B = 0.600$) indicates that each one-unit increase in social media use (X_1) increases entrepreneurial intention (Y) by 0.600 units. The regression coefficient for adversity quotient ($B = 0.579$) indicates that each one-unit increase in adversity quotient (X_2) increases entrepreneurial intention (Y) by 0.579 units.

Discussion

The first hypothesis test revealed that the t-value for social media use was 5.361, exceeding the critical value of 1.984, with a significance value of $p < .001$. These findings demonstrate that social media use (X_1) exerted a significant partial influence on entrepreneurial intention among Office Administration Education students at UNS (Y). Consequently, H_1 was supported, indicating a positive and significant influence of social media use on entrepreneurial intention. These findings align with previous research by Gustina et al. (2021), who found that social media use exerted a positive and significant partial influence on entrepreneurial intention. Sumerta et al. (2020) similarly explained that higher levels of social media use correspond to increased entrepreneurial intention among students.

The findings indicate that most students possess easy and flexible access to social media in their daily lives. This aligns with Rahmawati et al. (2022), who stated that social media functions as a communication tool and information source accessible online. This accessibility enables students to obtain more information, business opportunities, and entrepreneurial inspiration through digital devices.

The second hypothesis test revealed that the t-value for adversity quotient was 4.197, exceeding the critical value of 1.984, with a significance value of $p < .001$. These findings demonstrate that adversity quotient (X_2) exerted a significant partial influence on entrepreneurial intention among Office Administration Education students at UNS (Y). Consequently, H_2 was supported, indicating a positive and significant influence of adversity quotient on entrepreneurial intention. These findings align with previous research by Pratiwi et al. (2024), who demonstrated that adversity quotient exerted a positive and significant partial influence on entrepreneurial intention. Rakhmadiningrum et al. (2021) explained that students' adversity quotient, manifested through entrepreneurial attitudes, encompasses a strong determination to achieve goals and persistent effort toward improved outcomes.

The findings indicate that most students possess the ability to persevere and seek solutions when facing problems or life challenges. Stoltz (as cited in Baharun & Adhimah, 2019) stated that control represents a dimension of adversity quotient reflecting the extent to which an individual can manage difficult situations and respond to emerging pressures.

The third hypothesis test yielded $F(2, 107) = 38.693$, $p < .001$. This value exceeded the critical F-value of 3.087 ($\alpha = .05$), indicating that H_3 was supported. Thus, social media use and adversity quotient simultaneously exerted a positive and significant influence on entrepreneurial intention among Office Administration Education students at UNS. The coefficient of determination ($R^2 = .420$) indicated that social media use (X_1) and adversity quotient (X_2) collectively explained 42% of the variance in entrepreneurial intention (Y), while the remaining 58% was attributable to other factors beyond the scope of this study.

This study holds practical implications suggesting that faculty members can serve as facilitators in guiding students to utilize social media for entrepreneurial purposes, while higher education institutions can provide digital-based support programs. Students are encouraged to more actively utilize social media as a medium for learning, promotion, and business idea development.

Conclusion

Based on the multiple linear regression analysis regarding the influence of social media use and adversity quotient on entrepreneurial intention among Office Administration Education students at UNS, three primary conclusions emerge. First, social media use exerts a positive and significant influence on entrepreneurial intention among Office Administration Education students at UNS. Second, adversity quotient exerts a positive and significant influence on entrepreneurial intention among Office Administration Education students at UNS. Third, social media use and adversity quotient simultaneously exert a positive and significant influence on entrepreneurial intention among Office Administration Education students at UNS. The adjusted R^2 of .42 indicates that social media use and adversity quotient collectively explain 42% of the variance in entrepreneurial intention, while the remaining 58% is attributable to other factors beyond the scope of this study.

The practical implications of this research suggest that students should utilize social media productively while simultaneously developing resilience (adversity quotient) to foster entrepreneurial intention. Theoretically, this study reinforces the conceptual foundation that external factors such as social media and internal factors such as adversity quotient influence entrepreneurial intention. This study has limitations in scope, encompassing only students from the 2021 and 2022 cohorts of the Office Administration Education Program at FKIP UNS, thus limiting generalizability. Additionally, data collection through online questionnaires encountered challenges due to low respondent participation rates. Future researchers are recommended to expand the research scope, incorporate additional relevant variables, and employ mixed methods to obtain more comprehensive and generalizable results.

Reference

- Aisyah, S., Ahmadi, N., Rahmani, B., & Hasibuan, S. (2023). Pengaruh pengetahuan kewirausahaan, motivasi, lingkungan keluarga dan media sosial terhadap minat berwirausaha mahasiswa muslim. *Journal on Education*, 5(4), 11740–11757.
- Asima, N., & Ambo, N. (2023). Analisis minat berwirausaha pada mahasiswa Fakultas Ekonomi dan Bisnis Islam IAIN Parepare. *Jurnal Sipakainge: Inovasi Penelitian, Karya Ilmiah, dan Pengembangan (Islamic Science)*.
- Astri, W., & Latifah, L. (2017). Pengaruh personal attributes, adversity quotient dengan mediasi self efficacy terhadap minat berwirausaha. *Economic Education Analysis Journal*. <http://journal.unnes.ac.id/sju/index.php/eeaj>
- Baharun, H., & Adhimah, S. (2019). Adversity quotient: Complementary intelligence in establishing mental endurance santri in pesantren. *Indian Journal of Science and Technology*, 9(1), 1–8. <https://doi.org/10.17485/ijst/2016/v9i47/108695>
- Gustina, M., Sumiati, A., & Mardi. (2021). Pengaruh penggunaan media sosial dan lingkungan keluarga terhadap minat berwirausaha pada mahasiswa Fakultas Ekonomi Universitas Negeri Jakarta. *Jurnal Ekonomi dan Pendidikan*, 18. <http://dx.doi.org/10.21831/jep.v18i2.41027>
- Indraswati, D., Hidayati, V., Wulandari, N., & Maulyda, M. (2021). Pengaruh penggunaan media sosial dan lingkungan keluarga terhadap minat berwirausaha mahasiswa PGSD Universitas Mataram. *Jurnal Ekonomi Pendidikan dan Kewirausahaan*, 9. <https://doi.org/10.26740/jepk.v9n1.p17-34>
- Ismail, & Wa'adarramah. (2021). Analisis peran pengusaha dalam mengurangi pengangguran terbuka perspektif ekonomi Islam di Kota Bima (Studi kasus HIPMI dan TDA Kota Bima). *Jurnal Ekonomi Syariah*, 4(1), 11–26. <https://doi.org/10.52266/jesa.v4i1>
- Kamal, A. H., & Thoyyibah, N. (2020). Analisis faktor-faktor yang mempengaruhi minat berwirausaha santri pondok pesantren. *At-Taqqaddum*, 12(1), 75. <https://doi.org/10.21580/at.v12i1.5330>
- Kusumadewi, A. (2020). Implementasi jiwa wirasaha dan pemanfaatan media sosial terhadap minat berwirausaha pada mahasiswi Purwakarta. *Jurnal Ekonomi dan Bisnis*, 7(2). <http://dx.doi.org/10.34308/eqien.v7i2.141>
- Monica, V., & Rosari, R. B. (2020). Penggunaan media sosial pada mahasiswa Universitas Kristen Petra Surabaya. *Scriptura*, 9(2), 71–81. <https://doi.org/10.9744/scriptura.9.2.71-81>
- Pratiwi, M., Maslichah, & Amin, M. (2024). Pengaruh adversity quotient, income expectation dan self efficacy terhadap minat berwirausaha mahasiswa berbasis teknologi. *E-Jurnal Riset Manajemen*, 13.
- Pratiwi, Y., & Wardana, I. M. (2016). Pengaruh faktor internal dan eksternal terhadap minat berwirausaha mahasiswa Fakultas Ekonomi dan Bisnis Universitas Udayana. *E-Jurnal Manajemen Unud*, 5(8), 5215–5242.
- Rahmawati, A., Yohana, C., & Pratama, A. (2022). Pengaruh sosial media dan motivasi terhadap minat berwirausaha mahasiswa. *Jurnal Bisnis, Manajemen, dan Keuangan*, 3(2). <https://doi.org/10.21009/jbmk.0302.19>

- Rakhmadiningrum, P., Soetjipto, B., & Patmi Rahayu, W. (2021). The influence of adversity quotient, entrepreneurial environment, and entrepreneurial attitudes on entrepreneurial intentions on students in Malang. *International Journal of Business, Economics and Law*, 24(4).
- Ramadhan, F. S., Hafid, A., Ardiansyah, & Nurjaman, U. (2024). Pengertian wirausaha dan karakteristik wirausaha. *Jurnal Penelitian dan Karya Ilmiah*, 2(3).
<https://doi.org/10.59059/mutiara.v2i2.1342>
- Rizalnurdin, & Dinaloni, D. (2023). Pengaruh penggunaan media sosial terhadap minat berwirausaha pada mahasiswa Program Studi Pendidikan Ekonomi STKIP PGRI Jombang.
- Sahban, M. (2024). Pengaruh media sosial dan teknologi digital terhadap minat berwirausaha di kalangan mahasiswa manajemen bisnis. *Jurnal Review Pendidikan dan Pengajaran*.
- Sari, T. U., Adi, B. W., & Totalia, S. A. (2021). Pengaruh mata kuliah kewirausahaan, adversity quotient dan lingkungan sosial terhadap minat berwirausaha mahasiswa Program Studi Pendidikan Ekonomi FKIP UNS. *BISE: Jurnal Pendidikan Bisnis dan Ekonomi*.
<https://jurnal.uns.ac.id/bise>
- Savitri, C., & Wanta. (2017). Upaya menumbuhkan minat berwirausaha pada mahasiswa Prodi Manajemen di UBP Karawang. *Jurnal Manajemen & Bisnis Kreatif*, 93–112.
- Setiadi, A. (2016). Pemanfaatan media sosial untuk efektifitas komunikasi. *Jurnal Humaniora Universitas Bina Sarana Informatika*, 16. <https://doi.org/10.31294/jc.v16i2.1283>
- Sholihah, A. A., Meiyuntariningsih, T., Ramadhani, H. S., & Psikologi, F. (2023). Minat berwirausaha pada mahasiswa: Bagaimana perananan self-efficacy dan adversity quotient? *INNER: Journal of Psychological Research*, 2(4), 1004–1013.
- Simanihuruk, P., & Simanjutak, M. (2024). Faktor-faktor penyebab kurangnya minat mahasiswa berwirausaha. *Jurnal Manajemen dan Bisnis (JMB)*, 24.
- Soeltanong, D., Gosal, G. B. R., & Layman, C. (2019). Analisis pengaruh adversity quotient, need for achievement, dan self efficacy terhadap entrepreneurial intention mahasiswa S1. *Proceeding of NCBMA 2019 The 3rd National Conference on Business, Management, and Accounting*, 195–205.
- Sumerta, I. K., Redianingsih, N. K., Pranawa, I. M. B., & Indahyani, D. N. T. (2020). Pengaruh tingkat penggunaan media sosial dan motivasi terhadap minat berwirausaha pada mahasiswa program studi manajemen perguruan tinggi di Kota Denpasar. *E-Jurnal Ekonomi dan Bisnis Universitas Udayana*, 7, 627–652.
<http://dx.doi.org/10.24843/EEB.2020.v09.i07.p03>
- Zunaedy, M., & Aisyah, S. (2021). Faktor-faktor yang mempengaruhi minat berwirausaha mahasiswa Pendidikan Ekonomi STKIP PGRI Lumajang tahun akademik 2020/2021. *Jurnal Riset Pendidikan Ekonomi*, (6). <http://ejournal.unikama.ac.id>

The influence of brand image and service quality on belift lab's brand trust

Doan Aprilinda Dewi*, Susantiningrum Susantiningrum

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: april.dna@student.uns.ac.id

Abstrak

Kepercayaan merek penting di semua sektor industri, termasuk industri kreatif music seperti K-Pop yang memiliki fans setia dan aktif. Penelitian ini bertujuan untuk: 1) mengetahui ada tidaknya pengaruh brand image terhadap brand trust Belift Lab, 2) mengetahui ada tidaknya pengaruh service quality terhadap brand trust Belift Lab, serta 3) mengetahui ada tidaknya pengaruh brand image dan service quality terhadap brand trust Belift Lab. Penelitian ini merupakan penelitian deskriptif kuantitatif dengan metode korelasional. Populasi penelitian adalah penggemar ENHYPEN Indonesia. Pengambilan sampel dengan teknik non probability sampling melalui metode purposive sampling. Sampel penelitian sebanyak 96 dari populasi yang memenuhi kriteria. Pengumpulan data melalui instrumen angket kuesioner dengan media Google Form yang disebarakan secara online melalui platform X. Pengolahan data menggunakan media software IBM SPSS Statistics 26. Teknik analisis data berupa regresi linier berganda. Hasil penelitian menunjukkan: 1) terdapat pengaruh positif dan signifikan antara brand image terhadap brand trust Belift Lab, 2) terdapat pengaruh positif dan signifikan antara service quality terhadap brand trust Belift Lab, 3) terdapat pengaruh positif dan signifikan antara brand image dan service quality terhadap brand trust Belift Lab.

Kata kunci: hubungan masyarakat; industri kreatif; penelitian kuantitatif; persepsi

Abstract

Brand trust is essential across all industry sectors, including the creative music industry such as K-Pop, which maintains loyal and active fan bases. This study aimed to: (1) determine whether brand image influences Belift Lab's brand trust, (2) determine whether service quality influences Belift Lab's brand trust, and (3) determine whether brand image and service quality jointly influence Belift Lab's brand trust. This quantitative descriptive study employed a correlational method. The study population consisted of Indonesian ENHYPEN fans. Sampling was conducted using non-probability sampling with a purposive sampling method. The sample comprised 96 individuals from the population who met the established criteria. Data were collected using a questionnaire instrument via Google Forms, distributed online through the X platform. Data processing was performed using IBM SPSS Statistics 26 software. Multiple linear regression served as the data analysis technique. The

* Corresponding author

Citation in APA style: Dewi, D.A., & Susantiningrum, S. (2026). The influence of brand image and service quality on belift lab's brand trust. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 16-23. <https://dx.doi.org/10.20961/jikap.v10i1.105984>

results indicated that: (1) brand image exerts a positive and significant influence on Belift Lab's brand trust, (2) service quality exerts a positive and significant influence on Belift Lab's brand trust, and (3) brand image and service quality jointly exert a positive and significant influence on Belift Lab's brand trust.

Keywords: creative industries; perception; public relations; quantitative research

Received July 15, 2025; Revised September 24, 2025; Accepted September 27, 2025;
Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.105984>

Introduction

As time progresses and human needs expand, competition across various fields has accompanied the evolution of the industrial world. Corporate success is no longer measured solely by the products or services offered but also by the emotional and psychological relationships established with consumers, particularly regarding trust. Companies must consistently build and maintain brand trust to ensure organizational sustainability and success.

Brand trust is essential across all industry sectors, including the creative music industry such as K-Pop, which maintains loyal and active fan bases. One group with a substantial fan base is ENHYPEN. According to Twitter's internal data (January 1–December 31, 2021), ENHYPEN ranked third as the most discussed K-Pop artist in Indonesia. This popularity stems not only from the quality of their work but also from how their agency, Belift Lab, develops branding and service quality through public relations.

However, a preliminary study conducted by the researchers in March 2025 through social media platform X with Indonesian ENHYPEN fans revealed that Belift Lab was identified as one of the agencies that did not optimally fulfill the public relations function expected by fans. Belift Lab is known as an agency that frequently delays providing official statements in the form of clarifications and follow-up actions when evaluating incoming complaints. Despite fans massively raising hashtags through platform X and sending reports via email, Belift Lab is perceived as failing to provide meaningful responsiveness.

Research by Fajarini and Meria (2020) and Ula et al. (2022) indicates that service quality positively affects trust. Similarly, research conducted by Sidharta et al. (2018) demonstrates that brand image positively affects trust. Although numerous previous studies have examined similar variables, this study offers novelty in two respects. First, relatively few studies have examined the effect of brand image on brand trust directly; most existing studies position brand trust as an independent or mediating variable rather than a dependent variable. Second, unlike previous studies focusing on general industries such as products and services, this study examines companies/agencies in the creative music industry as research objects and fan groups as subjects, who psychographically demonstrate emotional attachment and active participation toward artists and agencies, distinguishing them from typical product consumers.

The research problems are formulated as follows: (1) Does brand image affect Belift Lab's brand trust? (2) Does service quality affect Belift Lab's brand trust? (3) Do brand image and service quality jointly affect Belift Lab's brand trust?

This research is grounded in Customer-Based Brand Equity (CBBE) Theory and Servqual Theory. According to Keller (2020), CBBE Theory represents "the differential effect of brand knowledge on consumer response to the marketing of the brand" (Wang et al., 2022, p. 123). The CBBE Theory concept emphasizes that consumer acceptance is influenced by brand differentiation in consumers' minds, referring to distinguishing factors that constitute brand strength based on what consumers learn, feel, see, hear, and remember. Meanwhile, Servqual Theory by Parasuraman (1988) is constructed upon a comparison of two primary factors: consumer expectations and the reality received regarding a brand's service (Sinollah & Masruro, 2019, p. 46). Service is considered

quality when reality exceeds consumer expectations. From these two theories, brand trust originates from fulfilling consumer expectations through service quality and positive brand image.

According to Kotler and Armstrong (as cited in Rahmadhani et al., 2022, p. 209), brand trust refers to consumers trusting a brand unconditionally because they hold high expectations that the brand will deliver positive results, thereby generating loyalty and trust. Delgado (as cited in Mahuda, 2018, p. 102) states that brand trust constitutes a belief or promise given by a brand to fulfill all consumer interests. Brand trust is a critical factor in building long-term relationships between brands and consumers. Brands with trusted reputations have greater opportunities to attract consumer attention than less reliable brands. Thus, brand trust can be defined as an expectation of brand reliability in meeting consumer interests, fulfilling promises, and managing potential risks. Indicators of brand trust according to the ABI model by Mayer et al. (1995, as cited in Svare et al., 2019, p. 586) include: (1) Ability, (2) Benevolence, and (3) Integrity.

According to Kotler and Keller (as cited in Rahmadhani et al., 2022, p. 209), brand image represents a set of beliefs, ideas, and impressions that consumers hold about a brand, thereby determining their attitudes and actions. Similarly, Lombok and Samadi (2022, p. 954), citing Firmansyah (2019), state that brand image can be interpreted as an impression arising in consumers' minds when they think of a particular brand. In this context, brand image functions as a psychological factor that influences consumer behavior alongside physical factors. Thus, brand image can be defined as a subjective perception formed from memories of a brand in consumers' minds. According to Kotler and Keller (2016, as cited in Rahmadhani et al., 2022, p. 209), brand image indicators include: (1) Strength, (2) Favorability, and (3) Uniqueness.

According to Kotler (as cited in Panjaitan, 2016, p. 266), service quality refers to a company's continuous performance in improving quality related to processes, products, and services produced. Meanwhile, according to Parasuraman et al. (as cited in Deviana et al., 2021, p. 20), service quality reflects consumers' evaluative perceptions of services received at a given time. In essence, service quality pertains to the conformity between services received and consumer expectations. Servqual Theory by Parasuraman et al. (1988) posits that service quality can be measured across five dimensions: (1) Tangibles, (2) Reliability, (3) Responsiveness, (4) Assurance, and (5) Empathy.

Research Methods

This study employed a quantitative descriptive research design, which seeks to explain or describe events based on data (Riyanto & Hatmawan, as cited in Rofiudin et al., 2022, p. 725). The correlational method was utilized, which is useful for identifying relationships between variables, making predictions, and developing theories (Gall et al., as cited in Adnyana, 2024, p. 55). This study comprised two types of variables: independent and dependent. The independent variables were brand image (X1) and service quality (X2). The brand image variable was measured using indicators according to Kotler and Keller (2016) with nine statements, while the service quality variable was measured using indicators according to Parasuraman et al. (1988) with 15 statements. The dependent variable was brand trust (Y), measured using indicators according to Mayer et al. (1995) with 13 statements.

The study population consisted of ENHYPEN fans across Indonesia, whose numbers are dynamic and cannot be officially counted or recorded. Riyanto and Hatmawan (as cited in Rofiudin et al., 2022, p. 726) state that the Lemeshow formula can be used to calculate sample size when the total population is unknown due to its large size. This study used a 95% confidence level ($\alpha = .05$), a maximum estimate of 0.5, and a margin of error of 10%. A 95% confidence level is a common standard recommended by researchers for social studies. A maximum estimate of 0.5 (50%) represents the safest value for producing a statistically robust minimum sample size when data are uncertain. A 10% error rate was used to obtain accurate yet realistic data.

The z-score calculation was as follows: $z_{1-(\alpha/2)} = z_{1-(0.05/2)} = z_{1-0.025} = z_{0.975}$. Based on the z-score table, the value 0.975 lies at the intersection of 1.9 and 0.06, yielding a z-value of 1.96. Thus, the sample size according to Lemeshow's formula was calculated as: $n = z^2 \times P(1 - P) / d^2 = 1.96^2 \times 0.5(1 - 0.5) / 0.10^2 = 3.8416 \times 0.25 / 0.01 = 0.9604 / 0.01 = 96.04 \approx 96$. Where: n = number of samples; z = z-score at confidence level; P = maximum estimate; d = margin of error. Thus, a

sample of 96 respondents meeting the specified criteria was considered sufficient to represent the research population.

The sampling technique employed was non-probability sampling with purposive sampling method, which uses specific criteria for research subjects. This approach ensured sample relevance to the variables and research objects. The sample criteria were: (1) Indonesian ENHYPEN fans (ENGINA) on the X platform who actively engage and participate in discussions about current news related to Belift Lab, (2) at least 17 years of age to ensure respondents have reached adulthood and are capable of rational thinking, and (3) follow current news about ENHYPEN and Belift Lab, thereby possessing contextual understanding of the subject matter. Data were collected using a questionnaire instrument via Google Forms, distributed online through platform X with a five-point Likert scale (strongly agree, agree, neutral, disagree, and strongly disagree). To prevent multiple entries, Google Forms were configured to limit one response per account. Additionally, researchers manually verified accounts to ensure respondents were Indonesian ENHYPEN fans meeting the criteria.

The research instrument was validated through validity and reliability tests using IBM SPSS Statistics 26 software. The validity test assessed the extent to which the instrument accurately measured the intended variables using the Pearson correlation coefficient formula. The decision criterion was that if r -calculated $>$ r -table and significance $<$.05, the item was valid. In the pilot test, of 45 items, 37 were valid and 8 were invalid. In the final research instrument, all 37 items were valid. The reliability test assessed whether an instrument produces consistent results upon repeated testing using Cronbach's alpha coefficient formula. The decision criterion was that if Cronbach's $\alpha >$.60, the instrument was reliable. The final research instrument yielded a Cronbach's α of .959, which exceeds .60, indicating reliability. Data analysis employed multiple linear regression through classical assumption tests (normality, linearity, multicollinearity, and heteroscedasticity tests) and hypothesis testing (partial significance test/t-test, simultaneous test/F-test, coefficient of determination/ R^2 , and multiple linear regression).

Result and Discussion

Research Result

The research instrument comprised 37 statement items (13 valid statements from the brand trust variable, 9 valid statements from the brand image variable, and 15 valid statements from the service quality variable) that were validated through validity and reliability tests using IBM SPSS Statistics 26 software. The descriptive statistics are presented in Table 1.

Table 1
Descriptive Data Analysis

	Brand_Image	Service_Quality	Brand_Trust
Valid	96	96	96
Missing	0	0	0
Mean	25.19	46.22	39.32
Median	26.00	47.00	39.50
Mode	26	40	40 ^a
Std. Deviation	6.231	13.056	10.856
Variance	38.828	170.467	117.863
Range	29	58	45
Minimum	10	15	17
Maximum	39	73	62
Sum	2418	4437	3775

The research data were first subjected to classical assumption tests, specifically normality, linearity, multicollinearity, and heteroscedasticity tests. The normality test was conducted using the One-Sample Kolmogorov-Smirnov test, which showed an Asymp. Sig. (2-tailed) of .200, which

exceeds .05, indicating normally distributed data. The linearity test was conducted through the Test for Linearity with a significance level of .05. Results indicated that the significance of Deviation from Linearity for $Y \cdot X_1$ (.936) and $Y \cdot X_2$ (.982) both exceeded .05, confirming linear relationships with variable Y . The multicollinearity test showed tolerance values of .412 ($> .10$) and VIF values of 2.425 (< 10) for each variable, indicating no multicollinearity symptoms among independent variables in the regression model. The heteroscedasticity test showed significance values of .164 for variable X_1 and .481 for X_2 , both exceeding .05, indicating no heteroscedasticity symptoms in the regression model.

Hypothesis testing proceeded through four stages. The first stage was the partial significance test (t-test), with results presented in Table 2.

Table 2
Partial Significance Test Results (T Test)

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	1.717	2.407		.713	.478
Brand Image	.755	.143	.434	5.296	.000
Service Quality	.402	.068	.484	5.907	.000

The partial significance test (t-test) assessed whether independent variables partially affect the dependent variable. Based on the results in Table 2, the t-value for the brand image variable was 5.296, exceeding the t-table value (1.661), with $p < .001$. Therefore, a positive and significant relationship exists between brand image and brand trust, indicating that improved brand image corresponds to higher trust in Belift Lab.

Furthermore, results in Table 2 show that the t-value for the service quality variable was 5.907, exceeding the t-table value (1.661), with $p < .001$. Therefore, a positive and significant relationship exists between service quality and brand trust, indicating that improved service quality corresponds to higher trust in Belift Lab.

The second hypothesis test was the simultaneous significance test (F-test), with results presented in Table 3.

Table 3
Simultaneous Significance Test Results (F Test)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	8320.563	2	4160.281	134.509	.000 ^b
Residual	2876.427	93	30.929		
Total	11196.990	95			

The simultaneous significance test (F-test) assessed whether independent variables simultaneously affect the dependent variable. Based on results in Table 3, the F-value was 134.509, exceeding the F-table value (3.09), with $p < .001$. Therefore, H_0 was rejected and H_1 was accepted, indicating a positive influence of brand image and service quality on Belift Lab's brand trust. Consequently, if Belift Lab seeks to enhance brand trust, both variables brand image and service quality require attention, as both have been demonstrated to influence trust.

The third hypothesis test was the coefficient of determination (R^2) test, with results presented in Table 4.

Table 4
Test Results of the Coefficient of Determination / Square (R^2)

R	R Square	Adjusted R	
		Square	Std. Error of the Estimate
.862 ^a	.743	.738	5.561

The coefficient of determination (R^2) test assessed the extent of independent variable influence on the dependent variable. Based on results in Table 4, the R^2 value was .743 (74.3%). This indicates that the brand image and service quality variables jointly exert a strong effect on Belift Lab's brand trust, accounting for 74.3% of the variance, while the remaining 25.7% is influenced by variables not examined in this study. These results reinforce the theory that brand image and service quality are key factors in building consumer trust in a brand.

The final hypothesis test was multiple linear regression, with results presented in Table 5.

Table 5

Hypothesis Test: Multiple Linear Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	1.717	2.407		.713	.478
Brand Image	.755	.143	.434	5.296	.000
Service Quality	.402	.068	.484	5.907	.000

Multiple linear regression demonstrates the extent of influence between two or more independent variables on a dependent variable. Based on the results in Table 5, the regression equation is: $Y = 1.717 + 0.755X_1 + 0.402X_2$, where Y = dependent variable (brand trust); X_1 = independent variable 1 (brand image); X_2 = independent variable 2 (service quality). The equation indicates that: (1) a constant of 1.717 means that when brand image (X_1) and service quality (X_2) equal zero, brand trust (Y) equals 1.717; (2) the X_1 coefficient of 0.755 indicates that each one-point increase in brand image increases brand trust by 0.755; and (3) the X_2 coefficient of 0.402 indicates that each one-point increase in service quality increases brand trust by 0.402.

Discussion

The first hypothesis test demonstrated a positive and significant influence of brand image on Belift Lab's brand trust. The partial significance test (t-test) yielded a t-value of 5.296 for the brand image variable, exceeding the t-table value (1.661), with $p < .001$. Therefore, H_0 was rejected and H_1 was accepted. Similarly, research by Indrawati and Panjaitan (2025), Ni et al. (2024), Sidharta et al. (2018), and Soerjanto and Nainggolan (2022) demonstrated t-calculated $>$ t-table and significance values $< .05$. These studies concluded that a positive and significant influence exists between brand image and brand trust, indicating that improved brand image corresponds to higher brand trust. Lin and Ryan (as cited in Giantari et al., 2020, p. 56) reinforce these findings, stating that a positive and strong brand image can serve as psychological reliability in selecting a product or service, representing trust between the public and the company. Furthermore, research by Lombok and Samadi (2022) concluded that positive brand perception helps consumers trust the brand. These relevant research findings and theoretical studies support the present study's results that brand image influences brand trust: when brand image develops positively, the company establishes strong brand trust from the public.

The second hypothesis test demonstrated a positive and significant influence of service quality on Belift Lab's brand trust. The partial significance test (t-test) yielded a t-value of 5.907 for the service quality variable, exceeding the t-table value (1.661), with $p < .001$. Therefore, H_0 was rejected and H_2 was accepted. Similarly, research by Fajarini and Meria (2020), Ni et al. (2024), Soerjanto and Nainggolan (2022), Ula et al. (2022), and Wijaya et al. (2020) demonstrated t-calculated $>$ t-table and significance values $< .05$. These studies concluded that a positive and significant influence exists between service quality and brand trust, indicating that improved service quality corresponds to higher brand trust. Fajarini and Meria (2020) reinforce these findings, stating that with good service quality, consumers feel satisfied and believe the company will meet expectations. Wijaya et al. (2020, p. 49) similarly state, "The better the quality of services provided by companies then consumers will be more confident in the company and the products are given." These relevant research findings and theoretical studies support the present study's results that

service quality influences brand trust: when service quality is good, the company establishes strong brand trust from its public.

The third hypothesis test demonstrated a positive and significant influence of brand image and service quality on Belift Lab's brand trust. The simultaneous significance test (F-test) yielded an F-value of 134.509, exceeding the F-table value (3.09), with $p < .001$. Therefore, H_0 was rejected and H_3 was accepted. Similarly, research by Ni et al. (2024) and Soerjanto and Nainggolan (2022) demonstrated $F_{\text{calculated}} > F_{\text{table}}$ and significance values $< .05$. Based on the coefficient of determination (R^2) test, the R^2 value was .743 (74.3%). This indicates that brand image and service quality jointly affect Belift Lab's brand trust by 74.3%, while the remaining 25.7% is influenced by variables not examined in this study. Furthermore, the linear regression test yielded the equation $Y = 1.717 + 0.755X_1 + 0.402X_2$. This indicates that each one-point increase in brand image (X_1) increases brand trust (Y) by 0.755, and each one-point increase in service quality (X_2) increases brand trust (Y) by 0.402. This equation further strengthens the hypothesis that when brand image develops positively and service quality is satisfactory, both factors jointly increase brand trust.

Conclusion

The results demonstrate that brand image and service quality affect brand trust. Strengthening branding constitutes an important marketing strategy that helps the public recognize comparative advantages of the products/services offered. Furthermore, when service quality is good, the public remembers it as a satisfying experience; when companies successfully implement both factors optimally, trust in the brand grows. This study examined a sample of only 96 individuals from the large population of Indonesian ENHYPEN fans. Therefore, future researchers should expand the population and sample to improve data generalization and representativeness.

References

- Adnyana, I. M. D. M. (2024). *Metodologi penelitian*. CV Media Sains Indonesia.
- Deviana, D., Suyoto, S., Mahjudin, M., & Permana, F. A. (2021). Analisis mutu pelayanan pendidikan dengan model service quality. *JRE: Jurnal Riset Entrepreneurship*, 4(1), 19–24. <https://doi.org/10.30587/jre.v4i1.2281>
- Fajarini, A., & Meria, L. (2020). Pengaruh kualitas pelayanan terhadap kepercayaan dan loyalitas pelanggan dimediasi kepuasan pelanggan (Studi kasus klinik kecantikan Beauty Inc). *JCA Ekonomi*, 1(2), 481–491. <https://jca.esaunggul.ac.id/index.php/jeco/article/view/99>
- Giantari, I. G. A. K., Utama, I. P. H. B., & Wardani, N. L. D. A. (2020). Peran brand love memediasi pengaruh brand image terhadap word of mouth. *Juima*, 10(1), 54–61. <https://e-journal.unmas.ac.id/index.php/juima/article/download/1072/918>
- Indrawati, L., & Panjaitan, T. W. S. (2025). The influence of WOM and brand image on customer trust and satisfaction at Bank Central Asia (BCA). *IJEED (International Journal of Entrepreneurship and Business Development)*, 8(1), 59–67. <https://doi.org/10.29138/ijeed.v8i1.3086>
- Lombok, E. V. V., & Samadi, R. L. (2022). Pengaruh brand image, brand trust dan digital marketing terhadap keputusan pembelian konsumen pada produk Emina (Studi kasus pada mahasiswa Universitas Sam Ratulangi). *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 10(3), 953–964. <https://doi.org/10.35794/emba.v10i3.43524>
- Mahuda, F. D. (2018). Pengaruh brand personality dan brand trust terhadap keputusan pembelian (Studi kasus Butik Meccanism). *Al-Infaq: Jurnal Ekonomi Islam*, 9(2), 98–112. <https://doi.org/10.32507/ajei.v9i2.454>
- Ni, L. S. A. S., Ketut, P. R., & Ni, P. N. A. (2024). The influence of service quality and brand image in improving marketing performance by mediating consumer trust to Indobat Pharmacy Denpasar. *Russian Journal of Agricultural and Socio-Economic Sciences*, 152(8), 31–38. <https://doaj.org/article/5c900560190f4fea84807d45471ae6fe>

- Panjaitan, J. E. (2016). Pengaruh kualitas pelayanan terhadap kepuasan pelanggan pada JNE Cabang Bandung. *DeReMa (Development Research of Management): Jurnal Manajemen*, 11(2), 265–289. <https://doi.org/10.24929/feb.v6i2.268>
- Rahmadhani, S., Nofirda, F. A., & Sulistyandari, S. (2022). Pengaruh kualitas produk, citra merek dan kepercayaan merek terhadap loyalitas merek dengan kepuasan pelanggan sebagai mediasi (Studi pada merek Apple). *Derema (Development Research of Management): Jurnal Manajemen*, 17(2), 205. <https://doi.org/10.19166/derema.v17i2.5569>
- Rofiudin, M., Shabry, M., & Juniarsa, N. (2022). Pengaruh harga dan fitur layanan terhadap minat beli konsumen Tokopedia pasca Covid 19 di Malang Raya. *Jurnal Ilmu-Ilmu Sosial*, 19(2), 721–730. <https://doi.org/10.29100/insp.v19i2.3681>
- Sidharta, R. B. F. I., Sari, N. L. A., & Suwandha, W. (2018). Purchase intention pada produk bank syariah ditinjau dari brand awareness dan brand image dengan trust sebagai variabel mediasi. *MIX: Jurnal Ilmiah Manajemen*, 8(3), 562–578. <https://dx.doi.org/10.22441/mix.2018.v8i3.007>
- Sinollah, & Masruro. (2019). Pengukuran kualitas pelayanan (Servqual-Parasuraman) dalam membentuk kepuasan pelanggan sehingga tercipta loyalitas pelanggan (Studi kasus pada Toko Mayang Collection Cabang Kepanjen). *Jurnal Dialektika*, 4(1), 45–64. <https://doi.org/10.36636/dialektika.v4i1.285>
- Soerjanto, & Nainggolan, B. M. (2022). Improving customer satisfaction through trust in 'Bandung Tour on Bus (Bandros)' by taking into account the contribution of service quality and brand image. *Majalah Ilmiah Bijak*, 19(1), 01–12. <https://doi.org/10.31334/bijak.v19i2.1866>
- Svare, H., Gausdal, A. H., & Möllering, G. (2019). The function of ability, benevolence, and integrity based trust in innovation networks. *Industry and Innovation*, 27(6), 585–604. <https://doi.org/10.1080/13662716.2019.1632695>
- Ula, A., Farid, M. M., Sholikha, S. M., Rochman, A. S., & Setiawan, D. (2022). Pengaruh kualitas pelayanan terhadap kepercayaan konsumen PT. SAP Express Agen Trapang Kec. Banyuwates: Kualitas pelayanan, kepercayaan konsumen. *Jurnal Penelitian Multidisiplin*, 1(2), 52–55. <https://doi.org/10.58705/jpm.v1i2.49>
- Wang, S., Arianis, C., & Dian, F. (2022). The effect of co-branding on customer-based brand equity of Indomie Hypeabis campaign (Study in collaboration of Indomie and The Goods Dept). *AdBispreneur: Jurnal Pemikiran dan Penelitian Administrasi Bisnis dan Kewirausahaan*, 7(2), 121–132. <https://doi.org/10.24198/adbispreneur.v7i2.35613>
- Wijaya, A. F. B., Surachman, S., & Mugiono, M. (2020). The effect of service quality, perceived value and mediating effect of brand image on brand trust. *Jurnal Manajemen dan Kewirausahaan*, 22(1), 45–56. <https://doi.org/10.9744/jmk.22.1.45-56>

The influence of sustainable entrepreneurship education and economic literacy on consumptive behavior among university students

Ari Tri Anggraeni*, Cicilia Dyah Sulistyaningrum Indrawati

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: ar.anggra12@student.uns.ac.id

Abstrak

Tingginya akses informasi dan gaya hidup digital menjadikan perilaku konsumtif mahasiswa sebagai isu krusial. Penelitian ini bertujuan untuk mengetahui pengaruh edukasi kewirausahaan berkelanjutan dan literasi ekonomi terhadap perilaku konsumtif mahasiswa Pendidikan Administrasi Perkantoran Universitas Sebelas Maret angkatan 2021 dan 2022, baik secara parsial maupun simultan. Penelitian ini menggunakan pendekatan kuantitatif korelasional dengan sampel 124 mahasiswa yang diperoleh melalui teknik proportional stratified random sampling. Data dikumpulkan melalui kuesioner skala Likert empat tingkat dan dianalisis dengan regresi linear berganda. Hasil penelitian menunjukkan bahwa edukasi kewirausahaan berkelanjutan berpengaruh positif signifikan terhadap perilaku konsumtif ($p = 0.002$), sedangkan literasi ekonomi tidak berpengaruh signifikan ($p = 0.076$). Namun, secara simultan kedua variabel berpengaruh signifikan terhadap perilaku konsumtif ($p = 0.000$). Nilai koefisien determinasi sebesar 0,185 mengindikasikan bahwa kedua variabel menjelaskan 18,5% variasi perilaku konsumtif mahasiswa. Temuan ini mengindikasikan bahwa edukasi kewirausahaan berkelanjutan maupun literasi ekonomi belum cukup menekan perilaku konsumtif mahasiswa, bahkan berpotensi mendorong konsumsi tertentu akibat aktivitas kewirausahaan maupun rasa percaya diri finansial. Oleh karena itu, diperlukan strategi pembelajaran yang tidak hanya meningkatkan aspek kognitif, tetapi juga memperkuat kontrol diri dan kesadaran kritis mahasiswa dalam menghadapi budaya konsumtif digital.

Kata kunci: edukasi kewirausahaan berkelanjutan; kuantitatif; literasi ekonomi; perilaku konsumtif

Abstract

The proliferation of digital technology and evolving lifestyle patterns have rendered consumptive behavior among university students a critical concern. This study examined the influence of sustainable entrepreneurship education and economic

* Corresponding author

Citation in APA style: Anggraeni, A.T., & Indrawati, C.D.S. (2026). The influence of sustainable entrepreneurship education and economic literacy on consumptive behavior among university students. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 24-35.
<https://dx.doi.org/10.20961/jikap.v10i1.106549>

literacy on the consumptive behavior of Office Administration Education students at Sebelas Maret University from the 2021 and 2022 cohorts, analyzing both partial and simultaneous effects. A quantitative correlational approach was employed, with a sample of 124 students obtained through proportional stratified random sampling. Data were collected using a four-point Likert scale questionnaire and analyzed using multiple linear regression. Results indicated that sustainable entrepreneurship education exerted a significant positive effect on consumptive behavior ($p = .002$), whereas economic literacy demonstrated no significant effect ($p = .076$). However, both variables simultaneously demonstrated a significant influence on consumptive behavior ($p < .001$). The coefficient of determination ($R^2 = .185$) indicated that both variables explained 18.5% of the variance in students' consumptive behavior. These findings suggest that sustainable entrepreneurship education and economic literacy alone are insufficient to reduce consumptive behavior and may paradoxically encourage certain consumption patterns due to entrepreneurial activities or financial self-confidence. Consequently, educational strategies are needed that not only enhance cognitive dimensions but also strengthen students' self-control and critical awareness in navigating digital consumer culture.

Keywords: consumptive behavior; economic literacy; entrepreneurship education; quantitative; sustainable

Received July 21, 2025; Revised September 26, 2025; Accepted October 03, 2025;
Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.106549>

Introduction

Consumptive behavior represents a tendency to purchase goods or services driven primarily by desires rather than actual needs. This phenomenon frequently emerges from impulsive urges, social influences, and exposure to digital media. Anizzah et al. (2025) observed that contemporary university students exhibit increasingly heightened consumptive behavior attributable to instant-gratification lifestyles. This condition has become particularly pronounced in the digital era, wherein convenient access to e-commerce platforms and pervasive social media promotions have substantially amplified societal consumption patterns.

The consumptive phenomenon in Indonesia is evidenced by data from Katadata Insight Center and Kredivo (2023), which documented that 84.3% of consumers now utilize e-wallets, a significant increase from 60.9% in the preceding year. Furthermore, PayLater service adoption increased by 64.3% annually. A report by Google, Temasek, and Bain & Company (2023) affirmed that Indonesia constitutes the largest e-commerce market in Southeast Asia, with digital transaction values reaching USD 82 billion. These data demonstrate that digital technological advancement has not merely rendered transactions more convenient but has also intensified consumptive tendencies within society.

A similar phenomenon is observable among university students. A preliminary study involving 20 students from the Office Administration Education Program at Sebelas Maret University (2021 and 2022 cohorts) revealed that 65% of respondents had engaged in impulsive purchasing, 55% purchased items due to social media trends, 60% preferred online shopping, and 65% utilized digital installment plans for non-essential needs. These findings illustrate that consumptive behavior has become integral to students' daily lives, particularly as they constitute a digital native generation highly familiar with financial technology.

These findings align with research by Harahap et al. (2024), who identified that student consumptive behavior is influenced by internal factors, including the drive for immediate gratification and self-image concerns, as well as external factors such as trends, advertisements, and

social media. The consequences are substantial, encompassing financial waste, dependence on instant gratification, and diminished self-control in fulfilling needs (Elliyana et al., 2022). Thus, consumptive behavior extends beyond mere shopping activity to constitute a complex process influenced by psychological, social, and cultural dimensions.

Theoretically, consumptive behavior can be explained through behaviorist theory. Behavior fundamentally represents an individual's response to environmental stimuli influenced by both internal and external factors (Bandura, 1977). Skinner (1938) emphasized that behavior is formed through stimulus-response mechanisms reinforced by reinforcement or punishment, while Pavlov (1927) explained behavior as the result of associations between neutral stimuli and stimuli that naturally elicit specific responses, subsequently becoming established habits when stimuli are consistently repeated (classical conditioning). In the consumption context, consumptive behavior constitutes the outcome of social learning and environmental stimuli that encourage individuals to engage in excessive consumption (Anizzah et al., 2025; Elliyana et al., 2022; Wardhana, 2024).

Beyond classical theories, consumptive behavior can also be explained through more contemporary frameworks. The Theory of Planned Behavior proposed by Ajzen (1991) emphasizes that behavior is influenced by individual attitudes, subjective norms, and perceived behavioral control. In the consumption context, students who maintain positive attitudes toward online shopping, receive peer social support, and perceive financial control through e-wallet and PayLater facilities tend to engage in impulsive purchasing.

One factor hypothesized to influence student consumptive behavior is sustainable entrepreneurship education. Weidinger et al. (2014) defined sustainable entrepreneurship as entrepreneurial practice integrating economic, social, and environmental dimensions. According to Nasrudin et al. (2024), sustainable entrepreneurship education assists students in instilling sustainability values in their economic behavior. Freihals and Van Wordragen (2024) further affirmed that this education cultivates critical awareness, enabling students to consider not only short-term gains but also long-term consequences of consumption and production decisions. Consequently, students receiving sustainable entrepreneurship education tend toward greater selectivity and rationality in consumption.

Additionally, economic literacy exerts significant influence on consumptive behavior. Within the framework of literacy as sociocultural practice (Dewayani & Retnaningdyah, 2017), economic literacy is understood as the ability to comprehend economic concepts, principles, and mechanisms, and to apply them critically in daily decision-making (Agustin & Rindrayani, 2021; Dewi et al., 2022). Thus, economic literacy emphasizes cognitive, social, and cultural skills enabling individuals to interpret economic phenomena, analyze options, and make rational and responsible decisions regarding personal and societal welfare. Students with high economic literacy are expected to distinguish between needs and wants, control impulsive urges, and make more rational consumption decisions, particularly amid the digital economy's challenges.

However, prior research has predominantly focused solely on the influence of economic literacy on consumptive behavior or addressed sustainable entrepreneurship education in relation to entrepreneurial intentions. Limited research has simultaneously examined the influence of both factors on student consumptive behavior.

Accordingly, this study's significance lies in providing a more comprehensive analysis by connecting sustainable entrepreneurship education and economic literacy within the context of student consumptive behavior, specifically among Office Administration Education students at Sebelas Maret University from the 2021 and 2022 cohorts. This research differs from previous studies by analyzing the simultaneous influence of both variables on student consumptive behavior.

Based on the foregoing discussion, this study was formulated to address the following questions: (1) What is the influence of sustainable entrepreneurship education on the consumptive behavior of Office Administration Education students at Sebelas Maret University from the 2021 and 2022 cohorts? (2) What is the influence of economic literacy on the consumptive behavior of these students? (3) What is the simultaneous influence of both variables on student consumptive behavior?

Research Methods

This study was conducted at the Office Administration Education Program, Sebelas Maret University, from November 2024 to July 2025. The research process encompassed proposal development, data collection, analysis, and report writing. This location was selected because students in this program had completed coursework and participated in entrepreneurship internships, providing appropriate backgrounds for examining economic literacy and consumptive behavior.

A quantitative correlational research design was employed. According to Sugiyono (2023), correlational research aims to measure the strength and direction of relationships between variables without directly manipulating subjects. In this context, the study analyzed the influence of Sustainable Entrepreneurship Education (X_1) and Economic Literacy (X_2) on Student Consumptive Behavior (Y) through a survey method utilizing a closed-ended questionnaire.

The study population comprised all Office Administration Education students from the 2021 and 2022 cohorts, totaling 180 individuals (81 students from 2021 and 99 from 2022). The sample was determined using the Slovin formula with a 5% margin of error, yielding 124 respondents selected through proportional stratified random sampling. Respondents ranged in age from 21 to 25 years, comprising 16 males and 65 females from the 2021 cohort and 15 males and 84 females from the 2022 cohort, resulting in a predominantly female sample.

Data were collected online using Google Forms distributed through student communication groups. Prior to completion, respondents were required to provide informed consent, as specified in the questionnaire's introductory section. To ensure data quality, all items were mandatory, duplicate submissions were monitored, and response consistency patterns were reviewed.

The research instrument employed a four-point Likert scale comprising positive and negative statements for each variable indicator, modified to exclude a neutral option to elicit definitive responses (Hertanto, 2017). The questionnaire was developed based on indicators for sustainable entrepreneurship education, economic literacy, and student consumptive behavior variables.

Operationally, the Consumptive Behavior variable (Y) was defined as respondents' tendency to make unplanned purchases, exhibit dependence on online shopping, be influenced by promotions and discounts, be motivated by emotional factors, and purchase items to maintain lifestyle or follow social trends. Indicators included: (1) unplanned purchases, (2) online shopping dependence, (3) promotional and discount influence, (4) emotional shopping motivations, and (5) lifestyle maintenance desires.

The Sustainable Entrepreneurship Education variable (X_1) was defined as students' ability to apply business skills aligned with sustainability principles. Indicators included: (1) problem-solving ability in addressing sustainability challenges, (2) structured and innovative thinking in designing business solutions, and (3) proactive attitudes and social responsibility in decision-making.

The Economic Literacy variable (X_2) was defined as students' ability to understand and wisely apply economic concepts in daily decision-making. Indicators included: (1) economic knowledge, (2) economic behavior, (3) attitudes toward economics, (4) ability to access and understand financial information, and (5) digital financial literacy.

The research instrument was tested for validity using Pearson Product Moment correlation and for reliability using Cronbach's Alpha. An item was considered valid if its r -calculated exceeded r -table at the 5% significance level. Items were deemed reliable if Cronbach's Alpha exceeded .60. Results indicated that all items met validity and reliability standards.

Prior to conducting multiple linear regression analysis, classical assumption tests were performed, including: normality testing using Kolmogorov-Smirnov, linearity examination, multicollinearity testing using Tolerance and VIF, and heteroscedasticity analysis using the Glejser method. These tests ensured that data met parametric statistical analysis requirements.

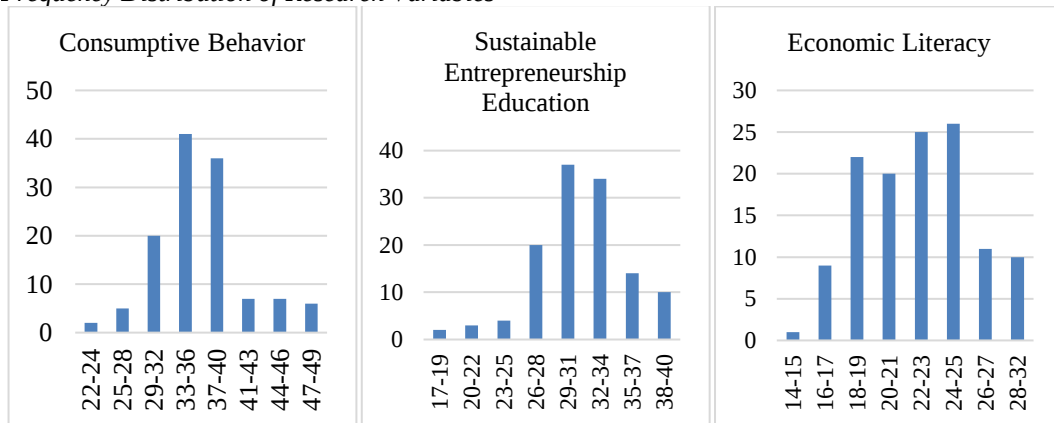
Data processing encompassed descriptive and inferential analyses. Descriptive analysis presented data through statistics including means and standard deviations. Inferential analysis employed multiple linear regression to determine simultaneous and partial influences of sustainable entrepreneurship education and economic literacy on student consumptive behavior. Analyses were conducted using SPSS version 26.

Result and Disssussion

Research Result

Descriptive analysis results indicated that Office Administration Education students at Sebelas Maret University from the 2021 and 2022 cohorts demonstrated mean scores of 31.22 for sustainable entrepreneurship education, 22.28 for economic literacy, and 36.22 for consumptive behavior. Standard deviations for all three variables ranged from 4 to 5 points, indicating reasonable data variation. Overall, although respondents demonstrated adequate understanding of economics and entrepreneurship, consumptive behavior tendencies remained moderate to high. This distribution is illustrated in Figure 1.

Figure 1
Frequency Distribution of Research Variables



Prior to hypothesis testing, instrument validity and reliability were examined. Validity testing using Pearson Product Moment indicated that all items had r-calculated values exceeding r-table (.1764), confirming validity. Reliability testing yielded Cronbach's Alpha values of .858 for sustainable entrepreneurship education, .794 for economic literacy, and .879 for consumptive behavior. As all alpha values exceeded .60, instruments were deemed reliable.

Subsequently, prerequisite analysis tests were conducted. The Kolmogorov-Smirnov normality test yielded a significance value of .200 ($> .05$), indicating normal data distribution. Linearity testing produced linearity significance values $< .05$ and deviation from linearity values $> .05$, confirming linear relationships between variables. Multicollinearity testing indicated Tolerance values of .720 and VIF of 1.390, confirming absence of multicollinearity. Heteroscedasticity testing using the Glejser method yielded independent variable significance values $> .05$, confirming absence of heteroscedasticity.

Partial testing through t-tests demonstrated that sustainable entrepreneurship education significantly influenced consumptive behavior, with $t = 3.230$ and $p = .002$ ($< .05$). Conversely, economic literacy showed no significant partial effect, with $t = 1.789$ and $p = .076$ ($> .05$). Detailed results appear in Table 1.

Table 1
Results of Partial t-Test Analysis

Model	Coefficients ^a		Beta	t	Sig.
	Unstandardized				
	Coefficients	Coefficients			
(Constant)	18.506	3.408		5.429	.000
Sustainable Entrepreneurship Education	.386	.120	.312	3.230	.002
Economic Literacy	.254	.142	.173	1.789	.076

The practical interpretation of regression coefficients indicates that each one-unit increase in sustainable entrepreneurship education score (X_1) increases student consumptive behavior (Y) by 0.386 points. This finding can be explained by students actively engaged in entrepreneurial activities frequently purchasing supporting items such as laptops, software, or following fashion trends and lifestyles to enhance the business image they manage.

Meanwhile, economic literacy (X_2) demonstrated a positive coefficient of 0.254 but was not statistically significant. This indicates that although students understand economic concepts, such knowledge is not consistently manifested in consumption control but is often used to justify purchases perceived as "valuable" or "beneficial."

Based on regression analysis results, the direction of influence was positive. This signifies that higher levels of sustainable entrepreneurship education and economic literacy correspond with higher consumptive behavior tendencies. This result appears contradictory to theories generally assuming that higher economic literacy and entrepreneurship knowledge would render individuals more rational and capable of suppressing consumptive behavior.

However, this finding can be understood through field phenomena. For example, students actively engaged in entrepreneurial activities frequently purchase business-supporting items. Additionally, some students tend to follow fashion trends or lifestyles to build professional images when networking with clients or business partners. This demonstrates that although they possess economic literacy, such understanding is not fully utilized to suppress consumption but rather to justify expenditures perceived as investments or business-supporting necessities.

Visualization of this relationship pattern can be observed in scatter plots. Figure 2 displays the relationship between sustainable entrepreneurship education and consumptive behavior. The scatter points tend to follow the regression line direction with a positive tendency, confirming a significant influence. Figure 3 displays the relationship between economic literacy and consumptive behavior. The scatter points appear more dispersed and do not form a clear pattern, indicating a weak and non-significant relationship.

Figure 2
Scatter Plot of Sustainable Entrepreneurship Education (X_1) and Consumptive Behavior (Y)

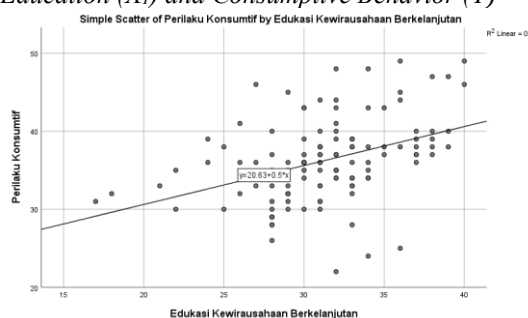
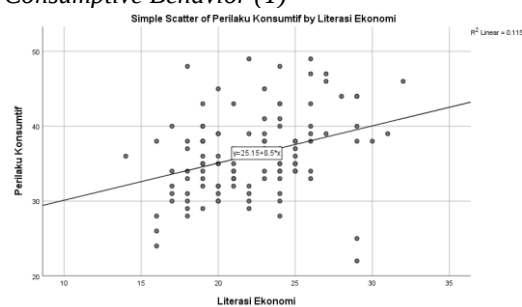


Figure 3
Scatter Plot of Economic Literacy (X_2) and Consumptive Behavior (Y)



F-test results demonstrated that sustainable entrepreneurship education and economic literacy simultaneously exerted a significant effect on student consumptive behavior, with $F(2, 121) = 13.722$ and $p < .001$. Detailed results appear in Table 2.

Table 2
Results of Simultaneous F-Test Analysis (ANOVA)

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	626.930	2	313.465	13.722	.000 ^b
Residual	2764.191	121	22.845		
Total	3391.121	123			

The regression model generated in this study is:

$$\hat{Y} = 18,506 + 0,386X_1 + 0,254X_2$$

The coefficient of determination (Adjusted R^2) of .171 ($R^2 = .185$) indicates that 18.5% of the variance in student consumptive behavior can be explained by sustainable entrepreneurship education and economic literacy, while the remaining 81.5% is influenced by factors outside the model. Detailed results appear in Table 3.

Table 3
Model Summary Statistics

Model Summary ^b			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.430 ^a	.185	.171	4.780

Furthermore, to determine the relative contribution of each independent variable, effective contribution (SE) and relative contribution (SR) calculations were performed. Results appear in Table 4.

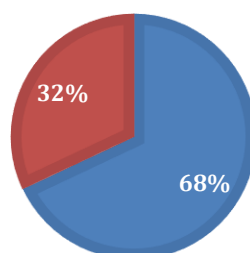
Table 4
Effective and Relative Contribution Analysis

Variable	Beta	rx _y	SE (%)	SR (%)
Sustainable Entrepreneurship Education (X_1)	0,312	0,404	12,61	68,16 $\approx$ 68
Economic Literacy (X_2)	0,173	0,339	5,87	31,73 $\approx$ 32
Total	–	–	18,48 $\approx$ 18,5	100

Based on calculations, the effective contribution of sustainable entrepreneurship education to consumptive behavior was 12.61%, with a relative contribution of 68.16%. Meanwhile, economic literacy demonstrated an effective contribution of 5.87%, with a relative contribution of 31.84%. These findings indicate that sustainable entrepreneurship education more dominantly influences student consumptive behavior compared to economic literacy. To clarify these results, the relative contribution proportions of both variables are visualized in a pie chart in Figure 4.

Figure 4
Relative Contribution of Independent Variables

■ Sustainable Entrepreneurship Education (X_1) ■ Economic Literacy (X_2)



Discussion

This study examined the influence of sustainable entrepreneurship education and economic literacy on the consumptive behavior of Office Administration Education students at Sebelas Maret University from the 2021 and 2022 cohorts. Results indicated that both variables simultaneously exerted a significant influence on consumptive behavior. However, when examined partially, only sustainable entrepreneurship education demonstrated a significant effect, while economic literacy showed no significant influence. Notably, the direction of influence was positive, signifying that greater student understanding of sustainable entrepreneurship and economic literacy corresponds with higher consumptive behavior tendencies.

The first finding demonstrates that sustainable entrepreneurship education significantly influences student consumptive behavior. However, the positive direction of this relationship does not fully align with theoretical frameworks or prior research. Rustyawati and Siswoyo (2023) and Rifaldi and Sangka (2025) affirmed that sustainable entrepreneurship education should promote wiser resource management, thereby suppressing consumptive behavior. This divergence in influence direction can be understood through the value-action gap phenomenon—the discrepancy between knowledge and actual behavior. Bernardes et al. (2018) explained that the value-action gap represents a paradox wherein individuals demonstrate positive attitudes or values yet act inconsistently with them. In the student context, although they understand sustainability principles, daily consumption behavior remains influenced by emotional impulses and social demands. Meyer and Simons (2021) added that this gap occurs due to situational factors, wherein consumption decisions are more heavily influenced by external pressures such as digital trends, discounts, and peer groups compared to internally held values. Consequently, despite students possessing theoretical knowledge of sustainability, lifestyle, trends, and robust digital access continue to dominate their consumptive choices (Ganglmair-Wooliscroft et al., 2025). Furthermore, moral licensing mechanisms (Blanken et al., 2015; Dütschke et al., 2018) may enable students to feel they have "already done something good" through entrepreneurship learning activities, consequently becoming more permissive in consumption. This explains why sustainable entrepreneurship education in this study actually strengthened rather than suppressed consumptive behavior.

This first finding aligns with international research, such as studies in Japan and Africa by Mahlaole (2025), wherein sustainable education strengthened consumption intentions oriented toward lifestyle and ethics. However, contrary to theories generally stating that such education would suppress consumptive behavior, studies such as Setiawan et al. (2024) demonstrated that self-efficacy and positive attitudes generated by entrepreneurship education, without accompanying internal control, can facilitate increased consumption. Conversely, a Chinese study by Jiang and Pu (2022) on students in the education industry showed that "sustainable consumption" is frequently understood as ethical consumerism, which in practice still involves purchasing goods/digital items as part of modern consumer identity.

Meanwhile, results for the economic literacy variable indicated no significant influence on consumptive behavior, despite a positive coefficient direction. This finding aligns with research by Dewi et al. (2022), who also found no significant influence, albeit with a different direction. This condition again demonstrates the value-action gap—the inconsistency between students' economic concept knowledge and actual consumption behavior application (Bernardes et al., 2018; Meyer & Simons, 2021). Rather than acting according to their economic understanding, student consumption decisions are frequently influenced by fast-and-frugal heuristics mechanisms (Raab & Gigerenzer, 2015)—economic decisions often influenced by cognitive shortcuts such as impulses to purchase due to discounts, promotions, or social validation. Additionally, Generation Z lifestyles strongly connected to social media and digital promotions (Herawati et al., 2025; Anizzah et al., 2025) more dominantly influence consumptive behavior compared to students' economic literacy. This affirms that their economic literacy remains at a cognitive level, not yet transformed into practical skills for controlling consumption.

This finding aligns with international research. Adeel et al. (2023) affirmed that financial literacy without practical skills tends to be merely declarative, thus not automatically suppressing consumptive behavior. Indeed, in the student context, literacy effects are often diminished by social

and digital environmental influences. Similarly, a study from Bulacan State University in the Philippines found that although student financial literacy was relatively good, impulse buying remained high because immediate desires and lifestyle influences dominated over long-term considerations (Sarmiento, 2024). Meanwhile, Yang (2022) highlighted that economic literacy functions more effectively when combined with behavioral control strategies, such as budgeting training or consumption decision simulations, enabling cognitive literacy to become genuinely internalized in daily practice. Thus, this study's results affirm that student economic literacy remains at a purely cognitive level, without accompanying genuine behavioral transformation.

When examined simultaneously, sustainable entrepreneurship education and economic literacy were proven to significantly influence consumptive behavior with an effective contribution of 18.5%. However, the positive influence direction of both indicates that student understanding of sustainable entrepreneurship and economic literacy actually corresponds with increased consumptive behavior. This finding differs from theoretical expectations (Dutta et al., 2022; Rosário & Raimundo, 2024) but aligns with research emphasizing the strong influence of lifestyle and digital currents on student consumption behavior (Herawati et al., 2025; Dewi et al., 2022). Several possible explanations exist. First, productive consumption due to student involvement in entrepreneurial activities indirectly increases certain shopping needs (Nasrudin et al., 2024). Second, increased financial self-confidence from economic literacy actually encourages students to more boldly conduct transactions (Oktaviana & Aji, 2025). Third, the robust digital ecosystem floods students with promotional stimuli, discounts, and consumption trends (Adhianto et al., 2019; Wardhana, 2024). This phenomenon aligns with Herbert Simon's bounded rationality concept (as cited in Giarlotta & Petralia, 2024), explaining individual limitations in making rational decisions due to complex information influences.

Considering these research results, strengthening curriculum design and instruction is necessary. First, sustainable entrepreneurship education materials should not only emphasize cognitive aspects of sustainability principles but also integrate reflective practices and authentic projects connecting entrepreneurship with daily consumption management. For example, students can be directed to create environmentally friendly business projects that simultaneously require them to critically evaluate consumption needs. Second, economic literacy should be taught through applied approaches, such as personal budgeting simulations, gamification in consumption decision-making, and case studies based on student digital consumption trends. This approach will help economic literacy not stop at declarative knowledge but develop into practical skills for controlling consumption behavior. Third, entrepreneurship and economic literacy instruction can be integrated through interdisciplinary learning with other courses, enabling students to perceive connections between theory and practice in daily life. Consequently, curriculum and instruction will not only provide conceptual understanding but also instill self-control, critical awareness, and resilience against increasingly powerful digital consumption temptations.

These research results provide both practical and theoretical implications. Practically, strengthening sustainable entrepreneurship education and economic literacy in higher education should be directed not only at cognitive domains but also at applied domains. Students need to be equipped with reflective experiences, budgeting simulations, gamification, and authentic projects connecting entrepreneurship concepts with daily consumption control. These efforts are expected to reduce the gap between knowledge and students' actual behavior. Theoretically, this study's results affirm the relevance of value-action gap, moral licensing, bounded rationality, and fast-and-frugal heuristics concepts in explaining student consumptive behavior in the digital era. Thus, this research can serve as a foundation for further in-depth studies regarding the design of effective educational interventions for developing sustainable consumption behavior.

Conclusion

This study concludes that sustainable entrepreneurship education exerts a significant positive influence on the consumptive behavior of Office Administration Education students at Sebelas Maret University from the 2021 and 2022 cohorts, while economic literacy exerts a positive but non-significant influence. Simultaneously, both contribute to consumptive behavior with a coefficient of

determination of 18.5%, with the largest contribution deriving from sustainable entrepreneurship education. These results partially align with behaviorist theory (Pavlov, 1927; Skinner, 1938; Bandura, 1977), which emphasizes that behavior is formed through stimulus-response and environmental reinforcement, as well as the theory of planned behavior (Ajzen, 1991), which posits that social norms and perceived control influence consumptive behavior. However, the positive direction of influence reveals a paradox, as theoretically, sustainable entrepreneurship education and economic literacy should suppress rather than enhance consumptive behavior. Therefore, this study theoretically contributes to strengthening value-action gap research (Bernardes et al., 2018; Meyer & Simons, 2021), moral licensing mechanisms (Blanken et al., 2015; Dütschke et al., 2018), fast-and-frugal heuristics (Raab & Gigerenzer, 2015), and bounded rationality (Simon, as cited in Giarlotta & Petralia, 2024), which explain how sustainable entrepreneurship education and economic literacy have not automatically been internalized into consumption control behavior in daily life. The practical implications of this research affirm that curriculum and instruction in higher education should be more applied, integrating reflective entrepreneurship projects requiring consumption needs evaluation, implementing personal budgeting simulations and decision-making gamification, and developing interdisciplinary learning connecting economic and entrepreneurship theory with student digital consumption practice. Consequently, this study's results not only enhance theoretical understanding of student consumptive behavior in the digital era but also provide practical direction for improving educational strategies that are more contextual, applied, and relevant to young generations' consumptive lifestyle challenges.

References

- Adeel, S., Daniel, A. D., & Botelho, A. (2023). The effect of entrepreneurship education on the determinants of entrepreneurial behaviour among higher education students: A multi-group analysis. *Journal of Innovation and Knowledge*, 8(1), 100324. <https://doi.org/10.1016/j.jik.2023.100324>
- Adhiarso, D. S., Utari, P., & Hastjarjo, S. (2019). The impact of digital technology to change people's behavior in using the media. *Digital Press Social Sciences and Humanities*, 2, Article 00005. <https://doi.org/10.29037/digitalpress.42256>
- Agustin, L., & Rindrayani, S. R. (2021). Pengaruh literasi ekonomi dan kontrol diri terhadap perilaku konsumtif mahasiswa program studi pendidikan ekonomi Universitas Bhinneka PGRI Tulungagung Tahun Akademik 2019/2020. *Oikos: Jurnal Kajian Pendidikan Ekonomi dan Ilmu Ekonomi*, 5(1), 39–50. <https://journal.unpas.ac.id/index.php/oikos/article/view/3053>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Anizzah, D. A. P. N., Marsofiyati, & Utari, E. D. (2025). Studi kasus: Perilaku konsumen dan gaya hidup konsumtif dalam berbelanja online generasi Z. *Musytari: Jurnal Manajemen, Akuntansi, dan Ekonomi*, 16(9). <https://doi.org/10.8734/mnmae.v1i2.359>
- Bandura, A. (1977). *Social learning theory*. Prentice-Hall. https://www.asecib.ase.ro/mps/Bandura_SocialLearningTheory.pdf
- Bernardes, J. P., Ferreira, F., Marques, A. D., & Nogueira, M. (2018). "Do as I say, not as I do"—A systematic literature review on the attitude-behaviour gap towards sustainable consumption of Generation Y. *IOP Conference Series: Materials Science and Engineering*, 459(1), 012089. <https://doi.org/10.1088/1757-899X/459/1/012089>
- Blanken, I., van de Ven, N., & Zeelenberg, M. (2015). A meta-analytic review of moral licensing. *Personality and Social Psychology Bulletin*, 41(4), 540–558. <https://doi.org/10.1177/0146167215572134>
- Dewayani, S., & Retnaningdyah, P. (2017). *Suara dari marjin: Literasi sebagai praktik sosial*. Remaja Rosdakarya.

- Dewi, A. P. K., Setiaji, C. A., & Widoyoko, S. E. P. (2022). Pengaruh literasi ekonomi dan life style terhadap perilaku konsumtif mahasiswa. *Surya Edunomics*, 6(1), 1–8. <https://jurnal.umpwr.ac.id/index.php/suryaedunomics/article/view/2267>
- Dütschke, E., Frondel, M., Schleich, J., & Vance, C. (2018). Moral licensing Another source of rebound? *Frontiers in Energy Research*, 6, Article 38. <https://doi.org/10.3389/fenrg.2018.00038>
- Dutta, A., Poddar, S., & Bhaumik, A. (2022). *Sustainable entrepreneurship*. Lincoln University College. <https://books.lucp.net/wp-content/uploads/Sustainable-Entrepreneurship.pdf>
- Elliyana, E., Surianti, Rostini, Gazali, S., Sucidha, I., Verawaty, Erwin, Ardyan, E. E., Fadillah, N. R., Yuliani, Tyra, M. J., Paerah, A., Nurmasari, I., Dwita, F., Suryo, B. S., & Narwis, A. (2022). *Perilaku konsumen*. Ahlimedia Press. https://www.academia.edu/37610166/PERILAKU_KONSUMEN_PERILAKU_KONSUMEN_MAKALAH_PERILAKU_KONSUMEN
- Freihals, M., & Van Wordragen, C. (2024). *Exploring the influence of sustainable entrepreneurship education on sustainable opportunity recognition* [Undergraduate thesis, Lund University]. Lund University. <https://lup.lub.lu.se/student-papers/record/9161429/file/9161432.pdf>
- Ganglmair-Wooliscroft, A., Bulmer, S., Palakshappa, N., & Dodds, S. (2025). A systemic view of sustainable consumption behaviour in the context of disruption. *Journal of Marketing Management*, 41(1–2), 147–177. <https://doi.org/10.1080/0267257X.2025.2474123>
- Girolotta, A., & Petralia, A. (2024). Simon's bounded rationality. *Decisions in Economics and Finance*, 47(1), 327–346. <https://doi.org/10.1007/s10203-024-00436-2>
- Google, Temasek, & Bain & Company. (2023). *Reaching new heights: Navigating the path to profitable growth*. Temasek. <https://www.temasek.com.sg/content/dam/temasek-corporate/news-and-views/resources/reports/google-temasek-bain-e-conomy-sea-2023-report.pdf>
- Harahap, M. G., Krahara, Y. D., Polimpung, L. J. C., Hasanah, Ramadhi, F., Fikriando, E., Nurdin, Siddiqa, H., Annas, M., Rachmadi, K. R., Anggraini, D. T., Sangadah, H. A., Shofia, Al., Junaida, E., Meliana, & Chakim, M. H. R. (2024). *Perilaku konsumen: Teori dan praktik*. PT Sada Kurnia Pustaka.
- Herawati, R., Sadih, A., & Sartika, S. H. (2025). Pengaruh literasi ekonomi dan gaya hidup terhadap perilaku konsumtif mahasiswa FKIP Pendidikan Ekonomi Universitas Ekasakti Padang. *Ekasakti Educational Scientific Journal*, 2(4), 607–620. <https://doi.org/10.60034/eesj.v2i2.36>
- Hertanto, E. (2017). Perbedaan skala Likert lima skala dengan skala Likert empat skala. *Jurnal Metodologi Penelitian*, September, 2–3.
- Jiang, S., & Pu, R. (2022). An empirical investigation on sustainable consumption behaviors in the online education industry: Perspectives from Chinese college students. *International Journal of Entrepreneurship*, 26(S1), 1–17.
- Katadata Insight Center & Kredivo. (2023, June 20). E-wallet, metode pembayaran digital yang paling banyak digunakan warga RI saat belanja online. *Databoks*. <https://databoks.katadata.co.id/datapublish/2023/06/20/e-wallet-metode-pembayaran-digital-yang-paling-banyak-digunakan-warga-ri-saat-belanja-online>
- Mahlaole, S. T. (2025). Education for sustainable development's role in influencing sustainable consumption behaviour among international students: A multi-group analysis. *Discover Education*, 4(1). <https://doi.org/10.1007/s44217-025-00498-3>
- Meyer, K. B., & Simons, J. (2021). Good attitudes are not good enough: An ethnographical approach to investigate attitude-behavior inconsistencies in sustainable choice. *Foods*, 10(6), Article 1317. <https://doi.org/10.3390/foods10061317>
- Nasrudin, D., Nurina, Oktavianti, P. R. M., Khamimah, W., Lutfi, Ariani, N., Winata, A., Nurhayati, L., Sudirman, A., Parmita, R., Irma, Fitriana, Trikariastoto, S., Wardhana, A., Fatma, Sinaga, E., Klau, E. R., & Widiastuti, T. (2024). *Membangun model kewirausahaan berkelanjutan*. Eureka Media Aksara.

- Oktaviana, H., & Aji, S. S. B. (2025). How financial literacy shapes impulsive "paylater" buying among Yogyakarta students. *InCAF: Proceedings of the International Conference on Accounting and Finance*, 3(1), 209–224.
- Pavlov, I. P. (1927). *Conditioned reflexes: An investigation of the physiological activity of the cerebral cortex* (G. V. Anrep, Trans.). Oxford University Press.
<https://psychclassics.yorku.ca/Pavlov/>
- Rifaldi, N. D., & Sangka, K. B. (2025). Peran pendidikan kewirausahaan dalam membangun niat ecopreneurship di kalangan mahasiswa pendidikan. *DWIJA Cendekia: Jurnal Riset Pedagogik*, 9(1), 1. <https://doi.org/10.20961/jdc.v9i1.94194>
- Rosário, A. T., & Raimundo, R. (2024). Sustainable entrepreneurship education: A systematic bibliometric literature review. *Sustainability*, 16(2), Article 0784.
<https://doi.org/10.3390/su16020784>
- Rustyawati, D., & Siswoyo. (2023). Pengembangan kewirausahaan berkelanjutan dalam pendidikan: Pendekatan berdasarkan prinsip-prinsip ekonomi Islam. *Jurnal Perbankan Syariah*, 3(2), 61–75.
- Sarmiento, A. G. M. (2024). Buy now, think later: Financial literacy and impulse buying behavior among college students in City of Malolos. *International Journal of Social Science Humanity & Management Research*, 3(11), 1452–1459.
<https://doi.org/10.58806/ijsshmr.2024.v3i11n10>
- Setiawan, A., Hafizah, A., & Sapitri, D. (2024). The impact of entrepreneurship education, perceived behavior control, and entrepreneurial self-efficacy on pre-service teacher candidates' entrepreneurial intention. *AL-ISHLAH: Jurnal Pendidikan*, 16(1), 387–397.
<https://doi.org/10.35445/alishlah.v16i1.3354>
- Skinner, B. F. (1938). *The behavior of organisms: An experimental analysis*. Appleton-Century-Crofts. <http://scioteca.caf.com/bitstream/handle/123456789/1091/RED2017-Eng-8ene.pdf?sequence=12>
- Sugiyono. (2023). *Metode penelitian kuantitatif kualitatif* (Vol. 3, Issue 1). Alfabeta.
- Wardhana, A. (2024). *Consumer behavior in the digital era 4.0 – Edisi Indonesia*. CV Eureka Media Aksara. https://www.researchgate.net/profile/Aditya-Wardhana/publication/383464524_PENGANTAR_PERILAKU_KONSUMEN/links/66cef5b8fa5e11512c3b162f/PENGANTAR-PERILAKU-KONSUMEN.pdf
- Weidinger, C., Fischler, F., & Schmidpeter, R. (2014). *Sustainable entrepreneurship: Business success through sustainability*. Springer. <https://doi.org/10.1007/978-3-642-38753-1>
- Yang, D. (2022). The impact of adaptive learning in entrepreneurial behavior for college students. *Frontiers in Psychology*, 12, Article 797459. <https://doi.org/10.3389/fpsyg.2021.797459>

Flipped learning implementation to improve student learning outcomes in office management fundamentals

Intan Cahya Wandira*, Hery Sawiji

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: intncay@gmail.com

Abstrak

Penelitian ini bertujuan untuk mengetahui implementasi model pembelajaran flipped learning dalam meningkatkan hasil belajar siswa pada mata pelajaran Dasar-Dasar Manajemen Perkantoran dan Layanan Bisnis. Penelitian menggunakan pendekatan Penelitian Tindakan Kelas (PTK) sebanyak dua siklus. Sumber data berasal dari hasil belajar siswa, guru mata pelajaran, siswa kelas 10 MPLB 1, dan dokumen pendukung. Teknik pengumpulan data dilakukan melalui tes, observasi, dan wawancara. Data dianalisis dengan teknik reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa penerapan flipped learning berjalan efektif melalui penyampaian materi berupa video pembelajaran yang diakses siswa sebelum pembelajaran tatap muka. Rata-rata nilai siswa meningkat dari 61% pada pra tindakan, menjadi 72% pada siklus I, dan 85% pada siklus II. Model ini juga meningkatkan keaktifan dan keterlibatan siswa selama proses pembelajaran.

Kata kunci: Inovasi Model Pembelajaran; Penelitian Tindakan Kelas; Video Pembelajaran

Abstract

This study aimed to investigate the implementation of the flipped learning model in improving student learning outcomes in the subject of Office Management and Business Services Fundamentals. The research employed Classroom Action Research (CAR) conducted over two cycles. Data sources included student learning outcomes, subject teachers, Grade 10 MPLB 1 students, and supporting documents. Data were collected through tests, observations, and interviews, then analyzed using data reduction, data display, and conclusion drawing techniques. The findings demonstrate that flipped learning was effectively implemented through instructional videos accessed by students prior to face-to-face sessions. Student average scores increased from 61% in the pre-action phase to 72% in Cycle I and 85% in Cycle II. This model also enhanced student engagement and active participation throughout the learning process.

* Corresponding author

Citation in APA style: Wandira, I.C., & Sawiji, H. (2026). Flipped learning implementation to improve student learning outcomes in office management fundamentals. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 36-45.
<https://dx.doi.org/10.20961/jikap.v10i1.104861>

Keywords : Classroom Action Research; Instructional Video; Learning Model Innovation

Received June 25, 2025; Revised October 03, 2025; Accepted October 18, 2025;
Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.104861>

Introduction

The rapid development of information and communication technology has driven transformative changes in education, including the pedagogical models implemented by teachers in schools. However, most learning processes in vocational high schools remain dominated by conventional teacher-centered methods that minimally engage students as active participants. This condition adversely affects student learning outcomes, particularly in Office Management and Business Services Fundamentals. A preliminary survey conducted at SMK Negeri 1 Sukoharjo revealed that the average daily test scores of Grade 10 MPLB 1 students reached only 62, falling below the Minimum Completeness Criteria (KKM) of 70.

The flipped learning model represents an innovative pedagogical approach that inverts traditional learning sequences. Students study material at home through media such as videos, while classroom time is allocated for discussions and problem-solving activities with teachers. According to Tresnawati et al. (2022), flipped learning is particularly relevant for 21st-century education as it develops students' independent learning activities and enhances classroom engagement. This model transforms learning tasks typically assigned in class into home-based activities, while school time is devoted to completing assignments or confirming knowledge acquired at home through peer and teacher collaboration (Maolidah et al., 2017). Consequently, classroom interactions proceed more effectively because both teachers and students have prior familiarity with the topics under discussion (Hasjim & Siem, 2021). Additionally, Subagia (2017) stated that flipped learning can improve learning outcomes and make instruction less monotonous through the utilization of engaging digital media.

However, these findings indicate that flipped learning implementation still encounters challenges, particularly in learning environments not fully adaptive to technology use or among students with low learning autonomy. Therefore, further research is necessary that considers the characteristics of vocational high school students and the active role of teachers in facilitating the adaptation process to flipped learning. Herein lies the novelty of this study: the implementation of video-based flipped learning specifically designed according to vocational high school student characteristics, combined with intensive teacher guidance throughout the learning process.

Based on this background, the research problem is formulated as follows: How is the flipped learning model implemented to improve student learning outcomes in Office Management and Business Services Fundamentals at SMK Negeri 1 Sukoharjo? This study aimed to examine both the process and results of implementing the flipped learning model in enhancing student learning outcomes. The research is expected to serve as an innovative solution for vocational high school instruction and contribute to improving the quality of technology-based education in Indonesia.

Theoretically, flipped learning is a pedagogical model that inverts conventional learning sequences: students study theory at home and engage in practice or clarification in class (Putra et al., 2020). Flipped learning encourages greater student activity, enhances engagement, and develops critical thinking skills (Nurpianti et al., 2018). Meanwhile, Somayana (2020) defined learning outcomes as academic achievements attained through examinations and assignment completion, supported by active participation in questioning and answering that contributes to these achievements. Learning outcomes result from the interaction between stimulus and response demonstrated through mastery of specific competencies across cognitive, affective, and psychomotor domains (Mboa et al., 2024). Learning outcomes are influenced by internal factors such as learning interest and motivation, teacher competence, teacher communication, student

learning discipline, classroom management, and self-management, while external factors include the implemented learning model, school environment, and school culture (Yandi et al., 2023).

Research Methods

This study employed a Classroom Action Research (CAR) approach. This research design was selected to describe teacher and student activities during the learning implementation process. Classroom Action Research represents an effort by teachers to improve the quality of and responsibility for classroom learning management. CAR is research that describes cause-and-effect relationships from treatments while documenting all occurrences during treatment implementation and describing the entire process from initial treatment to its outcomes. Thus, CAR describes both processes and results as conducted by teachers in their classrooms to improve learning quality.

The research subjects were 34 Grade 10 MPLB 1 students at SMK Negeri 1 Sukoharjo for the 2024/2025 academic year, comprising 2 male and 32 female students. The researcher selected Grade 10 MPLB 1 because this class demonstrated low learning outcomes in Office Management and Business Services Fundamentals, with a classical absorption rate of only 62% on the second daily test for business services material in the first semester.

Qualitative data were used to describe the success of implementing the flipped learning model designed by the researcher, obtained through observations and interviews during teaching-learning activities between teachers and students. Quantitative data were obtained from test results administered to the 34 Grade 10 MPLB 1 students at SMK Negeri 1 Sukoharjo.

Data collection techniques included observation, interviews, document analysis, and tests. The data validity technique in this classroom action research employed triangulation, one approach used to enhance data validity and credibility obtained during the research process. The test instruments used in this study underwent validity testing to ensure that the measurement tools accurately measured the investigated aspects. The instruments comprised pre-action, Cycle I, and Cycle II questions validated through expert judgment. This expert validation involved specialists with expertise in the field, specifically Office Management and Business Services Fundamentals teachers. Reliability testing of observation instruments was not conducted through inter-rater reliability because only one observer, the researcher, was involved. To ensure instrument consistency, the researcher verified internal consistency reliability by examining coherence among indicators in the observation sheets and ensuring uniform assessment criteria for each observed aspect. Additionally, expert judgment was incorporated in the content validation process to ensure each observation indicator accurately represented the measured aspects.

Data analysis in this study utilized interactive qualitative data analysis techniques consisting of data reduction, data display, and conclusion drawing. Data reduction involves selecting appropriate and useful data while identifying data that can be disregarded, ensuring that collected data provide meaningful information. Data display presents information in narrative, graphic, table, and matrix formats to illustrate relationships between variables. The conclusion drawing stage involved drawing conclusions regarding possibilities and evaluations. Action success indicators were established as follows: (a) at least 75% of students achieve scores ≥ 70 , and (b) student engagement during learning reaches at least 75% based on observation sheets. Research ethics were fulfilled through informed consent from students and parents, along with guarantees of personal data confidentiality.

Result and Discussion

Research Result

Pre-Action Data

During this phase, the researcher conducted direct observation of problems related to Office Management and Business Services Fundamentals instruction in Grade 10 MPLB. This classroom action research was conducted collaboratively between the researcher as the process observer and the teacher as the instructor of Office Management and Business Services Fundamentals. Generally,

the teacher still employed conventional models that rendered students passive and bored during learning activities. During observation, the researcher referred to prepared observation sheets, yielding percentages of 37% for teacher activity and 42% for student activity. The pre-action posttest results before implementing the flipped learning model are presented in Table 1:

Table 1
Pre-Action Student Learning Outcomes

Description	Initial Results	Percentage (%)
Number of Students	34	–
Met KKM	15	44%
Did Not Meet KKM	19	56%
Average Score	61%	–
Classical Absorption	44%	–

Table 1 indicates that the pre-action phase before implementing the flipped learning model yielded a classical absorption rate of 44%, calculated from the percentage of students achieving mastery. Of the 34 students, 15 (44%) achieved mastery, while 19 (56%) did not meet the minimum criteria.

Cycle I Results

Cycle I action research was conducted over two meetings, encompassing planning, implementation, reflection, and observation stages. First, action planning included: (a) designing the flipped learning model; (b) preparing lesson plans for Office Management and Business Services Fundamentals on office communication material, along with materials for pre-class delivery such as videos, PowerPoint presentations, and other teaching materials; and (c) preparing research assessment instruments for data collection, including teacher teaching activity observation sheets and student activity observation sheets. Second, action implementation consisted of: (a) opening activities, (b) core activities, and (c) closing activities. Third, a posttest was administered at the end of the cycle to determine the success level of the intervention following flipped learning model implementation. Fourth, the researcher observed student and teacher activities to assess classroom learning implementation.

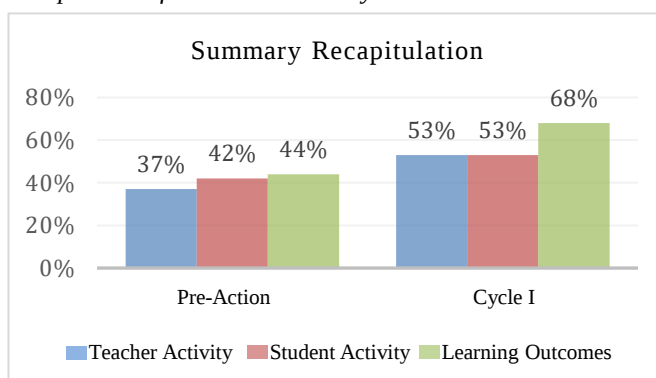
Table 2
Cycle I Student Learning Outcomes

Description	Results	Percentage (%)
Number of Students	34	–
Met KKM	23	68%
Did Not Meet KKM	11	32%
Average Score	72%	–
Classical Absorption	68%	–

Table 2 demonstrates that Cycle I achieved an average score of 72%, with 23 students scoring above the KKM (≥ 70) and 11 students scoring below the KKM (< 70). The classical absorption rate reached 68%, calculated based on the percentage of students achieving learning mastery.

Figure 1 Teacher activities

Comparison of Pre-Action and Cycle I Observation Results



Based on Figure 1, observation of teacher and student activities in Cycle I revealed improvements compared to the pre-action phase. Teacher activity increased from 37% in the pre-action phase to 53% in Cycle I, while student activity rose from 42% to 53%. Furthermore, student learning outcomes showed significant improvement from 44% in the pre-action phase to 68% in Cycle I. These improvements indicate that implementing the flipped learning model positively impacts teacher and student engagement in the learning process. Nevertheless, several aspects required improvement, including teacher readiness in managing group discussions and student readiness for active, independent learning.

Cycle II Results

Cycle I results were obtained from posttests administered at the end of each cycle and subsequently analyzed. The strengths and weaknesses identified in Cycle I served as references for Cycle II. Cycle II learning occurred over five meetings, with the first meeting consisting of question-and-answer sessions or quizzes to assess students' initial abilities, followed by material delivery. A posttest was administered at the end of the cycle to determine intervention success following flipped learning model implementation. Cycle II stages included planning, action implementation, observation, and reflection. First, action planning comprised: (a) designing the flipped learning model; (b) preparing lesson plans for Office Management and Business Services Fundamentals on office communication material, along with materials for pre-class delivery such as videos, PowerPoint presentations, and other teaching materials; and (c) preparing research assessment instruments for data collection. Second, action implementation consisted of: (a) opening activities, (b) core activities, and (c) closing activities. Third, reflection was conducted by administering posttest questions to individual students as a measure of flipped learning model implementation success. Fourth, observation was conducted to monitor teacher and student activities in implementing flipped learning model procedures from beginning to end.

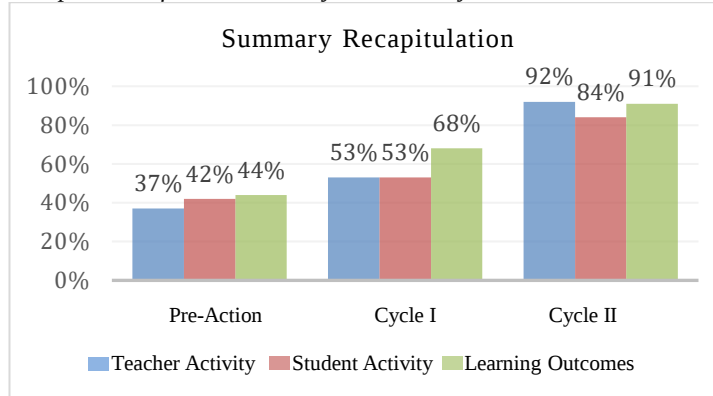
Reflection from Cycle I improvements, based on posttest results and teacher and student activity observations, indicated enhancement. Student outcomes achieved the success indicator initially established by the researcher at 75%. This improvement demonstrates that implementing the flipped learning model can enhance student learning outcomes, thus eliminating the need for further corrective actions in Cycle III.

The researcher analyzed the Cycle II observations and found that student learning outcomes improved, with learning indicator achievement reaching scores in the very good category. The Cycle II student learning outcomes for Office Management and Business Services Fundamentals are presented in the following table:

Table 3
Cycle II Student Learning Outcomes

Description	Results	Percentage (%)
Number of Students	34	–
Met KKM	31	91%
Did Not Meet KKM	3	9%
Average Score	85%	–
Classical Absorption	91%	–

Table 3 indicates that of 34 students, 31 achieved scores above the established KKM of 70. This number demonstrates significant improvement in student learning mastery compared to both initial conditions and Cycle I results. The classical absorption rate in Cycle II reached 91%, indicating that most Grade 10 MPLB 1 students successfully achieved learning mastery according to criteria. However, the three students who did not meet the KKM were individuals with specific characteristics and constraints, such as difficulty comprehending material despite receiving additional guidance. These constraints were individual in nature and could not be fully addressed through classical intervention.

Figure 2*Comparison of Pre-Action, Cycle I, and Cycle II Observation Results*

As shown in Figure 2, teacher and student activities in Cycle II demonstrated significant improvement compared to both the pre-action phase and Cycle I. Teacher activity increased from 37% in the pre-action phase to 53% in Cycle I, reaching 92% in Cycle II. In Cycle II, teachers showed improvement in learning management with excellent percentages, demonstrating greater confidence in material delivery, maximum utilization of learning media, and effective implementation of the flipped learning model while explaining difficult concepts using simple language and everyday examples that enhanced student comprehension.

Student activity also increased from 42% in the pre-action phase to 53% in Cycle I, then dramatically to 94% in Cycle II. Cycle II student activity observations from initial to final meetings showed significant improvement with a percentage of 84%, falling within the good criteria. Compared to student activity during pre-action and Cycle I, which still indicated that students were unable to follow flipped learning model instruction, this improvement demonstrates that students were prepared to participate in school learning activities, capable of following flipped learning model instruction both in group discussions and expressing opinions, and able to complete teacher-assigned tasks properly. Students demonstrated greater readiness because they had previously studied materials at home through provided instructional videos. To monitor student engagement in accessing video-based learning materials, the researcher utilized analytics features available on YouTube. Displayed data, such as view counts, were used to assess the extent to which Grade 10 MPLB 1 students accessed the provided instructional videos. Based on this data, the office communication material video was accessed 141 times, while the written and verbal communication material received 133 views.

The improvements were not only evident from observation results but were also corroborated by teacher and student statements in interviews and questionnaires administered by the researcher. Mrs. Nur, the Office Management and Business Services Fundamentals teacher, stated that learning using the flipped learning model brought significant impact on student enthusiasm:

"As a teacher, I found the flipped learning model very helpful. Students appeared more prepared when entering class. They no longer waited for explanations from the beginning but already had a basic understanding. Discussions became more interactive, and I could immediately emphasize important points. Compared to before, the classroom atmosphere felt more lively and students were more confident in expressing their opinions."

The teacher also added that although there were some challenges when first implementing the flipped learning model, such as the teacher's initial inability to create instructional videos and students' unfamiliarity with accessing materials independently, by the second cycle students began showing good adaptation:

"Honestly, I initially struggled with instructional videos because I usually just searched for teaching videos on YouTube that sometimes didn't match what I wanted to convey to students. However, with the researcher's assistance, I found it helpful and learned how to

create instructional videos. Regarding student response to the flipped learning model, initially I only used PowerPoint or whiteboard media, but with instructional videos, students became more enthusiastic even though some students hadn't watched the videos before class during initial implementation. After reminders and support, they began adapting. Some previously passive students even started actively asking questions and participating in discussions." (Interview with Teacher, May 6, 2025)

Interviews conducted with several students after Cycle II implementation indicated that they experienced changes in their learning approach and attitudes toward subject material. One student stated:

"Learning with videos before class made me more prepared and understand what we would study in class. When entering class, I wasn't confused, and I became confident enough to ask questions because I already had an idea of the material." (Interview with Student, May 6, 2025)

"The flipped learning model is more interesting because before we only used books and PowerPoint that were too monotonous, so as students listening to teacher explanations, we quickly became drowsy." (Interview with Student, May 6, 2025)

"The difference with the learning model before using flipped learning is that I quickly became drowsy because we only listened to teacher explanations I felt like I was being told a bedtime story. However, when using the flipped learning model, I felt happy because there were videos that didn't just rely on monotonous books or PowerPoint." (Interview with Student, May 6, 2025).

Discussion

This classroom action research was conducted over two cycles encompassing planning, implementation, reflection, and observation stages. The intervention was motivated by low pretest scores among students who had not yet achieved the KKM and minimal student engagement in learning. The findings demonstrate significant improvement from the pre-action phase to Cycle I and Cycle II across teacher teaching activities, student learning activities, and student learning outcomes. During the pre-action phase, the learning process remained predominantly passive, with teacher activity at 37%, characterized by unidirectional material delivery and suboptimal utilization of learning media. This condition affected both student activity and learning outcomes.

In Cycle I, teacher learning activity reached 67% and student activity 53%. Students began adapting to the flipped learning model. Although learning outcomes improved compared to pretest conditions, research success indicators were not fully achieved. This was attributable to insufficient active student participation, time constraints and uncondusive classroom conditions, and suboptimal implementation of group presentation activities. Based on Cycle I reflection, the researcher decided to make improvements and continue to Cycle II.

The flipped learning model can significantly improve student learning outcomes. According to Putri and Hanesman (2020), flipped learning positively influences student learning outcomes. This success was demonstrated through improved classical absorption rates reaching the learning mastery indicator of 91% in Cycle II, meeting the established target. The logical process underlying these findings indicates that students who have previously studied material can follow learning more effectively, while classroom time can be utilized to strengthen understanding through discussions and interactive activities between teachers and students or among students. This model provides greater opportunities for students to actively construct knowledge.

The research findings demonstrate improved student learning outcomes from 44% in the pre-action phase to 68% in Cycle I and 91% in Cycle II. This finding aligns with research by Zainuddin and Halili (2016), which stated that flipped learning enhances learning motivation and outcomes due to its student-centered nature. With appropriate technology support and teacher guidance, flipped learning becomes an effective approach for improving learning quality in vocational high schools. Flipped learning provides opportunities for interaction and direct feedback typically unavailable in traditional learning (Lundin et al., 2018). This also relates to research by Sari et al. (2021), which

stated that students tend to prefer the flipped learning model due to its flexibility and enhancement of learning readiness.

Interpretation of these research results indicates that flipped learning can create more meaningful learning atmospheres, increase student participation, and provide more effective learning experiences. According to Rohiman et al. (2024), consistent application of flipped learning can improve student learning outcomes. The study findings also reinforce prior constructivist theory developed by Saputra and Mujib (2018), who stated that flipped learning model instruction is superior to lecture-based methods. Flipped learning positively influences student learning outcomes (van Alten et al., 2019). Additionally, Hafizuddin and Akhmad (2024) stated that flipped learning has proven effective in improving student learning outcomes through statistical testing, where the calculated value of 32.621 exceeded the critical value, which is highly relevant to Office Management and Business Services Fundamentals.

Based on the explanation above, it can be concluded that implementing the flipped learning model is effective in improving learning activities, student engagement, and learning outcomes in Office Management and Business Services Fundamentals. This model can serve as an alternative learning strategy applicable in vocational high school instruction to promote more optimal learning achievement.

Conclusion

Based on the research findings, implementing the flipped learning model proves effective in improving learning outcomes among Grade 10 MPLB 1 students in Office Management and Business Services Fundamentals at SMK Negeri 1 Sukoharjo. The initial problem identified through the preliminary survey indicated that student learning mastery remained low at only 62%, representing 21 students. This condition underscored the need for innovative implementation of learning models capable of promoting active student engagement and improving learning outcomes. The implementation results demonstrate significant improvement in both learning activities and student learning outcomes. Teacher and student activities during the learning process showed quality enhancement, evidenced by active student participation in discussions, better material comprehension, and enthusiasm in video-based learning. Regarding learning mastery, the number of students meeting the KKM increased from 15 students in the pre-action phase to 23 students in Cycle I and 31 students in Cycle II. Classically, student absorption reached 91%, surpassing the established minimum success indicator of 75%. This research also reinforces prior constructivist theory developed by Saputra and Mujib (2018), who stated that flipped learning model instruction is superior to lecture-based methods. Flipped learning positively influences student learning outcomes (van Alten et al., 2019). Additionally, Hafizuddin and Akhmad (2024) stated that flipped learning has proven effective in improving student learning outcomes through statistical testing, where the calculated value of 32.621 exceeded the critical value, demonstrating high relevance to Office Management and Business Services Fundamentals.

The practical implications of this research suggest that teachers can utilize various media, such as instructional videos, to deliver material before face-to-face classroom sessions. This activity can make classroom learning more effective for discussions, question-and-answer sessions, and practice exercises. This approach is particularly beneficial for students who need or prefer independent learning styles, as they tend to require more time to comprehend material. Based on these research findings, teachers are recommended to implement the flipped learning model consistently while adjusting to student characteristics. Teachers should also monitor student readiness in accessing materials before classroom learning activities to ensure effective flipped learning implementation. Additionally, students are expected to optimally utilize instructional video materials provided before face-to-face sessions to be better prepared for classroom learning processes. Student discipline and learning autonomy become crucial aspects requiring development in implementing this learning model. Furthermore, recommendations for future researchers include investigating flipped learning model implementation across different subjects to expand the research scope and provide a more comprehensive picture of this learning model's effectiveness across various fields of study. The limitations of this research relate to the instructional video production

process, during which the researcher encountered technical difficulties including audio interference during recording or voiceover sessions. Heavy rainfall disrupted recording clarity, requiring the researcher to repeat the recording process several times. This condition extended media production time beyond the planned schedule.

References

- Hafizuddin, M. A., & Akhmad, J. (2024). Model pembelajaran flipped learning untuk meningkatkan hasil belajar peserta didik pada kelas XI MA NW Lenek. *ESENSI: Jurnal Riset Pendidikan*, 1(1), 29–35. <https://doi.org/10.71094/esensi.v1i1.30>
- Hasjim, M., & Siem, E. Y. E. (2021). Penerapan model pembelajaran flipped classroom dalam meningkatkan kemampuan interaksi berbicara mahasiswa. *Jurnal Ilmu Budaya*, 9(1), 152–164. <https://journal.unhas.ac.id/index.php/jib/article/download/13322/6664/43948>
- Lundin, M., Bergviken Rensfeldt, A., Hillman, T., Lantz-Andersson, A., & Peterson, L. (2018). Higher education dominance and siloed knowledge: A systematic review of flipped classroom research. *International Journal of Educational Technology in Higher Education*, 15(1). <https://doi.org/10.1186/s41239-018-0101-6>
- Maolidah, I. S., Ruhimat, T., & Dewi, L. (2017). *Efektivitas penerapan model pembelajaran flipped classroom pada peningkatan kemampuan berpikir kritis*. (Skripsi, Universitas Pendidikan Indonesia) Bandung, Indonesia.
- Mboa, M. N., & Ajito, T. (2024). Meningkatkan hasil belajar dengan menggunakan model pembelajaran problem based learning (PBL) pada materi peluang siswa kelas VIII SMPK St. Theresia Kupang. *Journal on Education*, 6(2), 12296–12301. <https://doi.org/10.31004/joe.v6i2.5074>
- Nurpianti, S., Suwarma, I. R., & Jauhari, A. (2018). Kajian implementasi pendekatan flipped classroom pada pembelajaran fisika. *Prosiding Seminar Nasional Fisika (SINAFI)*, 115–119. <http://proceedings.upi.edu/index.php/sinafi/article/view/383>
- Putra, H. L. H., Maula, & Uswatun. (2020). Analisis proses pembelajaran dalam jaringan (daring) masa pandemi Covid-19 pada guru sekolah dasar. *Jurnal Basic Edu*, 4(4), 861. <https://doi.org/10.31004/basicedu.v4i4.460>
- Putri N, F., & Hanesman, H. (2020). Pengaruh penerapan model pembelajaran project-based learning terhadap hasil belajar. *Voteteknika (Vocational Teknik Elektronika dan Informatika)*, 8(1), 27. <https://doi.org/10.24036/voteteknika.v8i1.107688>
- Rohiman, I., Miftah, A., Thooyar, H., Darussalam, U. I., & Barat, J. (2024). Pengaruh metode flipped learning terhadap motivasi belajar peserta didik pada mata pelajaran PAI. *Ideguru: Jurnal Karya Ilmiah Guru*, 10(1), 414–425. <https://doi.org/10.51169/ideguru.v10i1.1481>
- Saputra, M. E. A., & Mujib, M. (2018). Efektivitas model flipped classroom menggunakan video pembelajaran matematika terhadap pemahaman konsep. *Desimal: Jurnal Matematika*, 1(2), 173. <https://doi.org/10.24042/djm.v1i2.2389>
- Sari, S. P., Siregar, E. F. S., & Lubis, B. S. (2021). Pengembangan pembelajaran blended learning berbasis model flipped learning untuk meningkatkan 6C for HOTS mahasiswa PGSD UMSU. *Jurnal Basicedu*, 5(5), 3460–3471. <https://doi.org/10.31004/basicedu.v5i5.1334>
- Somayana, W. (2020). Peningkatan hasil belajar siswa melalui metode PAKEM. *Jurnal Pendidikan Indonesia*, 1(03), 283–294. <https://doi.org/10.59141/japendi.v1i03.33>
- Subagia, I. M. (2017). Penerapan model pembelajaran flipped classroom untuk meningkatkan prestasi belajar IPA siswa kelas X AP 5 SMK Negeri 1 Amlapura tahun ajaran 2016/2017. *Lampuhyang*, 8(2). <https://doi.org/10.47730/jurnallampuhyang.v8i2.26>
- Tresnawati, C., Aryanti, F., & Suhaerah, L. (2022). Flipped learning dalam meningkatkan berpikir kritis mahasiswa pada materi fotosintesis di masa pandemik Covid-19. *BIOSFER: Jurnal Biologi dan Pendidikan Biologi*, 7(1). <https://doi.org/10.23969/biosfer.v7i1.5752>
- Yandi, A., Nathania Kani Putri, A., & Syaza Kani Putri, Y. (2023). Faktor-faktor yang mempengaruhi hasil belajar peserta didik (literature review). *Jurnal Pendidikan Siber Nusantara*, 1(1), 13–24. <https://doi.org/10.38035/jpsn.v1i1.14>

Zainuddin, Z., & Halili, S. H. (2016). Flipped classroom research and trends from different fields of study. *International Review of Research in Open and Distributed Learning*, 17(3).
<https://doi.org/10.19173/irrodl.v17i3.2274>

The effect of compensation and work environment on employee work motivation

Ilham Husni Ramdani*, Tri Murwaningsih

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: ilhambusnir@gmail.com

Abstrak

Penelitian ini bertujuan untuk membuktikan 1) pengaruh kompensasi terhadap motivasi kerja karyawan Matahari Department Store Pakuwon Mall Solo Baru, dan 2) pengaruh lingkungan kerja terhadap motivasi kerja karyawan Matahari Department Store Pakuwon Mall Solo Baru. Penelitian ini menggunakan metode kuantitatif, populasi dalam penelitian ini adalah seluruh karyawan internal Matahari Department Store Pakuwon Mall Solo Baru sebanyak 42 orang. Teknik pengambilan sampel menggunakan sampel jenuh dengan kuesioner sebagai teknik pengambilan data. Pengolahan data menggunakan metode SEM dengan bantuan aplikasi SMARTPLS. Teknik validasi menggunakan pengujian uji validitas konvergen, validitas konvergen, reliabilitas, signifikansi nilai bobot, dan multikolinieritas. Teknik analisis data menggunakan pengujian path coefisien, uji R², uji f², dan uji Q². Hasil penelitian ini adalah: 1) kompensasi tidak berpengaruh terhadap motivasi kerja dibuktikan dengan hasil uji Path Coefisien menunjukkan nilai T-Statistic 1,150 < 1,96 dan p-values sebesar 0,250 > 0,005. 2) Lingkungan kerja berpengaruh terhadap motivasi dibuktikan dengan hasil uji T menunjukkan nilai T-Statistic sebesar 2,116 > 1,96 dan p-values sebesar 0,034 < 0,05.

Kata kunci : budaya organisasi; kinerja karyawan; produktivitas kerja

Abstract

This study aimed to examine (1) the effect of compensation on employee work motivation at Matahari Department Store Pakuwon Mall Solo Baru, and (2) the effect of work environment on employee work motivation at the same location. This quantitative research involved a population of 42 internal employees. Total sampling technique was employed, with data collected through questionnaires. Data analysis was conducted using Structural Equation Modeling (SEM) with SmartPLS software. Validation procedures included convergent validity, discriminant validity, reliability, weight significance, and multicollinearity tests. The data analysis employed path coefficient testing, R², f², and Q² tests. The findings revealed that (1) compensation did not significantly influence work motivation, as indicated by a t-statistic of 1.150 (< 1.96) and p-value of .250 (> .05); and (2) work environment had a significant effect on motivation, supported by a t-statistic of 2.116 (> 1.96) and p-value of .034 (< .05).

* Corresponding author

Citation in APA style: Ramdani, I.H., & Murwaningsih, T. (2026). The effect of compensation and work environment on employee work motivation. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 46-57. <https://dx.doi.org/10.20961/jikap.v10i1.108662>

Keywords: employee performance; organizational culture; work productivity

Received June 25, 2025; Revised October 03, 2025; Accepted October 18, 2025;
Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.108662>

Introduction

As a retail company with sales targets, Matahari Department Store Pakuwon Mall Solo Baru operates 12 hours daily (10:00–22:00 WIB) without holidays, with work schedules divided into morning and afternoon shifts. Employees are expected to maintain high work motivation and strict discipline in accordance with Standard Operating Procedures (SOPs). However, employee motivation has declined, as evidenced by non-compliance with SOPs and disciplinary issues. Observations revealed several instances of employee misconduct: (1) sales promoters frequently absent from their work areas, spending time in the warehouse attaching security tags while listening to YouTube; (2) employees gathering in groups and socializing during working hours; (3) taking unauthorized breaks outside designated rest periods; and (4) inadequate interpersonal communication and mutual respect among certain employees, leading to potential conflicts. If left unaddressed, these behaviors may negatively affect the work motivation of other employees.

According to Maslow's hierarchy of needs theory, motivation fundamentally arises from the desire to fulfill needs, progressing from lower to higher levels (Andjarwati, 2015). Maslow categorized these needs into five levels: physiological, safety, social, esteem, and self-actualization. However, subsequent theoretical refinements suggest that needs should not be viewed as a strict hierarchy; rather, multiple needs can be fulfilled simultaneously (Siagian, 2019). Work motivation is influenced by internal factors—including desires for survival, possession, recognition, acknowledgment, and power—as well as external factors such as work environment conditions, compensation, effective supervision, job security, status and responsibility, and flexible regulations (Sutrisno, 2019).

Compensation represents one factor that influences employee work motivation. Compensation can be defined as remuneration or recognition provided individually by organizations for task completion or achievement of established standards or targets (Mujanah, 2019). Fundamentally, compensation aims to attract, retain, and motivate employees to contribute their best efforts to the organization through both financial and non-financial means (Sinambela, 2018). Compensation may take various forms, including salaries and wages, incentives, allowances, health and welfare benefits, career development opportunities such as skills training, and social compensation in the form of recognition, appreciation, teamwork cohesion, and verbal praise (Ulfatin & Triwiyanto, 2016). Effective compensation practices must consider adequacy in quantity and quality, equity, and appropriateness regarding position, timing, risk, and responsibility (Harras et al., 2020).

Research conducted by Putri (2021) demonstrated that compensation had a positive and significant effect on employee work motivation at PT. Sumber Sarana Agro (IDC). Similarly, Fauzi et al. (2023) found that compensation significantly influenced work motivation among employees at the Regional Personnel and Human Resource Development Agency of Makassar City. However, Butarbutar and Nawangsari (2022) reported that compensation did not significantly affect civil servant motivation at the DKI Jakarta Provincial DPRD Secretariat. This finding was corroborated by Sufiya (2021), who also found no significant relationship between compensation and work motivation.

Employee work motivation is also influenced by work environment conditions. The work environment encompasses not only physical conditions but also psychological and social dimensions. As the setting where employees perform their duties, the work environment affects work productivity, creating optimal conditions that enable task completion in a comfortable, healthy, and efficient manner (Kamal et al., 2023). The work environment comprises two types: physical

work environment, which includes facilities and supporting infrastructure; and non-physical work environment, which encompasses human conditions and interactions, air quality, temperature, lighting, noise levels, colors, and ambient aromas (Sedarmayanti, 2015).

Organizations must cultivate a quality work environment through employee personal qualities such as motivation levels, knowledge, abilities, and commitment; leadership quality in motivating, directing, and supporting managers; team quality characterized by supportive, cohesive, close, solid, and harmonious inter-colleague relationships that minimize conflicts; organizational work systems including organizational culture and compensation systems; and contextual factors that emerge suddenly from pressures and changes (Enny, 2019). Research by Indah and Riana (2020) demonstrated that work environment had a positive and significant effect on employee work motivation at Ibis Styles Denpasar Hotel. Sugiarti (2022) similarly found that work environment influenced employee work motivation at PT. Suryamas Elsindo Primatama.

Both compensation and work environment are hypothesized to influence work motivation; however, previous research has yielded inconsistent findings. Fauzi et al. (2023) found that compensation and work environment, both partially and simultaneously, had significant effects on employee work motivation. Conversely, Ginting et al. (2024) reported that only work environment significantly affected employee work motivation, while compensation showed no significant effect.

Table 1
Summary of Previous Research Findings

	Proven Results	Unproven Results
Compensation for Work Motivation	Employees are oriented towards financial compensation supported by a fair, competitive and transparent company compensation policy. (Putri, 2021)	Compensation isn't the only factor that motivates employees, although it does influence job satisfaction. Companies focus less on non-financial compensation: the work environment, career opportunities, recognition, and a sense of belonging. (Sufiya, 2021)
	The work motivation of ASN employees comes from extrinsic sources, where motivation increases driven by financial compensation such as salary and other benefits. (Fauzi, Latief, dan Bahasoan, 2023)	Motivation is more effectively influenced by work discipline factors: strict rule enforcement, transparent work evaluations, and the provision of sanctions or rewards. Compensation in the form of salary and benefits is not a primary factor. (Butarbutar dan Nawangsari, 2022)
	Employees consider that financial compensation is important and can increase work motivation. (Fauzi dkk., 2023)	Salary and benefits are not the primary factors influencing compensation. They are more influenced by the work environment and facilities. (Ginting dkk., 2024)

Source: Data processed by researchers (2025)

Across the aforementioned previous studies, work environment consistently showed significant effects on work motivation. This can be attributed to work environment—encompassing both physical and psychological dimensions—functioning as a hygiene factor in Herzberg's motivation theory, serving to reduce dissatisfaction even though it does not directly increase work motivation. In essence, work environment functions to maintain motivation levels and prevent decline.

Given the observed phenomena and inconsistent findings in previous research, this study aimed to determine (1) whether compensation affects employee work motivation, and (2) whether

work environment affects employee work motivation. This research focused on the variables of compensation, work environment, and work motivation. Compensation can be measured using indicators including wages and salary, incentives, allowances, and facilities (Afandi, 2018).

Compensation itself may include salaries and wages, incentives, allowances, health and welfare benefits, and career compensation such as workplace security, career and skills development, as well as social compensation in the form of recognition and appreciation, praise, and teamwork cohesion (Ulfatin & Triwiyanto, 2016). This study employed combined indicators from Afandi (2018) and Ulfatin and Triwiyanto (2016), encompassing (1) salary, (2) incentives, (3) recognition/appreciation in the form of verbal and symbolic praise, and (4) career opportunities including training and career advancement.

Work environment can be measured across two indicator categories: (1) physical work environment, including adequate lighting, good air circulation, comfortable spatial arrangement, harmonious decoration, low noise levels, and work support facilities; and (2) non-physical work environment, including positive and respectful relationships with supervisors and harmonious relationships among colleagues (Sedarmayanti, 2017). This study employed simplified indicators comprising facilities, work atmosphere, employee-supervisor relationships, and colleague relationships.

Work motivation can be measured through driving force, willingness, voluntariness, skill development, skill formation, responsibility, obligation, and goals (Siagian, 2013). This study simplified these indicators into (1) goals, (2) efforts to achieve goals accompanied by drive and enthusiasm, (3) voluntariness without coercion as part of strategy, and (4) improvement as a follow-up effort, including working more effectively, enhancing discipline and responsibility, and skill and self-development.

The research questions were (1) Does compensation affect employee work motivation? and (2) Does work environment affect employee work motivation? This study aimed to (1) analyze the effect of compensation on employee work motivation at Matahari Department Store Pakuwon Mall Solo Baru, and (2) analyze the effect of work environment on employee work motivation at the same location. The hypotheses were: H1: Compensation affects employee work motivation; and H2: Work environment affects employee work motivation.

Research Methods

This quantitative study employed descriptive analysis techniques. The population comprised 42 employees of Matahari Department Store Pakuwon Mall Solo Baru. Total sampling technique was utilized, with samples drawn from the entire population. Data were collected using closed-ended questionnaires with a 4-point Likert scale (1–4).

As the research variables were latent constructs, they were converted into indicator variables and analyzed using Structural Equation Modeling (SEM). Instrument validity was assessed through outer model evaluation: (1) for reflective indicators, convergent validity, discriminant validity, and reliability tests were conducted; and (2) for formative indicators, weight significance and multicollinearity tests were performed. Subsequently, inner model analysis was conducted through path coefficient testing, R^2 (coefficient of determination), f^2 (effect size), and Q^2 (predictive relevance). Hypothesis testing employed t-tests and F-tests.

Result and Discussion

Research Result

Respondent Characteristics

Respondents consisted of 42 non-consignment employees of Matahari Department Store Pakuwon Mall Solo Baru. The sample was predominantly female ($n = 31$, 73.8%), with males comprising the remainder ($n = 11$, 26.2%). Regarding age distribution, employees aged 21–25 years represented the largest group ($n = 15$, 35.7%), followed by 26–30 years ($n = 11$, 26.2%), with both 31–35 years and ≥ 36 years groups each comprising 8 employees (19%). By position, Sales Promoter

Boys/Girls (SPB/SPG) constituted the majority (n = 27, 64.3%), followed by cashiers (n = 7, 16.7%), supervisors (n = 2, 4.8%), and customer service and other positions (n = 3 each, 7.1%). Educational backgrounds showed that most employees held senior high school or equivalent qualifications (n = 33, 78.6%), followed by bachelor's degrees (n = 8, 19%), and master's/doctoral degrees (n = 1, 2.4%).

Table 2
Respondent Characteristics

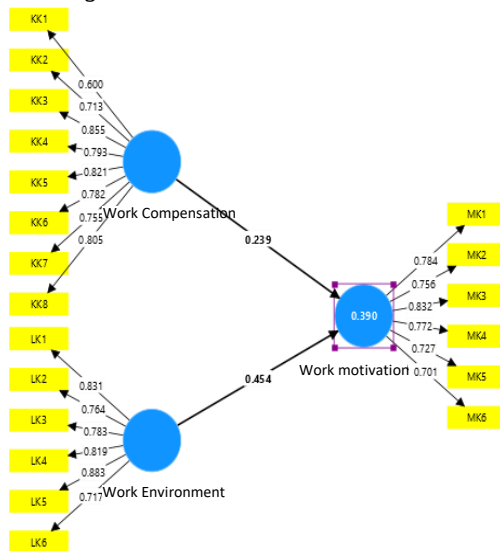
Characteristic	Category	Frequency	Percentage
Gender	Male	11	26,2%
	Female	31	73,8%
Age	21 – 25	15	35,7%
	26 – 30	11	26,2%
	31 – 35	8	19%
	≥ 36	8	19%
Position	SPV	2	4,8%
	SPB/ SPG	27	64,3%
	Cashier	7	16,7%
	Customer Service	3	7,1%
	Other	3	7,1%
Education	High School/Equivalent	33	78,6%
	S1	8	19%
	S2/ S3	1	2,4%

Source: Data processed by researchers (2025)

Convergent Validity

Figure 1

Path Diagram



The outer loading values from Figure 1 are presented in Table 3. The convergent validity assessment criterion requires outer loading values > 0.60, which is considered acceptable for explanatory research (Sugiyono, 2015). All items demonstrated outer loading values exceeding 0.60 (ranging from 0.600 to 0.883), indicating that all indicators were valid.

Table 3
Outer Loading Values

	Work Compensation	Work Environment	Work Motivation	Status
KK1	0.600			Valid
KK2	0.713			Valid
KK3	0.855			Valid
KK4	0.793			Valid
KK5	0.821			Valid
KK6	0.782			Valid
KK7	0.755			Valid
KK8	0.805			Valid
LK1		0.831		Valid
LK2		0.764		Valid
LK3		0.783		Valid
LK4		0.819		Valid
LK5		0.883		Valid
LK6		0.717		Valid
MK1			0.784	Valid
MK2			0.756	Valid
MK3			0.832	Valid
MK4			0.772	Valid
MK5			0.727	Valid
MK6			0.701	Valid

Source: Data processed by researchers (2025)

Discriminant Validity

Discriminant validity was assessed using the cross-loading method, which compares the outer loading of each indicator against its own construct with loadings on other constructs, where values should be higher for the intended construct (Ghozali, 2016).

Table 4
Discriminant Validity (Cross-Loading)

	Work Compensation	Work Environment	Work Motivation	Status
KK1	0.600	0.360	0.514	Valid
KK2	0.713	0.472	0.333	Valid
KK3	0.855	0.450	0.313	Valid
KK4	0.793	0.430	0.342	Valid
KK5	0.821	0.572	0.348	Valid
KK6	0.782	0.350	0.287	Valid
KK7	0.755	0.436	0.372	Valid
KK8	0.805	0.464	0.434	Valid
LK1	0.523	0.831	0.600	Valid
LK2	0.321	0.764	0.516	Valid
LK3	0.397	0.783	0.319	Valid
LK4	0.518	0.819	0.355	Valid
LK5	0.472	0.883	0.439	Valid
LK6	0.541	0.717	0.494	Valid

MK1	0.476	0.325	0.784	Valid
MK2	0.556	0.368	0.756	Valid
MK3	0.344	0.534	0.832	Valid
MK4	0.422	0.296	0.772	Valid
MK5	0.285	0.634	0.727	Valid
MK6	0.247	0.467	0.701	Valid

Source: Data processed by researchers (2025)

The results confirmed that all indicators exhibited higher loadings on their respective constructs than on other constructs, establishing discriminant validity.

Reliability

Reliability testing was conducted to ensure consistency of individual indicator values relative to their measurements (Haryono, 2016). The acceptable thresholds require composite reliability > 0.80 and average variance extracted (AVE) > 0.50 (Ghozali, 2016). Additionally, Cronbach's alpha values should exceed 0.60 (Sarwono & Narimawati, 2015).

Table 5
Reliability Test Results

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)	Status
KK	0.900	0.904	0.920	0.591	Reliable
LK	0.889	0.902	0.915	0.642	Reliable
MK	0.857	0.862	0.893	0.582	Reliable

Source: Data processed by researchers (2025)

All variables demonstrated composite reliability values exceeding 0.80 and AVE values above 0.50. Cronbach's alpha values for all variables also exceeded 0.60. These results indicate that the research instruments possessed adequate reliability.

Weight Significance

Weight significance testing was conducted to compare outer weight values across constructs to determine which indicators contributed most substantially to each construct. Significance was established when $p < .05$ and $t\text{-statistic} > 1.96$ (Ghozali, 2016).

Table 6
Outer Weight Results

	Original sample	Sample mean	Standard deviation	T statistics (O/STDEV)	P values	Status
KK1 <- KK	0.231	0.244	0.096	2.402	0.016	Valid
KK2 <- KK	0.150	0.152	0.044	3.436	0.001	Valid
KK3 <- KK	0.141	0.132	0.051	2.740	0.006	Valid
KK4 <- KK	0.154	0.149	0.044	3.500	0.000	Valid
KK5 <- KK	0.156	0.153	0.046	3.374	0.001	Valid
KK6 <- KK	0.129	0.120	0.058	2.239	0.025	Valid
KK7 <- KK	0.167	0.164	0.050	3.353	0.001	Valid
KK8 <- KK	0.195	0.194	0.049	3.941	0.000	Valid
LK1 <- LK	0.276	0.280	0.062	4.446	0.000	Valid
LK2 <- LK	0.237	0.234	0.054	4.394	0.000	Valid

LK3 <- LK	0.147	0.136	0.062	2.351	0.019	Valid
LK4 <- LK	0.163	0.158	0.048	3.425	0.001	Valid
LK5 <- LK	0.202	0.200	0.039	5.194	0.000	Valid
LK6 <- LK	0.227	0.231	0.056	4.019	0.000	Valid
MK1 <- MK	0.196	0.199	0.046	4.280	0.000	Valid
MK2 <- MK	0.225	0.233	0.057	3.931	0.000	Valid
MK3 <- MK	0.244	0.239	0.045	5.425	0.000	Valid
MK4 <- MK	0.177	0.182	0.048	3.688	0.000	Valid
MK5 <- MK	0.267	0.253	0.057	4.653	0.000	Valid
MK6 <- MK	0.203	0.193	0.048	4.228	0.000	Valid

Source: Data processed by researchers (2025)

All indicators demonstrated significant contributions to their respective constructs ($p < .05$; $t > 1.96$), confirming their validity.

Multicollinearity

Multicollinearity testing was conducted to assess whether multicollinearity existed within the formative block model and its indicators. The absence of multicollinearity is indicated by VIF values < 5 (Utami, 2013).

Table 7

Multicollinearity Test Results

Item	VIF	Status
KK1	1.447	Valid
KK2	1.899	Valid
KK3	3.354	Valid
KK4	2.661	Valid
KK5	2.951	Valid
KK6	2.661	Valid
KK7	2.974	Valid
KK8	2.642	Valid
LK1	2.106	Valid
LK2	2.104	Valid
LK3	3.253	Valid
LK4	4.652	Valid
LK5	3.721	Valid
LK6	1.591	Valid
MK1	2.254	Valid
MK2	1.883	Valid
MK3	2.297	Valid
MK4	2.151	Valid
MK5	1.568	Valid
MK6	1.569	Valid

Source: Data processed by researchers (2025)

All indicators demonstrated VIF values below 5 (ranging from 1.447 to 4.652), confirming the absence of multicollinearity.

Coefficient of Determination (R^2)

The coefficient of determination test was conducted to assess the strength of influence of independent variables on endogenous variables (Haryono, 2016). Interpretation guidelines suggest values of 0.67, 0.33, and 0.19 represent strong, moderate, and weak effects, respectively (Ghozali, 2016).

Table 8
R² Results

	R-square	R-square adjusted
Work Motivation	0.390	0.359

Source: Data processed by researchers (2025)

The results indicated that $R^2 = .390$ (R^2 adjusted = .359), indicating that compensation and work environment together explained 39% of the variance in work motivation, representing a moderate effect.

Effect Size (f^2)

Effect size testing was conducted to assess the strength of exogenous variables on endogenous variables, with interpretation thresholds of 0.02, 0.15, and 0.35 indicating small, medium, and large effects, respectively (Ghozali, 2016).

Table 9
Effect Size Results

	KK	LK	MK
KK			0.062
LK			0.224
MK			

Source: Data processed by researchers (2025)

Compensation demonstrated a small effect on work motivation ($f^2 = 0.062$), while work environment exhibited a medium effect ($f^2 = 0.224$).

Predictive Relevance (Q^2)

Predictive relevance was assessed to evaluate the quality of model-generated observation values. This test serves as a goodness-of-fit indicator, where $Q^2 > 0$ indicates an acceptable model (Ghozali, 2016). Using the formula $Q^2 = 1 - (1 - R^2)$, the calculated $Q^2 = .39$, indicating that the model possesses strong predictive relevance and explains 39% of the information in the data.

Observation and Interview Findings

Field observations and interviews revealed that compensation did not make a substantial contribution to motivation because (1) employees perceived their salaries as satisfactory, meeting minimum wage standards; (2) fulfilling daily needs served as the primary work motivation; (3) the work environment and colleague relationships were comfortable and supportive; (4) supervisors functioned effectively as mentors, supporting employee needs in fulfilling duties and responsibilities; and (5) company policies were perceived as fair regarding both achievements and violations.

Path Coefficient Analysis

Path coefficient analysis was conducted to examine relationships between variables based on t-statistic significance with a threshold > 1.96 and p-value $< .05$ using bootstrapping. Hypotheses were accepted when t-statistic > 1.96 and p-value $< .05$; otherwise, they were rejected (Ghozali, 2016).

Table 10
Path Coefficient Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Signifikansi
KK -> MK	0.239	0.317	0.208	1.150	0.250	Tidak Signifikan
LK -> MK	0.454	0.412	0.215	2.116	0.034	Signifikan

Source: Data processed by researchers (2025)

The results indicated that not all hypotheses were supported. H1 was rejected: Compensation did not significantly affect work motivation ($t = 1.150$, $p = .250$). Conversely, H2 was supported: Work environment significantly affected work motivation ($t = 2.116$, $p = .034$).

Discussion

Effect of Compensation on Work Motivation

The path coefficient analysis revealed that compensation did not significantly affect work motivation ($t = 1.150 < 1.96$; $p = .250 > .05$). The effect size analysis indicated that compensation explained only 6.2% of the variance in work motivation. These findings align with Butarbutar and Nawangsari (2022) and Sufiya (2021), who similarly found no significant relationship between compensation and employee work motivation.

Observational findings indicated that employees were satisfied with their salaries, which may have reduced the incremental motivational effect of additional compensation, consistent with research by Yana et al. (2022). The work environment including colleague and supervisor relationships emerged as a more influential factor than compensation, a finding also corroborated by Ginting et al. (2024). According to Herzberg's Two-Factor Theory, fulfillment of basic needs and company policies represent hygiene factors that do not directly enhance motivation but rather prevent dissatisfaction (Azwanda et al., 2024).

Observations further revealed that recognition and career opportunities were not primary motivators for employees. These aspects constitute motivator factors in Herzberg's framework, which serve to enhance motivation and job satisfaction. Consequently, compensation whether material or non-material provided by the organization has not successfully enhanced employee work motivation in this context.

Effect of Work Environment on Work Motivation

Work environment demonstrated a significant effect on work motivation ($t = 2.116 > 1.96$; $p = .034 < .05$). Effect size analysis revealed that work environment explained 22.4% of the variance in work motivation. The most influential aspects included work facilities that fulfilled job requirements, followed by a safe work atmosphere, supervisor relationships characterized by role modeling behaviors and attitudes, and colleague relationships marked by helpfulness, comfort, and mutual respect.

These findings are consistent with Riana (2020), who demonstrated that work environment significantly affected employee work motivation. Sugiarti (2022) noted that facilities contributed most substantially to work environment quality, directly impacting comfort, efficiency, and job satisfaction. Wahyuningsih and Kirono (2023) added that a safe, comfortable, and conducive work atmosphere supports smooth work operations free from hazard concerns, thereby enhancing performance. Prakoso et al. (2022) observed that supervisors serving as role models foster employee trust, and clear direction combined with effective communication can stimulate work enthusiasm. Colleague relationships built on mutual assistance and respect also contribute to creating a comfortable and harmonious social atmosphere. These results support the conclusion that improvements in work environment quality correspond to increases in employee work motivation.

Conclusion

This study examined the effects of compensation and work environment on employee work motivation at Matahari Department Store Pakuwon Mall Solo Baru. The findings indicate that (1) compensation does not significantly affect employee work motivation, as evidenced by the path coefficient analysis ($t = 1.150 < 1.96$; $p = .250 > .05$), suggesting that compensation magnitude does not enhance employee work motivation; and (2) work environment significantly affects employee work motivation ($t = 2.116 > 1.96$; $p = .034 < .05$), indicating that improvements in work environment quality correspond to increased employee work motivation.

These findings corroborate Azmi (2024) and Ginting et al. (2024), demonstrating that compensation does not affect work motivation while work environment serves as the dominant influencing factor. The work environment dimensions examined—including work facilities quality, work support quality, colleague relationships, and employee-supervisor relationships—broadly support Herzberg's Two-Factor Theory, which posits that motivation is influenced by intrinsic or motivator factors that generate job satisfaction, while hygiene factors do not create satisfaction but prevent dissatisfaction.

The practical implications of this research provide insights for organizations in creating safe and comfortable work environments. Organizations should collaborate with employees to maintain physical work environments while fostering competitive yet familial work atmospheres built on supportiveness and mutual respect.

This study is limited to examining the effects of compensation and work environment on employee work motivation at a single store location. Future research would benefit from expanded samples across multiple store locations and consideration of additional variables that may influence work motivation, such as workload, leadership style, company policies, and personal factors including self-esteem and social support. Subsequent researchers should also consider focusing on specific motivation theories such as Herzberg's Two-Factor Theory.

References

- Andjarwati, T. (2015). Motivasi dari sudut pandang teori hirarki kebutuhan Maslow, teori dua faktor Herzberg, teori X Y McGregor, dan teori motivasi prestasi McClelland. *Jurnal Ilmu Ekonomi & Manajemen*, 1(2), 45–54. <https://doi.org/10.30996/jmm17.v2i01.422>
- Butarbutar, & Nawangsari. (2022). The effect of compensation and work discipline on employee performance through work motivation (Case study: Secretariat of DPRD DKI Jakarta Province). *Dinasti International Journal of Education Management and Social Science*, 3(4), 468–477. <https://doi.org/10.31933/dijemss.v3i4>
- Enny, W. M. (2019). *Manajemen sumber daya manusia*. Ubhara Manajemen Press.
- Fauzi, Latief, & Bahason. (2023). Pengaruh kompensasi dan lingkungan kerja terhadap motivasi kerja pegawai pada Badan Kepegawaian dan Pengembangan Sumber Daya Manusia Daerah Kota Makassar. *Jurnal Akuntansi dan Manajemen*, 1(1), 1–14. <https://ejournal.nobel.ac.id/index.php/manuver/article/view/3626>
- Ghozali, I. (2016). *Aplikasi analisis multivariate dengan program IBM SPSS 23* (8th ed.). Badan Penerbit Universitas Diponegoro.
- Haryono, S. (2016). *Metode SEM untuk penelitian manajemen dengan AMOS LISREL PLS*. PT. Intermedia Personalia Utama.
- Hasibuan, M. (2016). *Manajemen sumber daya manusia*. Bumi Aksara.
- Indah D. P., N., & Riana. (2020). The influence of physical work environment and organizational culture on work motivation and employee performance at Ibis Styles Bali Denpasar Hotel. *American Journal of Humanities and Social Sciences Research*, 4(8), 43–51. <https://www.ajhssr.com/wp-content/uploads/2020/08/F20484351.pdf>
- Mujanah, S. (2019). *Manajemen kompensasi*. CV. Putra Media.
- Sarwono, J., & Narimawati, U. (2015). *Membuat skripsi, tesis, dan disertasi dengan Partial Least Square SEM (PLS-SEM)*. Andi Offset.
- Siagian. (2019). *Manajemen sumber daya manusia*. Bumi Aksara.

- Sinambela. (2018). *Manajemen sumber daya manusia*. PT Bumi Aksara.
- Sugiarti, E. (2022). The influence of training, work environment and career development on work motivation that has an impact on employee performance at PT. Suryamas Elsindo Primatama in West Jakarta. *International Journal of Artificial Intelligence Research*, 6(1). <https://doi.org/10.29099/ijair.v6i1.304>
- Sugiyono. (2019). *Metodologi penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Sutrison. (2019). *Manajemen sumber daya manusia*. Kencana.
- Ulfatin, & Triwiyanto. (2016). *Manajemen sumber daya manusia bidang pendidikan*. Rajawali Pers.
- Wibowo. (2016). *Manajemen kinerja*. Rajawali Pers.

Effects of optimism and academic advisor social support on student resilience

Dini Nur Aisyiah*, Cicilia Dyah Sulistyaningrum Indrawati

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: dnaisyiah@student.uns.ac.id

Abstrak

Penelitian ini mengkaji (1) pengaruh optimisme terhadap ketahanan mahasiswa angkatan 2021 Program Pendidikan Administrasi Perkantoran, (2) pengaruh dukungan sosial pembimbing akademik terhadap ketahanan mahasiswa, dan (3) pengaruh simultan optimisme dan dukungan sosial pembimbing akademik terhadap ketahanan mahasiswa. Pendekatan kuantitatif dengan pengambilan sampel jenuh digunakan, melibatkan 80 mahasiswa aktif dari angkatan 2021 Program Pendidikan Administrasi Perkantoran. Data dikumpulkan menggunakan kuesioner dan dianalisis melalui analisis regresi linier berganda menggunakan SPSS versi 26. Hasil penelitian menunjukkan bahwa (1) optimisme memberikan pengaruh positif dan signifikan terhadap ketahanan mahasiswa, seperti yang ditunjukkan oleh $t(78) = 4,218, p < 0,001$; (2) dukungan sosial pembimbing akademik tidak memberikan pengaruh signifikan terhadap ketahanan mahasiswa, $t(78) = 1,199, p = 0,234$; dan (3) optimisme dan dukungan sosial penasihat akademik secara simultan memberikan pengaruh positif dan signifikan terhadap ketahanan mahasiswa, $F(2, 77) = 11,680, p < .001, R^2 = .233$.

Kata kunci: dosen; ketahanan diri; sikap positif; skripsi

Abstract

This study examined (1) the effect of optimism on the resilience of students in the 2021 cohort of the Office Administration Education Program, (2) the effect of academic advisor social support on student resilience, and (3) the simultaneous effect of optimism and academic advisor social support on student resilience. A quantitative approach with saturated sampling was employed, involving 80 active students from the 2021 cohort of the Office Administration Education Program. Data were collected using questionnaires and analyzed through multiple linear regression analysis using SPSS version 26. The findings revealed that (1) optimism exerted a positive and significant effect on student resilience, as indicated by $t(78) = 4.218, p < .001$; (2) academic advisor social support did not exert a significant effect on student resilience, $t(78) = 1.199, p = .234$; and (3) optimism and academic advisor social support simultaneously exerted a positive and significant effect on student resilience, $F(2, 77) = 11.680, p < .001, R^2 = .233$.

* Corresponding author

Citation in APA style: Aisyiah, D.N., & Indrawati, C.D.S. (2026). Effects of optimism and academic advisor social support on student resilience. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 58-68. <https://dx.doi.org/10.20961/jikap.v10i1.106208>

Keyword: lecturer; positive attitude; resilience; thesis

Received July 16, 2025; Revised October 12, 2025; Accepted October 20, 2025;
Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.106208>

Introduction

Thesis completion represents a critical final stage in undergraduate education. The Minister of Education and Culture Regulation of the Republic of Indonesia Number 3 of 2020 concerning National Higher Education Standards stipulates a maximum study duration of seven academic years (14 semesters) for bachelor's degree programs. Ideally, students should complete their thesis within four academic years (8 semesters). However, many students fail to meet this target annually. Data from SINTA (State University Analytics) on timely graduation rates over the past five years indicate that undergraduate on-time graduation percentages at several Indonesian universities remain relatively low: Jenderal Soedirman University at 42.3%, Bogor Agricultural Institute at 43.2%, Yogyakarta State University at 33.5%, and Sebelas Maret University at 34.8%. These figures demonstrate that average on-time graduation rates remain below 50%, indicating that delayed completion continues to be a prevalent issue in higher education institutions.

This phenomenon also occurs at the program level. Data obtained from the Office Administration Education Program administration for 2024 revealed that 28 students exceeded the standard eight-semester duration. Various internal and external factors influence students' completion timelines.

A preliminary study involving 29 students from the Office Administration Education Program was conducted to understand the reasons for delayed thesis completion. The findings revealed low resilience levels among students and identified various internal and external factors contributing to completion delays. Internal factors included loss of motivation, procrastination tendencies, and lack of confidence in thesis work. External factors encompassed non-conducive and unsupportive environments, difficulties in finding literature, and challenges in scheduling meetings with academic advisors. These difficulties led students to postpone thesis work, consistent with Susanti et al. (2021), who noted that student-perceived difficulties often trigger negative emotions such as worry, stress, and loss of motivation, ultimately causing students to delay or temporarily abandon thesis work. According to Anggraini and Yanto (2023), thesis completion represents a significant source of stress for final-year students, illustrating how students frequently feel burdened when confronting difficulties during the thesis writing process.

To address negative emotions and overcome various obstacles to prevent thesis completion beyond the ideal study period, students require resilience. This aligns with Erwanto et al. (2022), who argued that the increasing cases of students experiencing stress and depression due to thesis work demonstrate that students must possess resilience to navigate various difficulties and pressures. With resilience, students can effectively face challenges and obstacles while persisting in unpleasant situations during the thesis process, thereby completing their thesis within the appropriate timeframe.

Resilience is defined as an individual's capacity to recover and become stronger when facing problems (Widyanti et al., 2024). Resilience in the context of thesis-writing students is typically termed academic resilience. According to Martin and Marsh (as cited in A. Putri et al., 2023), academic resilience refers to an individual's capability to effectively respond to and overcome various obstacles, challenges, or pressures within learning contexts or educational environments. Student academic resilience levels during thesis completion can be assessed through various factors, including optimism and social support (Andriyaniputri et al., 2022).

Optimism represents an individual's positive perspective and expectations about the future (Pristie et al., 2022). Considering the thesis completion phenomenon among the 2021 cohort of the

Office Administration Education Program, where internal factors are predominant, optimism is considered crucial for helping students enhance their resilience during thesis work. When confronted with problems, students who maintain optimism can focus more on solutions, believing they can complete their thesis successfully through effort rather than dwelling on existing problems. The importance of optimism in enhancing resilience is supported by previous research by Danianta and Khotimah (2024), who found that higher optimism levels correspond to higher academic resilience levels. Similarly, research by Passela and Yusra (2023) revealed a positive and significant effect of optimism on final-year student resilience.

Beyond optimism as an internal factor, social support constitutes an important external factor in helping students enhance resilience during thesis completion (Missasi & Izzati, 2019). The role of social support in enhancing resilience is supported by previous research (Syahrinnisa et al., 2022), which demonstrated that social support positively and significantly affects the academic resilience of thesis-writing students. According to Sarafino (as cited in Muthmainah, 2022, p. 79), social support refers to the presence of comfortable feelings, care, self-esteem, or assistance obtained from other individuals or groups. The social support students need during thesis completion can originate from various sources, including family, friends, and lecturers (Yusitarini & Hidayah, 2024). Academic advisors play a crucial role in building student academic resilience through various forms of support provided. Academic advisors who provide academic, emotional, and guidance support can help students better overcome academic challenges (Raka & Hamid, 2022).

Research on the effects of optimism and social support on resilience was conducted by Andriyaniputri et al. (2022), revealing that optimism and social support simultaneously affect the resilience of thesis-writing students in the Education Department of FKIP ULM. Although this research demonstrated effects of optimism and social support variables on thesis-writing resilience both partially and simultaneously, the social support variable studied remained general. Therefore, exploration of specific social support variables from particular sources is necessary to provide deeper understanding of which social support sources most effectively enhance student resilience during thesis completion. In this context, the researchers focused on social support from academic advisors due to their significant role, as noted by Megawati and Damayanti (2022), who emphasized that academic advisors are obligated to guide, assist, and support students throughout the thesis completion process.

This research is grounded in theory explaining the relationships among optimism, academic advisor social support, and student academic resilience during thesis completion. The dependent variable in this study is academic resilience, measured using indicators from "The Academic Resilience Scale (ARS-30)" developed by Cassidy, comprising perseverance, reflecting and adaptive help-seeking, and negative affect and emotional response. The ARS-30 indicators were selected because they have been proven valid and reliable for measuring academic resilience in student populations. Additionally, ARS-30 indicators emphasize internal and external factors aligned with the X_1 and X_2 variables.

The independent variable of optimism utilizes indicators proposed by Seligman, comprising permanence, pervasiveness, and personalization aspects. The selection of optimism indicators is based on optimism theory with an Explanatory Style approach, which posits that individual optimism tends to be determined by past experiences and how individuals explain events. Meanwhile, the independent variable of academic advisor social support refers to Rosenfeld's theory (as cited in Jannah & Rohmatun, 2018), which identifies instructors (lecturers) as one source of social support obtained by individuals in educational settings. Using Sarafino's indicators comprising emotional support, esteem support, instrumental support, and informational support, this research can focus on the quality of support received across various aspects, thereby providing a comprehensive description of the extent to which academic advisor social support contributes to helping students face academic challenges and enhance resilience during thesis preparation.

Consequently, this study is titled "The Effects of Optimism and Academic Advisor Social Support on Student Resilience in the 2021 Cohort of the Office Administration Education Program." This research contributes by specifically identifying the role of academic advisor social support, rather than general social support, in the context of the Office Administration Education Program. This focus represents a novel aspect of the research, as most previous studies have only examined

the effect of general social support on student resilience without considering specific social support sources.

Research Methods

This research was conducted from February to July 2025. The research stages included problem formulation, title submission, proposal preparation, proposal seminar, instrument preparation and determination, data collection, data processing and analysis, and report preparation. The study was located in the Office Administration Education Program, Faculty of Teacher Training and Education, Sebelas Maret University. A quantitative approach was employed to test hypotheses regarding the effects of optimism (X_1) and academic advisor social support (X_2) on student resilience (Y).

The operational definition for the optimism variable (X_1) in this research refers to Prasetya et al. (2024), who defined it as a psychological concept involving the belief that positive outcomes will occur in the future, even under extremely difficult conditions. Academic advisor social support (X_2) refers to Ainia and Mariyati (2024), who explained that social support constitutes a reciprocal relationship when individuals face difficulties, enabling them to feel comfortable and cared for. Resilience (Y), as defined by Musafiri and Umroh (2022), refers to the capability to adapt to problems or difficulties and recover from such circumstances to become a better individual.

The population for this research comprised active students in the 2021 cohort of the Office Administration Education Program who were currently working on or had completed their thesis. According to Sugiyono (2019), a population is a generalization area consisting of objects or subjects with certain qualities and characteristics determined by researchers for study and subsequent conclusion drawing. The sampling technique employed nonprobability sampling with saturated sampling, involving all students in the 2021 cohort of the Office Administration Education Program across three classes, totaling 80 individuals.

The data collection procedure began with obtaining research permits from relevant institutions, followed by pilot testing with the 2021 cohort of the Economic Education Program. The Economic Education Program was selected as the pilot site because it was considered to have similar characteristics to the Office Administration Education Program. These characteristics were based on both programs belonging to the social education discipline and having similar academic processes, particularly in thesis preparation. Thus, Economic Education students were considered representative for testing instrument clarity, reliability, and validity before application to actual research subjects. The pilot test was conducted by distributing closed questionnaires via Google Forms, consisting of a 5-point Likert scale with response options of "strongly agree," "agree," "neutral," "disagree," and "strongly disagree."

From the pilot test results, validity testing using the product-moment coefficient revealed that of 15 total statement items for the optimism variable (X_1), 13 items were valid. All 15 items for the academic advisor social support variable (X_2) were valid. Of 15 statements for the resilience variable (Y), 11 items were valid, resulting in a total of 39 valid items for the instrument. Several items were eliminated because r -calculated $<$ r -table, indicating that these items inadequately represented the measured construct. Nevertheless, valid items still substantially reflected the overall construct, as each indicator aspect was represented by other items with high correlations to total scores. Therefore, the instrument was considered to possess adequate construct validity for measuring research variables. Reliability testing used Cronbach's alpha, as presented in Table 1.

Table 1
Instrument Reliability Test Results

Variable	Cronbach's Alpha	N of Items
Optimism	0,779	13
Academic Advisor Social Support	0,934	15
Resilience	0,764	11

The normality test results based on Table 2 output indicated that the Asymp. Sig. (2-tailed) value was .200, exceeding the .05 threshold. According to the Kolmogorov-Smirnov normality test decision criteria, the data were normally distributed, satisfying the normality assumption requirement for the regression model.

Table 2
Normality Test Results (Kolmogorov-Smirnov)

		Unstandardized Residual
N		80
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	5.39907904
Test Statistic		.082
Asymp. Sig. (2-tailed)		.200 ^{c,d}

Based on the linearity test results in Table 3, the Sig. Deviation from Linearity value was .376, exceeding .05, indicating a linear relationship between optimism (X_1) and student resilience (Y).

Tabel 3
Linearity Test Results for Resilience and Optimism

		df	F	Sig.
Between Groups	(Combined)	22	2.066	.015
	Linearity	1	22.378	.000
	Deviation from Linearity	21	1.099	.376
Within Groups		57		
Total		79		

Based on the linearity test results in Table 4, the Sig. Deviation from Linearity value was .430, exceeding .05, indicating a linear relationship between academic advisor social support (X_2) and student resilience (Y).

Table 4
Linearity Test Results for Resilience and Academic Advisor Social Support

		df	F	Sig.
Between Groups	(Combined)	35	1.158	.320
	Linearity	1	4.693	.036
	Deviation from Linearity	34	1.054	.430
Within Groups		44		
Total		79		

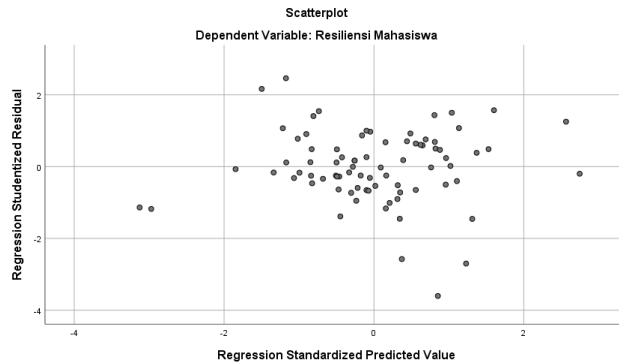
Based on the multicollinearity test results in Table 5, the tolerance value for independent variables was .934 ($> .10$) and VIF value was 1.070 (< 10.00), confirming no multicollinearity between independent variables.

Table 5
Hasil Uji Multikolinearitas

Variable	Collinearity Statistics		
	Tolerance	VIF	Result
Optimism	0.934	1.070	No multicollinearity
Academic Advisor Social Support	0.934	1.070	No multicollinearity

Based on the scatterplot heteroscedasticity test results shown in Figure 1, points were randomly scattered without forming specific patterns, indicating no heteroscedasticity issues.

Figure 1
Heteroscedasticity Test Scatterplot



Result and Discussion

Research Result

This research examined "The Effects of Optimism and Academic Advisor Social Support on Student Resilience in the 2021 Cohort of the Office Administration Education Program." The study included two independent variables Optimism (X_1) and Academic Advisor Social Support (X_2) and one dependent variable Resilience (Y). The sample comprised 80 students using saturated sampling. Descriptive analysis results are presented in Table 6.

Table 6
Descriptive Statistics

	Optimism	Academic Advisor Social Support	Resilience
Valid	80	80	80
Missing	0	0	0
Mean	49,05	52,89	36,86
Std. Deviation	6,418	11,328	6,164
Minimum	26	19	20
Maximum	65	75	51

The t-test was conducted to determine whether each independent variable optimism (X_1) and academic advisor social support (X_2) exerted a partial effect on the dependent variable (Y). The decision criteria for the t-test were as follows: if $p < .05$ or $t\text{-calculated} > t\text{-table}$, then H_0 is rejected and H_a is accepted, indicating a significant effect of variable X on Y . Conversely, if $p > .05$ or $t\text{-calculated} < t\text{-table}$, then H_0 is accepted and H_a is rejected, indicating no significant effect of variable X on Y .

Based on the results in Table 7, the significance value for the optimism variable (X_1) was .000 ($< .05$) and $t\text{-calculated} > t\text{-table}$ ($4.218 > 1.668$), leading to the conclusion that H_1 (the first hypothesis) was accepted and H_0 was rejected. This indicates that optimism exerted a positive and significant effect on the resilience of students in the 2021 cohort of the Office Administration Education Program. Subsequently, the significance value for the academic advisor social support variable (X_2) was .234 ($> .05$) and $t\text{-calculated} < t\text{-table}$ ($1.199 < 1.668$), leading to the conclusion that H_2 (the second hypothesis) was rejected and H_0 was accepted. This indicates that academic advisor social support did not exert a positive and significant effect on the resilience of students in the 2021 cohort of the Office Administration Education Program.

Table 7
t-Test Results

Model	t	Sig.	Decision
(Constant)	2.532	.013	
Optimism	4.218	.000	H ₁ accepted
Academic Advisor Social Support	1.199	.234	H ₂ rejected

The F-test was conducted to determine the simultaneous effect of independent variables. The decision criteria for the F-test were as follows: if $p < .05$ or $F\text{-calculated} > F\text{-table}$, then H_0 is rejected and H_a is accepted, indicating a simultaneous effect of X variables on Y. Conversely, if $p > .05$ or $F\text{-calculated} < F\text{-table}$, then H_0 is accepted and H_a is rejected, indicating no simultaneous effect of X variables on Y.

Based on the results in Table 8, the significance for optimism (X_1) and academic advisor social support (X_2) simultaneously affecting student resilience (Y) was $< .001$ ($< .05$) and $F\text{-calculated} > F\text{-table}$ ($11.680 > 3.12$), leading to H_0 being rejected and H_3 being accepted. Therefore, it was determined that optimism and academic advisor social support simultaneously exerted a positive and significant effect on the resilience of students in the 2021 cohort of the Office Administration Education Program during thesis completion.

Table 8
ANOVA Results (F-Test)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	698.633	2	349.317	11.680	.000 ^b
Residual	2302.854	77	29.907		
Total	3001.487	79			

Multiple linear regression analysis was conducted to determine the effect of independent variables on the dependent variable. Based on the results in Table 9, the regression equation is $\hat{Y} = 12.778 + 0.418X_1 + 0.067X_2$. This equation indicates that: (1) the constant value of Y is 12.778, meaning that if optimism (X_1) and academic advisor social support (X_2) equal zero, student resilience (Y) is estimated at 12.778; (2) the regression coefficient for X_1 from the multiple linear regression analysis is 0.418, meaning that for every 1-point increase in optimism (X_1), student resilience (Y) increases by 0.418, holding academic advisor social support (X_2) constant; and (3) the regression coefficient for X_2 is 0.067, meaning that for every 1-point increase in academic advisor social support (X_2), student resilience (Y) increases by 0.067, holding optimism (X_1) constant.

Table 9
Multiple Linear Regression Analysis Results

Model	B	Std. Error	Beta
(Constant)	12.778	5.046	
Optimism	.418	.099	.436
Academic Advisor Social Support	.067	.056	.124

Based on the coefficient of determination test results in Table 10, the R^2 value was .233 or 23.3%, indicating that optimism (X_1) and academic advisor social support (X_2) contributed 23.3% to the resilience of students in the 2021 cohort of the Office Administration Education Program during thesis completion, while 76.7% was influenced by variables outside this study. The adjusted R^2 value of .213 represents the determination coefficient adjusted for the number of independent

variables and sample size. Thus, after adjustment, the actual contribution of optimism and academic advisor social support to student resilience was 21.3%, indicating that the regression model provided a moderate level of explanation for the phenomenon under investigation.

Table 10

Model Summary (Coefficient of Determination)

R	R Square	Adjusted R Square	Std. Error of the Estimate
.482 ^a	.233	.213	5.469

Discussion

In this study, the first hypothesis posited that optimism affects the resilience of students in the 2021 cohort of the Office Administration Education Program. Based on the t-test results, the significance value was .000 ($< .05$) and $t\text{-calculated} > t\text{-table}$ ($4.218 > 1.668$), leading to H_0 being rejected and H_1 being accepted. It can be concluded that optimism exerts a significant effect on student resilience in the 2021 cohort of the Office Administration Education Program. This finding is supported by research conducted by Danianta and Khotimah (2024), who found that higher optimism levels correspond to higher academic resilience levels. Similarly, Passela and Yusra (2023) reported that optimism contributed positively and significantly to the academic resilience of final-year students.

The presence of optimism can enhance student resilience during thesis completion, consistent with Seligman's Learned Optimism Theory using the Explanatory Style approach, which posits that individual optimism is determined by how individuals interpret events. The importance of interpreting problems during thesis completion—such as viewing problems as temporary (permanence), not affecting all aspects of life (pervasiveness), and not excessively blaming oneself (personalization) when encountering problems—is essential for helping students remain resilient amid various difficulties during thesis completion.

In this study, the second hypothesis posited that academic advisor social support does not affect the resilience of students in the 2021 cohort of the Office Administration Education Program. Based on the t-test results, the significance value was .234 ($> .05$) and $t\text{-calculated} < t\text{-table}$ ($1.199 < 1.668$), leading to H_0 being accepted and H_2 being rejected. It can be concluded that academic advisor social support does not exert a positive and significant effect on student resilience in the 2021 cohort of the Office Administration Education Program. Nevertheless, the researchers acknowledge the importance of academic advisors in the thesis completion process.

Furthermore, according to Sarafino's social support theory (as cited in Said et al., 2021), social support quality can be assessed through four aspects: emotional support, esteem support, instrumental support, and informational support. These four aspects remain necessary and influential in the thesis completion process, although social support sources extend beyond academic advisors. This is evidenced by Putri et al. (2023), who found a positive and significant relationship between social support and student academic resilience, where the support studied originated from the surrounding environment including parents, family, friends, and lecturers. Additionally, peer social support is suspected to exert a greater influence on student resilience; according to Candrakanti and Chusairi (2022), higher peer social support corresponds to higher academic resilience among final-year students.

Furthermore, the lack of significant effect of academic advisor social support on resilience may be attributable to other more influential variables. These variables may originate from either internal or external student factors. Internal factors suspected of greater influence on student resilience include emotional intelligence and self-efficacy. Based on previous research, Anggraini and Yanto (2023) found that emotional intelligence positively and significantly affects the resilience of thesis-writing students, while Anggi Eka Putri et al. (2018) found that self-efficacy positively and significantly affects student academic resilience.

In this study, the third hypothesis posited that optimism and academic advisor social support simultaneously affect the resilience of students in the 2021 cohort of the Office Administration Education Program. Based on the F-test results obtained by the researchers, the significance for

optimism (X_1) and academic advisor social support (X_2) simultaneously affecting student resilience (Y) was $< .001$ ($< .05$) and $F\text{-calculated} > F\text{-table}$ ($11.680 > 3.12$). Therefore, H_0 was rejected and H_3 was accepted, indicating that optimism and academic advisor social support simultaneously exert a significant effect on the resilience of students in the 2021 cohort of the Office Administration Education Program.

This finding supports Cassidy's academic resilience theory, which explains that perseverance, reflection, adaptive help-seeking ability, and management of negative affect and emotional responses influence student endurance in facing challenges during thesis completion. This result aligns with previous research by Syahrinnisa et al. (2022), which yielded positive and significant values for the simultaneous effect of social support and optimism on final-year student resilience during thesis work. This means that maximizing resilience improvement, which can accelerate student study completion during thesis writing, requires synergistic enhancement of both optimism and academic advisor social support. Optimism is an internal student factor, while social support is an external factor; therefore, higher education institutions must recognize that beyond encouraging optimistic thinking among students, the role of proactively supportive academic advisors is equally important.

Based on the coefficient of determination test results, the R^2 value was .233 or 23.3%, indicating that optimism (X_1) and academic advisor social support (X_2) contributed 23.3% to the resilience of students in the 2021 cohort of the Office Administration Education Program during thesis completion, while 76.7% was influenced by variables outside this study.

Conclusion

This study yields several conclusions. First, there is a significant effect of optimism on the resilience of students in the 2021 cohort of the Office Administration Education Program. Based on the t-test results, the significance value was $.000$ ($< .05$) and $t\text{-calculated} > t\text{-table}$ ($4.218 > 1.668$). Second, there is no significant effect of academic advisor social support on the resilience of students in the 2021 cohort of the Office Administration Education Program, based on the t-test results showing a significance value of $.234$ ($> .05$) and $t\text{-calculated} < t\text{-table}$ ($1.199 < 1.668$). Third, there is a simultaneous significant effect of optimism and academic advisor social support on the resilience of students in the 2021 cohort of the Office Administration Education Program, based on the F-test results for optimism and academic advisor social support variables showing a significance of $< .001$ ($< .05$) and $F\text{-calculated} > F\text{-table}$ ($11.680 > 3.12$).

These findings support previous research by Andriyaniputri et al. (2022), which demonstrated that optimism and social support exert positive and significant effects on student resilience during thesis completion. Similarly, this study's findings are supported by Syahrinnisa et al. (2022), who stated that optimism and social support affect the academic resilience of final-year thesis-writing students. Thus, this research strengthens previous findings that optimism exerts a positive and significant effect on student resilience during thesis completion, while also reinforcing findings that optimism and academic advisor social support simultaneously affect student resilience during thesis completion. However, this study reveals that social support specifically from academic advisors does not exert a significant effect on student resilience, unlike general social support from other sources. Therefore, this finding supports Rukmana and Ismiradewi's (2021) research, which found that social support does not significantly affect student academic resilience.

This study demonstrates the importance of optimistic attitudes in facing academic difficulties, including thesis completion. Therefore, having recognized the importance of optimism, students are encouraged to enhance their optimism. Additionally, although academic advisor social support does not exert a significant effect, academic advisors remain important in supporting students throughout thesis completion. Theoretically, this research contributes to expanding understanding of internal factors (optimism) and external factors (academic advisor social support) affecting student academic resilience. The findings also enrich academic resilience theory by confirming that social support sources have differential effects on student resilience during thesis completion. Practically, this research can serve as a basis for evaluating and developing academic policies, particularly in efforts

to enhance student resilience through strengthening optimistic attitudes and interpersonal support from academic advisors.

This study was limited in terms of variables and sample size. Future researchers are encouraged to expand the research scope by adding relevant variables suspected of affecting student resilience, such as emotional intelligence, self-efficacy, and peer social support. Additionally, future researchers are encouraged to involve more diverse samples to obtain deeper insights into factors affecting student resilience during thesis completion.

References

- Ainia, A. N., & Mariyati, L. I. (2024). Hubungan dukungan sosial teman sebaya dan resiliensi dengan stres kerja pada tenaga kesehatan. *Jurnal Psikologi: Jurnal Ilmiah Fakultas Psikologi Universitas Yudharta Pasuruan*, 11(1), 148–161.
<https://doi.org/10.35891/jip.v11i1.4106>
- Andriyaniputri, A., Jamain, R. R., & Permatasari, N. (2022). Kontribusi optimisme dan dukungan sosial terhadap resiliensi mengerjakan skripsi mahasiswa ilmu pendidikan. *Jurnal Nusantara of Research*, 9(3), 264–281.
<https://ojs.unpkediri.ac.id/index.php/efektor/article/view/17883>
- Anggraini, S., & Yanto, A. R. (2023). Hubungan kecerdasan emosional dengan resiliensi pada mahasiswa yang sedang menyusun skripsi. *Journal on Education*, 5(4), 12158–12174.
<https://doi.org/10.31004/joe.v5i4.2177>
- Candrakanti, K. Q., & Chusairi, A. (2022). Hubungan dukungan sosial teman sebaya dengan resiliensi akademik pada mahasiswa tingkat akhir Fakultas Psikologi Universitas Airlangga. *Buletin Riset Psikologi dan Kesehatan Mental*, X, 1–11.
<http://repository.unair.ac.id/id/eprint/123539>
- Danianta, P. B., & Khotimah, S. K. (2024). Resiliensi akademik mahasiswa akhir: Peran optimisme dan dukungan teman sebaya. *Psikosains: Jurnal Penelitian dan Pemikiran Psikologi*, 19(117), 45–55. <https://doi.org/10.30587/psikosains.v19i1.7167>
- Erwantoa, A. U. N., Istiqomah, & Firdiyanti, R. (2022). Pengaruh dukungan sosial terhadap resiliensi akademik pada mahasiswa yang menempuh skripsi. *Jurnal Psikohumanika*, 14, 77–94. <https://doi.org/10.31001/j.psi.v14i2.1533>
- Jannah, S. N., & Rohmatun. (2018). Hubungan antara dukungan sosial dengan resiliensi pada penyintas banjir rob Tambak Lorok. *Proyeksi*, 13(Januari), 1–12.
<https://doi.org/10.30659/jp.13.1.1-12>
- Megawati, R., & Damayanti, M. (2022). Peran dosen pembimbing skripsi dalam proses penyelesaian tugas akhir mahasiswa. *J-HEST Journal of Health Education Economics Science and Technology*, 4(1), 33–39. <https://doi.org/10.36339/jhest.v4i1.63>
- Missasi, V., & Izzati, I. (2019). Faktor-faktor yang mempengaruhi resiliensi. *Prosiding Seminar Nasional Magister Psikologi Universitas Ahmad Dahlan*, 443–451.
- Musafiri, M. R. A., & Umroh, N. M. (2022). Hubungan optimisme terhadap resiliensi mahasiswa tingkat akhir yang mengerjakan skripsi. *Jurnal At-Taujih: Jurnal Bimbingan dan Konseling Islam*, II(2), 70–84. <https://doi.org/10.30739/jbkid.v2i2.1726>
- Muthmainah. (2022). Dukungan sosial dan resiliensi pada anak di wilayah perbukitan Gunung Kidul Yogyakarta. *Diklus: Jurnal Pendidikan Luar Sekolah*, 1, 78–88.
<https://doi.org/10.21831/diklus.v6i1.48875>
- Passela, L. H., & Yusra, Z. (2023). Kontribusi optimisme terhadap resiliensi akademik pada mahasiswa tingkat akhir. *Innovative: Journal of Social Science Research*, 3(2), 10527–10537. <https://j-innovative.org/index.php/Innovative/article/view/1625>
- Prasetya, A. W., Purwantini, D., & Saputra, A. K. (2024). Gambaran skala optimisme individu pada pasien kanker. *Jurnal Ners Lentera*, 12(2), 66–78. <https://doi.org/10.25130/sc.24.1.6>
- Pristie, Z. W., Maharani, B. D., Nindyati, A. D., & Fauzia, J. H. (2022). Dukungan sosial dan resiliensi pada mahasiswa. *Jurnal Kesehatan Mental Indonesia*, 1(01), 1–45.
<https://preprod-journal-update.binawan.ac.id/jkmi/article/view/593>

- Putri, A., Darmayanti, N., & Menanti, A. (2023). Pengaruh regulasi emosi dan dukungan sosial keluarga. *Journal of Behaviour and Mental Health*, 4(1), 21–31. <https://journal.iain-manado.ac.id/index.php/JIVA/index>
- Putri, A. E., Parimita, W., & Wolor, C. W. (2023). Pengaruh dukungan sosial dan efikasi diri terhadap resiliensi akademik mahasiswa Fakultas Ekonomi UNJ. *Berajah Journal*, 3(2), 377–386. <https://doi.org/10.47353/bj.v3i2.241>
- Raka, I. P., & Hamid, A. N. (2022). Hubungan dukungan sosial dosen pembimbing skripsi dengan prokrastinasi akademik mahasiswa dalam menyelesaikan skripsi. *Jurnal Psikologi Talenta Mahasiswa*, 1(4), 95–102. <https://ojs.unm.ac.id/jtm/article/view/94-102/15604>
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif dan R&D* (1st ed.). Alfabeta.
- Susanti, R., Maulidia, S., Ulfah, M., & Nabila, A. (2021). Pandemi dan tingkat stress mahasiswa dalam menyelesaikan tugas akhir kuliah: Studi analitik pada mahasiswa FKM Universitas Mulawarman. *Jurnal Kesehatan Masyarakat Mulawarman (JKMM)*, 3(1), 01. <https://doi.org/10.30872/jkmm.v3i1.6273>
- Syahrinnisa, F., Zubair, A. G. H., & Saudi, A. N. A. (2022). Dukungan sosial, optimisme, dan resiliensi akademik pada mahasiswa akhir yang sedang mengerjakan skripsi. *Jurnal Psikologi Karakter*, 2(2), 186–195. <https://doi.org/10.56326/jpk.v2i2.1956>
- Widyanti, K., Pusat, K. J., Sosial, D., & Sebaya, T. (2024). Hubungan antara optimisme dan dukungan sosial teman sebaya. *Psikologi Kreatif Inovatif*, 4(3), 8–15.
- Yusitarini, A., & Hidayah, N. (2024). Resiliensi dan dukungan sosial sebagai faktor protektif stres mengerjakan skripsi. *Psyche 165 Journal*, 17(4), 332–339. <https://doi.org/10.35134/jpsy165.v17i4.461>

Merdeka curriculum implementation and school facilities: effects on vocational students' creative thinking

Arvano Sahwa Riordan*, Subroto Rapih

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: arvanoriordan2@gmail.com

Abstrak

Penelitian ini bertujuan untuk menguji pengaruh parsial dan simultan dari implementasi Kurikulum Merdeka dan fasilitas sekolah terhadap kemampuan berpikir kreatif siswa kelas X dan XI program Manajemen Perkantoran dan Layanan Bisnis (MPLB) di SMK Negeri 1 Karanganyar. Desain penelitian kausal kuantitatif digunakan, dengan data dikumpulkan dari 106 responden yang dipilih melalui pengambilan sampel acak bertingkat proporsional. Kuesioner diberikan untuk mengumpulkan data primer, dan instrumen divalidasi melalui pengujian validitas dan reliabilitas. Analisis data dilakukan menggunakan regresi linier berganda dengan IBM SPSS 26.0. Hasil penelitian menunjukkan bahwa: (1) Implementasi Kurikulum Merdeka memiliki pengaruh positif yang signifikan terhadap kemampuan berpikir kreatif siswa, dengan $t(103) = 7,854, p < 0,001$; (2) Fasilitas sekolah tidak memiliki pengaruh yang signifikan terhadap kemampuan berpikir kreatif siswa, dengan $t(103) = 1,626, p = 0,107$; dan (3) Implementasi Kurikulum Merdeka dan fasilitas sekolah secara bersamaan memiliki pengaruh positif yang signifikan terhadap kemampuan berpikir kreatif siswa, dengan $F(2, 103) = 46,680, p < .001$. Variabel-variabel ini secara kolektif menjelaskan 47,5% varians dalam kemampuan berpikir kreatif ($R^2 = .475$).

Kata kunci: berpikir inovatif; sarana prasarana; sistem pembelajaran; vokasi

Abstract

This study aimed to examine the partial and simultaneous effects of Merdeka Curriculum implementation and school facilities on creative thinking skills among Grade X and XI students in the Office Management and Business Services (MPLB) program at SMK Negeri 1 Karanganyar. A quantitative causal research design was employed, with data collected from 106 respondents selected through proportionate stratified random sampling. Questionnaires were administered to gather primary data, and the instruments were validated through validity and reliability testing. Data analysis was conducted using multiple linear regression with IBM SPSS 26.0. The findings revealed that: (1) Merdeka Curriculum implementation had a significant positive effect on students' creative thinking skills, with $t(103) = 7.854, p < .001$; (2)

* Corresponding author

Citation in APA style: Riordan, A.S., & Rapih, S. (2026). Merdeka curriculum implementation and school facilities: effects on vocational students' creative thinking. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 69-78.
<https://dx.doi.org/10.20961/jikap.v10i1.106482>

school facilities did not have a significant effect on students' creative thinking skills, with $t(103) = 1.626$, $p = .107$; and (3) Merdeka Curriculum implementation and school facilities simultaneously had a significant positive effect on students' creative thinking skills, with $F(2, 103) = 46.680$, $p < .001$. These variables collectively explained 47.5% of the variance in creative thinking skills ($R^2 = .475$).

Keywords: infrastructure; innovative thinking; learning systems; vocational education

Received July 20, 2025; Revised August 30, 2025; Accepted October 23, 2025;
Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.106482>

Introduction

Building high-quality human resources constitutes a fundamental priority that requires comprehensive examination through education. According to Artamevia et al. (2025), quality human resources encompass individuals who possess advanced skills, knowledge, and competencies, alongside attitudes and behaviors that support organizational goal achievement. Such individuals demonstrate not only technical proficiency but also strong interpersonal and managerial capabilities, enabling them to adapt rapidly to change, solve problems effectively, and contribute significantly to organizational success. The rapid and massive global growth has transformed modern education, which now focuses on skills based on the need to prepare younger generations for increasingly complex challenges (Ahmad et al., 2024).

Creative thinking represents one critical skill that younger generations, including school students, must develop. For vocational secondary school (SMK) students specifically, creative thinking skills are essential, as these students are trained to acquire knowledge and competencies that prepare them for workforce entry upon graduation (Efrinaldi et al., 2023). Upon entering the workforce, SMK graduates encounter competitive labor market conditions that demand advanced skills and creativity in both industrial and retail sectors (Nilsson & Backman, 2024). According to Alfa et al. (2024), SMK students represent a human resource with significant potential for generating creative ideas for industrial products. Furthermore, Marnita et al. (2022) emphasized the concept of 'Thinking Outside The Box,' suggesting that rigid thinking patterns correlate with lower creativity, which necessitates developing flexible mindsets to enhance creative thinking.

Creative thinking is essential for workers across all fields and for students in the 21st century. Technological developments present additional challenges, with emerging 'smart' technologies including robotics, artificial intelligence, 3D printing, augmented reality, virtual reality, cloud computing, and the Internet of Things capable of replacing human labor. Future conditions are becoming increasingly difficult to predict due to unexpected developments arising from technology creation and utilization, leading to disruption that creates dynamic and rapidly changing environments. Vocational schools must anticipate these changes and develop individuals who combine knowledge, practical and social skills, positive attitudes, and digital competencies to adapt quickly to evolving workplace and societal demands. A 2019 U-Reporters poll indicated that essential skills for future employment include creativity (20%), digital skills (17%), critical thinking (12%), and problem-solving (8%), with creativity ranking highest among the skills needed for future career preparation.

Despite the recognized importance of creative thinking for SMK students, many students have not yet optimized this skill. Rasnawati et al. (2019) found that students' creative thinking abilities remained low, with only 39% of student responses achieving maximum scores. The percentage distribution across creativity indicators showed flexibility at 48%, fluency at 36%, originality at 22%, and elaboration at 3%. Research by Bharata et al. (2022) demonstrated that the majority of 34 students had not developed creative thinking ability patterns, as revealed through

observation, tests, interviews, and documentation, with creativity levels distributed as 5.88% (moderately creative), 41.18% (less creative), and 52.94% (not creative).

Within the Office Management and Business Services (MPLB) program at SMK Negeri 1 Karanganyar, indications of suboptimal creative thinking abilities among Grade X and XI students persist. Students demonstrate limited understanding of new knowledge, minimal capacity for generating novel ideas, and reluctance to attempt new approaches. Additionally, inadequate school facilities, such as insufficient internet connectivity, impede students' exploration and access to online resources and programs that could enrich their knowledge and support creative development.

One factor contributing to suboptimal creative thinking skills is the lack of innovation in learning materials prepared by teachers during instruction, which indicates incomplete implementation of the Merdeka Curriculum (Hasmiati et al., 2023). The Merdeka Curriculum represents an educational policy that provides freedom and flexibility in managing learning processes, characterized by student learning experiences that are relevant and centered on competency development. Teachers' role in preparing learning materials is crucial, as these materials serve as guides for implementing instruction in classrooms, laboratories, or external settings (Yuliani, 2021). The Indonesian government, through various policies and national education reforms under the Ministry of Education and Culture, designed and implemented the Merdeka Curriculum for primary and secondary education levels. This curriculum aims to empower schools at these levels to develop curricula more relevant to students' needs and characteristics while encouraging critical and creative thinking through student freedom in selecting subjects of interest (Prahastina et al., 2024). According to Tanjung et al. (2025), educational policy serves as a strategic instrument designed to improve human resource quality through effective and sustainable learning, functioning not only as guidance for educational implementation but also as a response to global challenges including technological change, labor market demands, and national character development.

Another factor affecting students' creative thinking skills is inadequate school facilities, which create difficulties for students in creating and developing new ideas, thereby impeding their learning process. School facilities comprise various physical infrastructure and equipment provided by educational institutions to support and facilitate teaching and learning activities, characterized by the condition and completeness of these resources. According to Daulay et al. (2022), school facilities influence student activities and creativity, as facilities enable students to engage in creative activities creating without adequate facilities is extremely difficult in the current era. Barrett et al. (2019) found that quality school facilities, including spaces designed to support interaction and creativity, influence students' capacity for innovation and creative thinking. Research by Mandailina (2024) indicated that supportive and motivating school environments can enhance student engagement in learning, thereby improving their creative thinking and problem-solving abilities.

Research Methods

This study was conducted at SMK Negeri 1 Karanganyar, a vocational educational institution located in Surakarta Regency, Central Java Province, Indonesia. The research was carried out from April to June 2025, encompassing preparation, proposal seminar, proposal revision, data collection, and report writing phases.

A quantitative research methodology was employed. According to Sugiyono (2022), quantitative research methods are grounded in positivist philosophy, used to investigate specific populations or samples, with data collection using research instruments and quantitative or statistical data analysis aimed at testing predetermined hypotheses. This study incorporated three variables: two independent variables and one dependent variable. According to Elvera (2021), independent variables influence dependent variables, causing changes in dependent variables. The independent variables in this study were Merdeka Curriculum implementation (X_1) and school facilities (X_2). The dependent variable, which is affected by independent variables as a consequence of their existence, was creative thinking skills (Y).

Primary data were collected through questionnaires. The study population comprised all Grade X and XI students in the MPLB program at SMK Negeri 1 Karanganyar, totaling 144 students.

The sample size was calculated using the Slovin formula with a 5% margin of error, resulting in 106 students. Proportionate stratified random sampling was employed as the sampling technique, appropriate when populations contain heterogeneous, proportionally stratified elements (Elvera, 2021). This technique ensured that each class was proportionally represented in the sample according to the number of students in each class, thereby obtaining an accurate representation of the population.

Data collection employed observation and questionnaire methods to generate accurate and detailed data regarding behaviors, events, or specific situations. Observation was conducted during Field Introduction to Schools (PLP) activities. The questionnaire utilized a five-point Likert scale ranging from "strongly agree" to "strongly disagree." The research instrument consisted of 13 items for Merdeka Curriculum implementation (X_1), 12 items for school facilities (X_2), and 14 items for creative thinking skills (Y).

Instrument validation employed validity testing using the product-moment correlation formula to measure questionnaire validity. A valid questionnaire effectively reveals what it intends to measure (Elvera, 2021). Valid instruments indicate that the measurement tools used to obtain data are valid, meaning they measure what they are supposed to measure (Sugiyono, 2022). Reliability testing used Cronbach's alpha to determine consistency and stability of research instrument measurements. Prior to the main study, a pilot test was conducted with 31 students outside the research sample, as approximately 30 participants are considered adequate and representative for statistical testing of instrument validity and reliability. Data analysis involved tabulation, assumption testing (normality, linearity, and multicollinearity tests), and hypothesis testing using multiple linear regression, t-test, F-test, and coefficient of determination (R^2). All quantitative data analysis was processed using IBM SPSS version 26.0.

Prior to data collection, the researcher obtained written permission from the principal of SMK Negeri 1 Karanganyar. Student respondents received explanations regarding research objectives, procedures, and assurance that their participation was voluntary. The researcher guaranteed confidentiality of respondent identities and all provided data, which were used solely for research purposes.

Result and Discussion

Research Result

Prior to hypothesis and assumption testing, a pilot study was conducted to ensure questionnaire validity and reliability. The pilot test distributed questionnaires to 31 Grade X and XI MPLB students. The questionnaire comprised 40 items: 14 items for Merdeka Curriculum implementation (X_1), 12 items for school facilities (X_2), and 14 items for creative thinking skills (Y). Validity testing for Merdeka Curriculum implementation (X_1) indicated that 13 items were valid while one item was invalid. For school facilities (X_2), all 12 items were valid. For creative thinking skills (Y), all 14 items were valid. Reliability testing demonstrated that questionnaires for each variable possessed adequate reliability levels. Merdeka Curriculum implementation (X_1) showed a Cronbach's alpha of .842, school facilities (X_2) showed .878, and creative thinking skills (Y) showed .890. As all reliability values exceeded .50, all questionnaire items were deemed reliable and suitable for further research.

The normality test revealed a significance value of $.098 > .05$, indicating that the data were normally distributed. The linearity test for Merdeka Curriculum implementation (X_1) and creative thinking skills (Y) showed a deviation from linearity value of $.137 > .05$, indicating a linear relationship between these variables. Similarly, the linearity test for school facilities (X_2) and creative thinking skills (Y) showed a deviation from linearity value of $.085 > .05$, confirming a linear relationship. The multicollinearity test indicated that tolerance values for both independent variables were $.809 > .10$ and VIF values were $1.237 < 10$, confirming no multicollinearity. The heteroscedasticity test using scatterplot analysis showed that residual data points were randomly distributed around zero without forming patterns, indicating no heteroscedasticity. Based on these assumption tests, hypothesis testing proceeded.

Table 1
Multiple Linear Regression Analysis Results

Model	B	Std. Error	Beta
(Constant)	8,914	4,521	
Merdeka Curriculum Implementation	0,805	0,103	0,623
School Facilities	0,119	0,73	0,129

Source: Data processed by researchers (2025)

Multiple linear regression analysis was conducted because more than one variable was used, aiming to determine the direction and magnitude of the influence of independent variables Merdeka Curriculum implementation (X_1) and school facilities (X_2) on the dependent variable, creative thinking skills (Y). Results from Table 1 yield the regression equation: $Y = 8.914 + 0.805X_1 + 0.119X_2$. This equation can be interpreted as follows: (1) The constant value for creative thinking skills (Y) is 8.914, with the positive sign indicating a positive relationship between independent and dependent variables. When Merdeka Curriculum implementation (X_1) and school facilities (X_2) equal zero or remain unchanged, creative thinking skills (Y) equals 8.914. (2) The regression coefficient for Merdeka Curriculum implementation (X_1) is 0.805, meaning that each unit increase in Merdeka Curriculum implementation increases creative thinking skills, assuming other variables remain constant. (3) The regression coefficient for school facilities (X_2) is 0.119, indicating that better school facilities increase creative thinking skills, assuming other variables remain constant.

Table 2
t-Test Results

Model	T	Significance
(Constant)	1,972	0,051
Merdeka Curriculum Implementation	7,854	0,000
School Facilities	1,626	0,107

Source: Data processed by researchers (2025)

The t-test results in Table 2 show that Merdeka Curriculum implementation had a significance value of $.000 < .05$ and $t = 7.854 > t\text{-critical} = 1.663$ ($\alpha = .05$, $df = 103$). These results indicate a significant partial effect of Merdeka Curriculum implementation (X_1) on creative thinking skills (Y). For school facilities, the significance value was $.107 > .05$ and $t = 1.626 < t\text{-critical} = 1.663$, indicating no significant partial effect of school facilities (X_2) on creative thinking skills (Y).

Table 3
F-Test Results (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Significance
Regression	1803,611	2	901,806	46,680	0,000
Residual	1989,832	103	19,319		
Total	3793,443	105			

Source: Data processed by researchers (2025)

Table 3 shows $p < .001$ and $F(2, 103) = 46.680 > F\text{-critical} = 3.08$. These results indicate that Merdeka Curriculum implementation (X_1) and school facilities (X_2) simultaneously have a significant effect on creative thinking skills (Y), confirming that the regression model adequately explains the dependent variable.

Table 4*Coefficient of Determination Results*

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,690	0,475	0,465	4,395

Source: Data processed by researchers (2025)

The coefficient of determination analysis was conducted to determine the percentage of influence of Merdeka Curriculum implementation (X_1) and school facilities (X_2) on creative thinking skills (Y). Table 4 shows $R^2 = .475$, indicating that 47.5% of the variance in creative thinking skills (Y) is explained by Merdeka Curriculum implementation (X_1) and school facilities (X_2). The remaining 52.5% is influenced by other factors not examined in this study.

Discussion

The first hypothesis demonstrated that Merdeka Curriculum implementation significantly affects creative thinking skills of Grade X and XI MPLB students at SMK Negeri 1 Karanganyar. Multiple linear regression analysis revealed that Merdeka Curriculum implementation (X_1) has a regression coefficient of 0.805 on creative thinking skills (Y), with a positive and directional relationship. This indicates that improvements in Merdeka Curriculum implementation quality tend to be accompanied by increases in students' creative thinking skills, assuming other model variables remain constant. This result was confirmed through the partial significance test (t-test), where $p < .001$ and $t = 7.854 > t\text{-critical} = 1.663$. Thus, H_0 was rejected and H_1 was accepted, confirming a significant influence of Merdeka Curriculum implementation on students' creative thinking skills.

This finding aligns with research by Silaban et al. (2023), who found that Merdeka Curriculum implementation positively impacts student creativity enhancement in learning. The result also corresponds with Fatmawati and Jaya's (2025) research, which found that Merdeka Curriculum implementation significantly contributes to developing students' creative thinking skills, particularly in vocational education contexts. Research by Pebriani et al. (2025) similarly showed that Merdeka Curriculum implementation encourages teachers to be more innovative in developing project-based learning strategies, impacting increased active participation and original student ideas. Meanwhile, Maryani et al. (2024) identified that implementing diagnostic assessment and differentiated instruction within the Merdeka Curriculum encourages students to think more independently and reflectively two essential elements in creative thinking processes.

In the context of vocational secondary education, the Merdeka Curriculum provides significant opportunities for educational institutions to align learning with workforce demands and student characteristics (Yahya et al., 2024). Freedom in designing learning projects, selecting contextual methods, and cross-subject collaboration enables integration between academic content and 21st-century skills, including creative thinking (Nur'aini & Narimo, 2023). This addresses the challenge that vocational education must not only produce work-ready graduates but also individuals capable of adapting, innovating, and providing creative solutions to industrial problems. Within this framework, creative thinking becomes not merely an indicator of learning success but also essential capital for students to survive and thrive in an increasingly complex and rapidly changing work landscape.

This study's findings reflect that the Merdeka Curriculum provides extensive opportunities for developing students' creative thinking skills through approaches emphasizing flexibility, learning personalization, and individual competency development orientation. This curriculum is designed to shift the learning paradigm from uniform, academically target-oriented models to systems accommodating diversity in student potential, interests, and learning styles. Students are no longer positioned as passive knowledge recipients but as active subjects encouraged to explore ideas, create solutions to real problems, and build connections between learning experiences and daily life. Contextual, interdisciplinary, and experience-based learning projects become strategic means for

students to practice imagination, intellectual risk-taking courage, and thinking resilience all primary elements of creative thinking.

The Merdeka Curriculum's student agency-centered approach and Pancasila Student Profile strengthening fundamentally transform teachers' roles in learning processes. Teachers no longer function as sole knowledge sources but as facilitators, mentors, and designers of collaborative and reflective learning environments. By providing space for more authentic, achievement-based assessment and accompanying students in project-based learning, teachers help students build confidence and innovative capacity for facing real-world challenges. This role is crucial in vocational education contexts, as current workforce demands require not only technical skill mastery but also adaptability, innovation, and creative problem-solving abilities. Accordingly, more optimal Merdeka Curriculum implementation corresponds to greater opportunities for increasing students' creative thinking capacity. These findings confirm that the Merdeka Curriculum is not merely an administrative instrument but a crucial strategy for building adaptive, relevant, and transformative vocational education systems amid global demands and knowledge-based industrial revolution dynamics.

The second hypothesis indicated that school facilities did not significantly affect creative thinking skills of Grade X and XI MPLB students at SMK Negeri 1 Karanganyar. Although the regression coefficient showed a positive relationship, the t-test yielded $p = .107 > .05$ and $t = 1.626 < t\text{-critical} = 1.663$. Based on these calculations, H_0 was accepted, indicating that school facilities' influence on students' creative thinking skills is not statistically significant, despite a tendency toward a directional relationship.

Several previous studies reported different results. Lubis et al. (2025) found that complete learning facilities including laboratories, digital media, and practice rooms contribute to creating conducive learning environments for developing student creativity. Hariyadi and Hariyati (2020) confirmed that technology facility availability and access in schools foster exploratory spirit and increase creative thinking motivation, especially in project-based learning. Gregory et al. (2013) also reported that students learning in classrooms equipped with innovative facilities, such as digital whiteboards and interactive teaching aids, demonstrated higher performance in creative idea and non-linear problem-solving indicators.

The discrepancy between this study's results and previous findings may be explained by suboptimal facility utilization. Physical facility presence in schools does not necessarily meaningfully impact learning processes unless supported by learning patterns that encourage exploration and creativity. At SMK Negeri 1 Karanganyar, facilities were likely available in basic form but had not been maximally utilized by teachers and students as part of creative learning strategies. This aligns with Kusuma and Wibowo's (2025) view that learning facility effectiveness is determined not by quantity or sophistication but by active integration into problem-solving-based learning processes with independent student involvement.

Non-structural factors such as pedagogical approaches, classroom climate, and learning motivation are also crucial in shaping students' creative thinking abilities. Research by Amabile (1996) demonstrated that social and psychological environments supporting expressive freedom, providing experimental space, and not excessively emphasizing punishment for mistakes constitute essential conditions for creativity emergence. In learning, students need to feel emotionally safe to express new ideas without fear of criticism. When teachers implement open, dialogic learning strategies that foster curiosity, students tend to be more cognitively and affectively engaged. Sternberg and Lubart's (2014) study reinforced this view by emphasizing the importance of 'creative climate'—a learning atmosphere that values originality, encourages flexible thinking, and reinforces student initiative.

Several studies have noted that students' courage in expressing ideas, willingness to take intellectual risks, and psychological support from teachers and peers are more influential than mere physical school conditions (Amabile, 1996). In vocational education contexts, where learning is directed toward applied skills, learning experiences that evoke reflection and actual problem-solving have greater contributions to creativity development. When teachers can frame learning as real challenges relevant to the workforce, students are trained to think outside conventions and present unique solutions. Accordingly, creativity is more accurately understood as a result of dynamic

interaction between individuals and social learning environments rather than an automatic product of facility availability. Environments encouraging active participation, cooperation, and critical reflection become more determining than mere completeness of school tools or physical facilities. This implies that student creativity enhancement efforts should be directed not only toward facility procurement but also toward building learning cultures that support and challenge students' intellectual capacities sustainably.

The third hypothesis stated that Merdeka Curriculum implementation and school facilities simultaneously provide significant effects on creative thinking skills of Grade X and XI MPLB students at SMK Negeri 1 Karanganyar. This can be interpreted as better Merdeka Curriculum implementation and school facility improvement corresponding to higher student creative thinking skills. The F-test showed $F = 46.680$ with $p < .001$, indicating that Merdeka Curriculum implementation (X_1) and school facilities (X_2) simultaneously have a significant effect on creative thinking skills (Y), confirming the regression model's adequacy. Based on Effective Contribution (SE) calculations, Merdeka Curriculum implementation (X_1) contributes 42.3% and school facilities (X_2) 5.18% to creative thinking skills (Y). For Relative Contribution (SR), Merdeka Curriculum implementation (X_1) accounts for 89.2% while school facilities (X_2) account for 10.9%. These results indicate that Merdeka Curriculum implementation (X_1) has the most dominant influence compared to school facilities (X_2) in this regression model.

In vocational secondary education contexts, the Merdeka Curriculum presents pedagogical approaches aligned with workforce demands and 21st-century dynamics. This curriculum emphasizes project-based learning, authentic assessment, and Pancasila Student Profile strengthening—all elements directly correlated with creative thinking skills. School facilities serve as supporting infrastructure that must be used strategically. Good facilities without progressive curriculum approaches often become passive infrastructure with no direct impact on student competency achievement. This study's findings strengthen the argument that student-centered learning orientations, facilitated through transformative curriculum policies, have more substantial impacts on forming higher-order thinking skills.

These findings also demonstrate the importance of alignment between curriculum policy and educational facility provision. Schools are expected not only to provide physical facilities but also to ensure consistent, creative, student needs-based Merdeka Curriculum implementation. Teachers as curriculum implementation leaders require ongoing training to optimize available facility utilization and translate Merdeka Curriculum principles into daily learning practices. Synergy between structural and non-structural aspects of educational systems becomes an important foundation for creating learning environments that truly support the growth of creative, adaptive, and innovative thinking abilities among vocational school students.

Conclusion

This study yields three key findings. First, Merdeka Curriculum implementation (X_1) has a positive and significant partial effect on creative thinking skills (Y). Second, school facilities (X_2) do not have a significant partial effect on creative thinking skills (Y). Third, Merdeka Curriculum implementation (X_1) and school facilities (X_2) simultaneously have a positive and significant effect on creative thinking skills among Grade X and XI students at SMK Negeri 1 Karanganyar. Based on data analysis, Merdeka Curriculum implementation and school facilities contribute 47.5% to creative thinking skills, with the remaining 52.5% influenced by factors not examined in this study. Future researchers are recommended to incorporate additional variables not tested but potentially influential on creative thinking skills. Researchers are also encouraged to expand population and sample coverage to obtain more representative results. This study at SMK Negeri 1 Karanganyar had several limitations: Grade XII students were not included because they were participating in Work Practice (PKL) activities outside the school during the research period. Addressing this limitation, future research should carefully consider appropriate timing for data collection to include all student grade levels for more comprehensive findings.

References

- Ahmad, F., Nabila, A. Z., Magfiroh, S. Z., Hafizhah, N. Z., Khomsah, M. N., Fatin, Z. Z., & Nurisma, S. (2024). Pengembangan keterampilan abad 21 di pesantren modern. *Jurnal Ilmiah Penelitian Mahasiswa*, 2(4), 393–401. <https://doi.org/10.61722/jipm.v2i4.298>
- Alfa, B. N., Kaidah, S., & Amrina, U. (2024). Peningkatan kreativitas siswa melalui pengenalan proses perancangan produk industri. *SOROT: Jurnal Pengabdian Kepada Masyarakat*, 3(2), 105–108. <https://doi.org/10.32699/sorot.v3i2.7680>
- Amabile, T. M. (1996). *Creativity in context: Update to "The Social Psychology of Creativity."* Westview Press.
- Artamevia, A., Surya, D., Fiti, T. K., & Kusumaningrum, H. (2025). Pengembangan SDM berkualitas: Kunci sukses institusi pendidikan. *Harmoni Pendidikan: Jurnal Ilmu Pendidikan*, 1. <https://doi.org/10.62383/hardik.v1i4.893>
- Barrett, P., Treves, A., Shmis, T., Ambasz, D., & Ustinova, M. (2019). *The impact of school infrastructure on learning: A synthesis of the evidence.* World Bank Group.
- Bharata, H. (2022). Analisis kemampuan berpikir kreatif siswa SMK pada pembelajaran jarak jauh di masa pandemi Covid-19. *Jurnal Ilmiah Pendidikan Matematika*, 10(1), 1–12. <http://dx.doi.org/10.31941/delta.v10i1.1421>
- Daulay, S. H., Fitriani, S. F., & Ningsih, E. W. (2022). Pengaruh fasilitas sekolah terhadap kemampuan dan motivasi belajar siswa. *Edukatif: Jurnal Ilmu Pendidikan*, 4(3), 3731–3738. <https://doi.org/10.31004/edukatif.v4i3.2553>
- Efrinaldi, E., Ambiyar, A., Maksum, H., & Waskito, W. (2023). Kontribusi bursa kerja khusus dan kemampuan bekerjasama terhadap kesiapan memasuki dunia kerja siswa sekolah menengah kejuruan. *Jurnal EDUCATIO (Jurnal Pendidikan Indonesia)*, 9(1), 396–402. <https://doi.org/10.29210/1202323060>
- Elvera, & Yesita, A. (2021). *Metodologi penelitian.* ANDI.
- Fatmawati, T., & Jaya, A. (2025). Transformasi pendidikan dasar melalui kurikulum merdeka: Analisis dampak pada kemampuan berpikir kritis dan kreatif siswa. *Jurnal Ilmu Manajemen Sosial Humaniora (JIMSH)*, 7, 14–30. <https://doi.org/10.51454/jimsh.v7i1.811>
- Gregory, E., Hardiman, M., Yarmolinskaya, J., Rinne, L., & Limb, C. (2013). Building creative thinking in the classroom: From research to practice. *International Journal of Educational Research*, 62, 43–50. <https://doi.org/10.1016/j.ijer.2013.06.003>
- Hariyadi, A. B., & Hariyati, N. (2020). Pentingnya fasilitas belajar berbasis teknologi informasi terhadap hasil belajar siswa. *Jurnal Inspirasi Manajemen Pendidikan*, 8(4), 558–569.
- Hasmiati, H., Fawzani, N., & Muhlis, W. (2023). Implementasi kurikulum merdeka untuk mengembangkan kreativitas peserta didik di sekolah dasar. *Jurnal Pendidikan Dasar*, 14(2), 158–170.
- Kusuma, G. P., & Wibowo, D. C. (2025). Pengaruh model problem-based learning terhadap hasil belajar siswa pada materi gaya dan gerak. *Jurnal Pendidikan Kimia, Fisika dan Biologi*, 1(1), 40–48. <https://doi.org/10.61132/jupenkifb.v1i1.167>
- Lubis, A. A. G., Siahaan, A., & Tarigan, M. (2025). Strategi manajemen sarana dan prasarana untuk meningkatkan minat belajar siswa di MTsS SKB 3 Menteri Pembangunan Lidah Tanah. *Madani: Jurnal Ilmiah Multidisiplin*, 3(3), 170–181. <https://doi.org/10.5281/zenodo.15235406>
- Mandailina, V. S. (2024). Pengaruh lingkungan belajar dan kebijakan sekolah terhadap kreativitas siswa di sekolah menengah pertama. *Seminar Nasional Paedagoria*, 4, 36–47.
- Marnita, M., Taufiq, & Komariah, A. N. (2022). Perspektif kreativitas dalam pendidikan melalui thinking outside the box. *Jurnal Pendidikan dan Konseling*, 4, 11862–11868.
- Maryani, I., & Hasanah, E. S. (2024). *Pembelajaran berdiferensiasi pada kurikulum merdeka.* K-Media.

- Nilsson, H., & Backman, M. (2024). Retail employee turnover and turnover destinations – the role of human capital. *The International Review of Retail, Distribution and Consumer Research*, 1–25. <https://doi.org/10.1080/09593969.2024.2370256>
- Nur'aini, A., & Narimo, S. (2023). Implementasi kurikulum merdeka pada proses pembelajaran di SMK Negeri 3 Sukoharjo (Skripsi, Universitas Muhammadiyah Surakarta) Surakarta, Indonesia. <http://eprints.ums.ac.id/id/eprint/114784>
- Pebriani, S., Sumardi, L., & Alqadri, B. (2025). Dampak penerapan kurikulum merdeka terhadap kreativitas dan inovasi guru di SMP Negeri 1 Masbagik. *Jurnal Pendidikan, Sains, Geologi, dan Geofisika*, 6(1). <https://doi.org/10.29303/goescienceed.v6i1.460>
- Prahastina, L., Indriayu, M., & Matsuri, M. (2024). Implementation of the merdeka curriculum and its impact on effective learning achievement in elementary school. In *Social, Humanities, and Educational Studies (SHES): Conference Series* 7(1), 166–173. <https://doi.org/10.20961/shes.v7i1.84306>
- Rasnawati, A., Rahmawati, W., Akbar, P., & Putra, H. D. (2019). Analisis kemampuan berfikir kreatif matematis siswa SMK pada materi sistem persamaan linier dua variabel (SPLDV) di kota Cimahi. *Jurnal Cendekia*, 3(1), 164–177. <https://doi.org/10.31004/cendekia.v3i1.87>
- Silaban, N., Napitupulu, T., Gultom, R., Simanungkalit, M., & Simatupang, L. (2023). Pengaruh kurikulum merdeka belajar terhadap kreativitas belajar PAK siswa kelas VII SMP Negeri 4 Laguboti Kabupaten Toba tahun pembelajaran 2022/2023. *Pendekar: Jurnal Pendidikan Berkarakter*, 1(5), 371–386. <https://doi.org/10.61132/bima.v1i4.267>
- Sternberg, R. J., & Lubart, T. I. (2014). The concept of creativity: Prospects and paradigms. *Handbook of Creativity*, 3–15. <https://doi.org/10.1017/cbo9780511807916.003>
- Sugiyono. (2022). *Metode penelitian bisnis: Pendekatan kuantitatif, kualitatif, kombinasi, dan R&D*. Alfabeta.
- Tanjung, A., Darmansah, T., Oktapia, D., & Halawa, S. (2025). Efektivitas sosialisasi kebijakan pendidikan dalam meningkatkan kesadaran guru dan siswa. *Harmoni Pendidikan: Jurnal Ilmu Pendidikan*, 1. <https://doi.org/10.62383/hardik.v2i1.1042>
- Yahya, N., Santaria, R., & Muhaemin, M. (2024). Manajemen dan evaluasi penerapan kurikulum merdeka di SMK Pusat Keunggulan. *Jurnal Riset dan Inovasi Pembelajaran*, 4(2), 1383–1393. <https://doi.org/10.1567/jrip.v4i2.1567>
- Yuliani, E. (2021). Meningkatkan kemampuan guru dalam menyusun perangkat pembelajaran melalui supervisi. *J-KIP (Jurnal Keguruan dan Ilmu Pendidikan)*, 2(3), 49–52. <https://dx.doi.org/10.25157/j-kip.v2i1.4845>

The effects of entrepreneurship training and entrepreneurial practice on entrepreneurial interest

Dimas Nurdin Adiwijaya*, Subroto Rapih

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: dimasnurdin@student.uns.ac.id

Abstrak

Penelitian ini bertujuan untuk mengkaji pengaruh pelatihan kewirausahaan dan praktik berwirausaha terhadap minat berwirausaha siswa jurusan Manajemen Perkantoran dan Layanan Bisnis (MPLB) di SMKN 1 Boyolali. Penelitian ini menggunakan desain kuantitatif kausal-komparatif dengan pengumpulan data melalui kuesioner dari 104 siswa yang dipilih menggunakan teknik proportionate stratified random sampling. Analisis regresi linear berganda menunjukkan: (1) pelatihan kewirausahaan berpengaruh positif dan signifikan terhadap minat berwirausaha ($t = 2,79, p < 0,05$); (2) praktik berwirausaha berpengaruh positif dan signifikan terhadap minat berwirausaha ($t = 6,80, p < 0,05$); dan (3) pelatihan kewirausahaan dan praktik berwirausaha secara bersama-sama berpengaruh positif dan signifikan terhadap minat berwirausaha ($F = 112,65, p < 0,05$). Koefisien determinasi ($\text{adjusted } R^2 = 0,69$) menunjukkan bahwa kedua variabel secara kolektif menjelaskan 69% varians minat berwirausaha. Temuan ini mengindikasikan bahwa integrasi pelatihan kewirausahaan terstruktur dengan praktik langsung merupakan strategi efektif untuk menumbuhkan minat berwirausaha di lingkungan pendidikan kejuruan.

Kata kunci: aktivitas berwirausaha; intensi berwirausaha; lokakarya kewirausahaan; pendidikan kejuruan

Abstract

This study examined the effects of entrepreneurship training and entrepreneurial practice on entrepreneurial interest among Office Management and Business Services (MPLB) students at SMKN 1 Boyolali. A quantitative causal-comparative design was employed, with data collected through questionnaires from 104 students selected using proportionate stratified random sampling. Multiple linear regression analysis revealed that: (1) entrepreneurship training had a positive and significant effect on entrepreneurial interest ($t = 2.79, p < .05$), (2) entrepreneurial practice had a positive and significant effect on entrepreneurial interest ($t = 6.80, p < .05$), and (3) both variables jointly had a positive and significant effect on entrepreneurial interest ($F = 112.65, p < .05$). The coefficient of determination ($\text{adjusted } R^2 = .69$) indicated that both variables collectively explained 69% of the variance in entrepreneurial interest.

* Corresponding author

Citation in APA style: Adiwijaya, D.N., & Rapih, S. (2026). The effects of entrepreneurship training and entrepreneurial practice on entrepreneurial interest. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 79-87. <https://dx.doi.org/10.20961/jikap.v10i1.108579>

These findings suggest that integrating structured entrepreneurship training with hands-on practice constitutes an effective strategy for fostering entrepreneurial interest in vocational education settings.

Keywords: entrepreneurial activity; entrepreneurial intention; quantitative; entrepreneurship workshop; vocational education

Received August 29, 2025; Revised October 19, 2025; Accepted October 23, 2025;
Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.108579>

Introduction

Entrepreneurship has emerged as a critical component of modern economies in both developed and developing nations. Entrepreneurship encompasses not only the creation and management of businesses but also innovation, risk-taking, and active participation in economic development. According to Azima and Rahmawati (2024), entrepreneurship serves as a primary instrument for strengthening the creative economy sector and small-medium industries, which possess significant potential for job creation and improving societal welfare. In Indonesia, entrepreneurship functions as a key driver of innovation, productivity enhancement, and creative economy development.

Despite the crucial role of entrepreneurship, young Indonesians' interest in pursuing entrepreneurial careers remains relatively low. Data from the Global Entrepreneurship Monitor (GEM, 2023) indicate that Indonesia's entrepreneurship ratio has reached only approximately 3.47% of the productive population, substantially below developed countries such as the United States at approximately 16% and Singapore at 8.7%. According to World Bank standards, a country is classified as developed when at least 4% of its population engages in entrepreneurship.

Furthermore, data from the Ministry of Education, Culture, Research, and Technology (Kemendikbud, 2024) reveal that only approximately 5.2% of vocational high school graduates in Indonesia choose to establish independent businesses, while the majority prefer formal sector employment or continuing education. This situation indicates a gap between entrepreneurial potential and its realization among young people, particularly vocational high school graduates who should possess vocational competencies to become new entrepreneurs.

According to research by Nurhadi et al. (2023), limited understanding and awareness of the importance of entrepreneurship constitutes the primary barrier inhibiting students' interest in entrepreneurship. Students tend to prefer educational pathways leading to formal sector employment without recognizing that the entrepreneurial world can offer broader and more flexible opportunities. Concerns regarding low entrepreneurial interest also apply to SMK Negeri 1 Boyolali. Based on a preliminary survey conducted by the researchers, entrepreneurial interest among students in the Office Management and Business Services (MPLB) Department at SMK Negeri 1 Boyolali remains relatively low.

The selection of the Office Management and Business Services (MPLB) Department as the focus of this study has strong relevance in the context of modern entrepreneurship. The MPLB Department not only emphasizes office administration skills but also equips students with managerial abilities, business communication, customer service, and document management—competencies that form important foundations for running a professional business. These competencies are essential for developing service-based entrepreneurship, which has become a major trend in the digital era, including administrative consulting, document management services, online business services, and virtual assistant work. Therefore, the MPLB Department possesses significant potential to produce young entrepreneurs in the service and business management fields relevant to modern labor market demands.

Entrepreneurial interest, as an essential element in creating new entrepreneurs, must be continuously nurtured through sustainable programs. According to Putri (2024), this interest encompasses aspects such as the desire to innovate, courage to take risks, and the ability to identify opportunities in every situation. Entrepreneurial interest can be influenced by several factors, including entrepreneurship training and entrepreneurial practice. In this context, entrepreneurial interest can be theoretically explained through the Theory of Planned Behavior (TPB) proposed by Ajzen (1991).

This theory posits that an individual's intention to perform a behavior is determined by three main components: attitude toward the behavior, subjective norms, and perceived behavioral control. In the entrepreneurship context, entrepreneurship training plays an important role in shaping positive attitudes toward business activities through enhanced knowledge and self-confidence, while entrepreneurial practice strengthens behavioral control by providing practical experience and the ability to face business challenges. Thus, both variables can strengthen entrepreneurial intention through the formation of self-belief, social encouragement, and direct practical experience in the field.

Entrepreneurship training is an effective method for fostering entrepreneurial interest by providing in-depth practical and theoretical insights. As stated by Mardikaningsih (2020), training focused on developing business skills such as management, marketing, and finance plays a significant role in building the self-confidence of prospective entrepreneurs. Structured and purposeful entrepreneurship training can provide deeper understanding of business and management principles (Andriani et al., 2020). Additionally, entrepreneurship training contributes to forming positive attitudes and self-efficacy beliefs, which within the TPB framework become important factors in strengthening entrepreneurial intention through enhanced perceived behavioral control.

Beyond entrepreneurship training, entrepreneurial practice also influences students' entrepreneurial interest. Entrepreneurial practice provides positive effects on the interest in starting a business. In a study by Yuliani et al. (2018), direct experience in running a small business was found to significantly increase entrepreneurial interest. Through practice, prospective entrepreneurs can learn to face real challenges, make business decisions, and understand the importance of innovation in maintaining business sustainability. From the TPB perspective, entrepreneurial practice strengthens the perceived behavioral control dimension because students not only understand theory but also directly experience how a business operates. This experience enhances self-confidence, forms positive attitudes toward risk, and cultivates the perception that they can manage their own business. Thus, training and entrepreneurial practice have a conceptually supportive relationship in shaping entrepreneurial interest through enhanced knowledge, experience, and self-confidence.

Based on the foregoing discussion, this study aimed to examine the effects of entrepreneurship training and entrepreneurial practice on entrepreneurial interest among students in the Office Management and Business Services (MPLB) Department at SMK Negeri 1 Boyolali. The findings are expected to provide meaningful contributions to the development of Office Administration curricula in vocational high schools, particularly in integrating entrepreneurship elements into practice-based subjects. For instance, the findings can serve as a foundation for designing project-based learning that emphasizes business simulation, customer service, and digital administration innovation. Thus, this study contributes not only theoretically to the development of the Theory of Planned Behavior in vocational education contexts but also provides practical benefits for enhancing students' entrepreneurial interest and readiness in modern office management fields.

Although this study has a limited geographical scope, specifically SMK Negeri 1 Boyolali, the findings provide meaningful and contextual scientific contributions to the development of entrepreneurship education in vocational high schools. The novelty of this study lies in its integrative approach to testing the simultaneous relationship between training and entrepreneurial practice using the TPB approach to explain the psychological mechanisms underlying the formation of students' entrepreneurial interest. This approach enables the findings to have not only local applicability but also theoretical and practical implications for other vocational education institutions with similar characteristics. Therefore, although the novelty is rooted in a specific geographical context, the

substantive findings of this study provide significant contributions to strengthening experiential learning-based entrepreneurship education models in vocational education settings.

Research Methods

This study was conducted at SMKN 1 Boyolali in the Office Management and Business Services (MPLB) Department. Data collection took place over two weeks, from June 24 to July 4, 2025. This study employed a quantitative causal-comparative approach and included three variables: two independent variables (X) and one dependent variable (Y). The independent variables were entrepreneurship training (X_1) and entrepreneurial practice (X_2), while the dependent variable was entrepreneurial interest (Y).

The population of this study consisted of 140 students enrolled in the MPLB Department at SMKN 1 Boyolali. The sample was determined to be 104 students using proportionate stratified random sampling. This technique was selected because the population comprised heterogeneous elements divided into proportional strata. In this study, the strata referred to grade levels, specifically Grade X and Grade XI in the MPLB Department. Data were collected using a questionnaire with a five-point Likert scale.

Respondent recruitment was conducted through collaboration with entrepreneurship subject teachers and homeroom teachers to ensure orderly and efficient questionnaire distribution. Prior to questionnaire completion, the researchers provided brief explanations regarding the research objectives, data confidentiality, and questionnaire instructions. Questionnaire completion was conducted on-site during class sessions, with an average completion time of 20–25 minutes per respondent.

Of the 104 distributed questionnaires, all were returned with complete responses suitable for analysis, resulting in a 100% response rate. This outcome indicates that the respondent recruitment strategy was effective and received full support from the school and students.

The research instrument was tested using validity and reliability tests. Validity testing was conducted with 30 respondents at a significance level of 5% (0.05). Data were considered valid if r -calculated $>$ r -table (0.361). The Product Moment Correlation method was employed. Based on the validity test results, 27 valid items were obtained for variable X_1 , 12 valid items for variable X_2 , and 11 valid items for variable Y. Reliability testing was conducted using Cronbach's Alpha, and all variables were deemed reliable as Cronbach's Alpha values exceeded 0.60.

The prerequisite tests in this study included a normality test using the Kolmogorov-Smirnov test, which yielded an Asymp. Sig. (2-tailed) value of .200 $>$.05, indicating normally distributed data. The linearity test showed that the Sig. Deviation from Linearity for X_1 with Y was .087 $>$.05, indicating a linear relationship between entrepreneurship training and entrepreneurial interest. Similarly, the Sig. Deviation from Linearity for X_2 with Y was .868 $>$.05, indicating a linear relationship between entrepreneurial practice and entrepreneurial interest. The multicollinearity test showed a VIF value of 2.675 for both X_1 and X_2 , indicating no multicollinearity between independent variables. The heteroscedasticity test showed significance values of .945 $>$.05 for entrepreneurship training and .852 $>$.05 for entrepreneurial practice, indicating no heteroscedasticity in either variable. Hypothesis testing in this study included t-tests, F-tests, multiple linear regression analysis, coefficient of determination analysis, and effective and relative contribution analyses.

Result and Discussion

Research Result

Table 1 presents the descriptive statistics for the study variables. For the entrepreneurial interest variable, the maximum score was 60, the minimum score was 26, $M = 46.24$, $SD = 6.44$. For the entrepreneurship training variable, the maximum score was 55, the minimum score was 26, $M = 44.82$, $SD = 5.18$. For the entrepreneurial practice variable, the maximum score was 134, the minimum score was 76, $M = 105.82$, $SD = 12.00$.

Table 1
Descriptive Statistics

Variable	N	Min	Max	Mean	Std. Deviation
Entrepreneurship Training	104	26	55	44.82	5.184
Entrepreneurial Practice	104	76	134	105.82	12.002
Entrepreneurial Interest	104	26	60	46.24	6.435

Table 2
Results of t-Test Analysis

	t	Sig.
(Constant)	.846	.400
Entrepreneurship Training	2.796	.006
Entrepreneurial Practice	6.806	.000

As shown in Table 2, the t-test results for entrepreneurship training (X_1) on entrepreneurial interest (Y) indicated that entrepreneurship training obtained $t = 2.80$, $p = .006$. Since t -calculated (2.80) $>$ t -table (1.983) and $p < .05$, H_0 was rejected and H_1 was accepted, indicating a significant partial effect of entrepreneurship training on entrepreneurial interest. Meanwhile, the t-test results for entrepreneurial practice (X_2) indicated $t = 6.81$, $p < .001$. Since t -calculated (6.81) $>$ t -table (1.983) and $p < .05$, H_0 was rejected and H_2 was accepted, indicating a significant partial effect of entrepreneurial practice on entrepreneurial interest.

Table 3
Results of F-Test Analysis (ANOVA)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	2944.915	2	1472.457	112.659	.000 ^b
Residual	1320.076	101	13.070		
Total	4264.990	103			

As presented in Table 3, the F-test results showed $F(2, 101) = 112.66$, $p < .001$. Since F -calculated (112.66) $>$ F -table (3.94) and $p < .05$, it can be concluded that H_0 was rejected, indicating a significant simultaneous effect of entrepreneurship training (X_1) and entrepreneurial practice (X_2) on entrepreneurial interest (Y).

Table 4
Results of Multiple Linear Regression Analysis

	B	Std. Error	Beta
(Constant)	2.797	3.307	
Entrepreneurship Training	.314	.112	.253
Entrepreneurial Practice	.330	.049	.616

Based on Table 4, the regression equation obtained in this study is $\hat{Y} = 2.80 + 0.31X_1 + 0.33X_2$, which can be interpreted as follows: (1) The constant of 2.80 indicates that if both entrepreneurship training (X_1) and entrepreneurial practice (X_2) equal zero, the entrepreneurial interest (Y) value would be 2.80. (2) The regression coefficient for entrepreneurship training (X_1) is 0.31, meaning that if X_1 increases by one unit while X_2 remains constant, entrepreneurial interest would increase by 0.31 units. (3) The regression coefficient for entrepreneurial practice (X_2) is 0.33, meaning that if X_2 increases by one unit while X_1 remains constant, entrepreneurial interest would increase by 0.33 units.

Table 5
Coefficient of Determination

R	R Square	Adjusted R Square	Std. Error of the Estimate
.831	.690	.684	3.165

Based on Table 5, the coefficient of determination (R^2) analysis yielded an R^2 value of .69. This indicates that the independent variables entrepreneurship training and entrepreneurial practice explain 69% of the variance in entrepreneurial interest, while the remaining 31% is explained by other variables not examined in this study.

Discussion

Based on the statistical test results, entrepreneurship training obtained $t = 2.79$, $p = .006$, which is statistically significant at $\alpha = .05$. Thus, H_0 was rejected and H_1 was accepted, indicating that entrepreneurial interest is positively and significantly influenced by entrepreneurship training. This finding demonstrates that entrepreneurship training is not merely a theoretical learning activity but also plays a strategic role in shaping students' attitudes, self-confidence, and motivation to start businesses. This result aligns with research by Doan and Phan (2020), who affirmed that entrepreneurship training plays an important role in enhancing students' entrepreneurial interest and enthusiasm through increased self-confidence and practical skills. Muhtarom et al. (2017) also added that training functions as a means of individual development and mentoring to enable skill development and entrepreneurial mindsets. Therefore, entrepreneurship training constitutes an important foundation for fostering students' readiness and desire to enter the entrepreneurial world independently.

Beyond providing technical skills, entrepreneurship training also plays a role in shaping creative, adaptive, and innovative entrepreneurial character. Wulandari et al. (2025) explained that entrepreneurship training can enhance creativity, broaden business insights, and foster a resilient entrepreneurial spirit. This finding is reinforced by Digón-Arroba et al. (2025), who stated that entrepreneurship training with interactive and contextual approaches can improve students' self-confidence and managerial competencies. Therefore, entrepreneurship training should be developed systematically and adapted to students' needs to maximize its impact. With improved training quality, more students are expected to develop the interest, courage, and ability to create new business opportunities that contribute to national economic progress.

In the second hypothesis test, entrepreneurial practice obtained $t = 6.80$, $p < .001$, which is statistically significant at $\alpha = .05$. Thus, H_0 was rejected and H_2 was accepted, indicating that entrepreneurial interest is positively and significantly influenced by entrepreneurial practice. This finding demonstrates that direct involvement in entrepreneurial activities can shape stronger attitudes, skills, and self-confidence compared to theoretical learning alone. Through practice, students gain real experience in managing businesses, facing risks, and making business decisions, thereby enhancing their perceptions of the feasibility and attractiveness of the business world. This result aligns with research by Huang et al. (2021), who affirmed that direct entrepreneurial experience plays a significant role in building prospective entrepreneurs' skills and self-confidence. Similar findings were also reported by Astuti (2018) and Mustofa et al. (2023), who found that entrepreneurial practice has a significant effect on students' interest in starting independent businesses. Thus, entrepreneurial practice functions as a real learning process that fosters mental readiness and entrepreneurial motivation.

Furthermore, entrepreneurial practice not only provides technical skills but also plays a role in shaping adaptive entrepreneurial mindsets and character. Kartika et al. (2022) explained that entrepreneurial practice activities can change attitudes, improve abilities, and strengthen individual expertise to prepare them for becoming entrepreneurs. Naturrohman et al. (2022) added that direct practical experience can foster students' desire and interest in starting their own businesses. Additionally, Salehe et al. (2024) affirmed that sustainably implemented entrepreneurial practice can mediate the relationship between entrepreneurial attitudes and business performance, thus

becoming an important bridge between theory and practical application. Therefore, entrepreneurial practice has a strategic role in shaping independence, courage to take risks, and stronger entrepreneurial interest in students, particularly in vocational education settings.

In the third hypothesis test, the results showed $F = 112.65$, $p < .001$, which is statistically significant at $\alpha = .05$. Therefore, H_3 in this study was accepted, indicating a positive and significant effect of entrepreneurship training and entrepreneurial practice simultaneously on students' entrepreneurial interest. However, the greater contribution came from entrepreneurial practice, which provides direct experience in facing real business situations. Through practical activities, students not only acquire technical skills but also develop self-confidence, creativity, and decision-making abilities in real conditions (Huang et al., 2021). This finding reinforces the view that experiential learning plays an important role in shaping entrepreneurial intention through enhanced self-efficacy and contextual understanding of the business world (Fadila, 2025). Thus, entrepreneurial practice becomes the dominant factor in fostering students' entrepreneurial interest and readiness.

Although entrepreneurial practice plays a greater role, entrepreneurship training remains important as a theoretical foundation that equips students with insights, strategies, and basic concepts of business management (Widarum et al., 2025). The synergy between training and practice becomes key in creating effective entrepreneurship education. Training builds conceptual understanding, while practice serves as a means of application and real reinforcement of entrepreneurial attitudes (Kartika et al., 2022; Naturrohmah et al., 2022). Therefore, the integration of both approaches should be optimized so that schools can create learning ecosystems that encourage creativity, courage to take risks, and student readiness to face business world challenges (Salehe et al., 2024).

Psychologically, the relationship between training and entrepreneurial practice with entrepreneurial interest can be explained more thoroughly through the Theory of Planned Behavior (TPB) framework. In this study, TPB is used not only as a theoretical foundation at the outset but also as an analytical tool to comprehensively understand the mechanisms of students' entrepreneurial interest formation. According to this theory, entrepreneurial intention is influenced by three main components: attitude toward behavior, subjective norms, and perceived behavioral control (Ajzen, 1991).

The research findings indicate that entrepreneurship training contributes to the formation of attitude toward behavior, specifically students' positive attitudes toward the business world through enhanced knowledge, business strategy understanding, and values of independence and responsibility. Meanwhile, entrepreneurial practice plays a role in strengthening perceived behavioral control by providing real experience that fosters self-efficacy and self-confidence that students can run business activities independently. Both factors are then complemented by social support from the school environment, teachers, and peers that forms positive subjective norms toward entrepreneurial activities.

The interaction of these three dimensions explains why students who receive training and entrepreneurial practice experience demonstrate higher entrepreneurial interest. Training creates understanding and positive attitudes, practice enhances behavioral control and self-confidence, while social support strengthens subjective norms toward entrepreneurial choices. Thus, increased entrepreneurial interest is not only influenced by learning activities themselves but is also a result of integrated changes in attitudes, perceived self-control, and social encouragement within the TPB framework.

Therefore, the findings of this study reinforce the relevance of the Theory of Planned Behavior in explaining the psychological processes underlying the formation of vocational education students' entrepreneurial interest. These findings affirm that entrepreneurship development strategies in schools should not only emphasize knowledge or skill aspects but should also consider the formation of positive attitudes, supportive social norms, and enhanced student self-efficacy as psychological factors that determine the emergence of entrepreneurial intention.

Conclusion

Based on the research findings, entrepreneurship training and entrepreneurial practice have positive and significant effects on entrepreneurial interest among SMKN 1 Boyolali students both partially and simultaneously. This indicates that improved quality of entrepreneurship training and increased intensity of entrepreneurial practice contribute to greater formation of entrepreneurial interest. The combination of training and practice proved to be the most effective strategy for fostering entrepreneurial spirit in vocational education settings. Training provides theoretical foundations, managerial insights, and conceptual understanding of the business world, while entrepreneurial practice serves as an applicative medium that enables students to experience real processes in running a business. The synergy between both creates a balance between knowledge and experience, which psychologically strengthens self-efficacy, sense of responsibility, and positive outcome expectations toward entrepreneurial activities.

This study has limitations as it examined only two independent variables—entrepreneurship training and entrepreneurial practice—and thus did not encompass all factors that may influence entrepreneurial interest. Additionally, the scope was limited to one department and one location; therefore, the findings may not represent conditions in other settings. Consequently, future research is recommended to include additional relevant variables, expand population and sample sizes, employ different methodologies, and involve more diverse research locations to provide deeper understanding of students' experiences, perceptions, and motivations in developing entrepreneurial interest.

The theoretical implications of this study demonstrate that entrepreneurship training and entrepreneurial practice have significant effects on enhancing vocational high school students' entrepreneurial interest. This interest is influenced by both internal and external factors, including structured learning and real experience. Training instills knowledge and positive mindsets, while practice reinforces direct experience. As the quality of both improves, the likelihood of entrepreneurial interest development increases, thus establishing the importance of entrepreneurship education in vocational school contexts. The practical implications of this study indicate that training and entrepreneurial practice can enhance entrepreneurial interest. For students, active involvement provides knowledge, skills, experience, and fosters self-confidence and business readiness. For educational institutions, integrating entrepreneurship into curricula and activities is important, supported by facilities, mentoring, and industry collaboration to encourage students' entrepreneurial motivation.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Astuti, P. (2018). Pengaruh pendidikan dan praktik kewirausahaan terhadap minat mahasiswa untuk berwirausaha. *Jurnal Ilmiah Riset Manajemen*, 7(1), 79–87. <https://core.ac.uk/download/pdf/229612609.pdf>
- Digón-Arroba, M. C., Escobar-Llamazares, M. C., di Giusto-Valle, C., de la Torre-Cruz, T., Luis-Rico, I., Palmero-Cámara, C., & Jiménez, A. (2025). Education and entrepreneurship: Entrepreneurial training in secondary education and its impact on entrepreneurial interest in the United States and Spain. *Cogent Social Sciences*, 11(1). <https://doi.org/10.1080/23311886.2025.2539548>
- Doan, X. T., & Phan, T. T. H. (2020). The impact of entrepreneurial education on entrepreneurial intention: The case of Vietnamese. *Management Science Letters*, 10(8), 1787–1796. <https://doi.org/10.5267/j.msl.2019.12.040>
- Fadila, C. N. (2025). *Pengaruh pendidikan kewirausahaan, lingkungan keluarga dan attitude towards enterpreneurship melalui self-efficacy terhadap minat berwirausaha pada mahasiswa Fakultas Ekonomi dan Bisnis Universitas Negeri Makassar* (Skripsi, Universitas Negeri Makassar) Makassar, Indonesia.

- Huang, Y., An, L., Wang, J., Chen, Y., Wang, S., & Wang, P. (2021). The role of entrepreneurship policy in college students' entrepreneurial intention: The intermediary role of entrepreneurial practice and entrepreneurial spirit. *Frontiers in Psychology*, 12, 1–11. <https://doi.org/10.3389/fpsyg.2021.585698>
- Kartika, Y., Sumartono, B. G., & Syamsuri, S. (2022). Pengaruh praktik kewirausahaan terhadap motivasi berwirausaha peserta didik. *Jurnal Penelitian Pendidikan dan Pembelajaran*, 9(2), 129–140.
- Muhtarom, M., Nizaruddin, N., & Zuhri, M. S. (2017). Pelatihan kewirausahaan di Universitas PGRI Semarang. *Jurnal Pengabdian Kepada Masyarakat*, 8(1), 104–114. <https://doi.org/10.26877/e-dimas.v8i1.1379>
- Mustofa, A. A., Amin, M., & Afifudin, A. (2023). Pengaruh pembelajaran kewirausahaan dan praktik kewirausahaan terhadap minat berwirausaha (studi pada mahasiswa Jurusan Manajemen dan Akuntansi FEB Unisma Angkatan 2019). *Jurnal Ilmiah Riset Akuntansi*, 12(02), 93–102. <https://doi.org/10.35508/jom.v16i1.9710>
- Naturrohman, D., Diana, N., & Afifudin, A. (2022). Pengaruh pendidikan kewirausahaan, praktik kewirausahaan, motivasi, dan lingkungan keluarga terhadap minat mahasiswa untuk berwirausaha di masa pandemi Covid-19 (studi kasus pada mahasiswa Angkatan 2018 Jurusan Akuntansi Fakultas Ekonomi dan Bisnis Universitas Islam Malang). *E-JRA*, 11(10), 38–55.
- Salehe, M. A., Sesabo, J. K., Isaga, N., & Mkuna, E. (2024). Individual entrepreneurial orientation and firm performance: The mediating role of sustainable entrepreneurship practices. *Sustainable Technology and Entrepreneurship*, 3(3), 100079. <https://doi.org/10.1016/j.stae.2024.100079>
- Widarum, C. A., Marsofiyati, M., & Utari, E. D. (2025). Pengaruh minat berwirausaha pada mahasiswa program wira-wiri wirausaha merdeka di Universitas Negeri Jakarta. *Neraca Manajemen dan Ekonomi*, 19(8), 1–11.
- Wulandari, M., Darno, D., & Purnamasari, W. (2025). Pengaruh pelatihan kewirausahaan, motivasi, dan lingkungan sekolah terhadap minat berwirausaha siswa SMK YPM 8 Sidoarjo Jurusan DKV. *Jurnal Dinamika Pendidikan Nusantara*, 6(1), 619–629.

Effects of project-based learning and learning independence on vocational students' archiving outcomes

Anggita Ayu Verawati*, Tri Murwaningsih

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: anggitaayuverawati@student.uns.ac.id

Abstrak

Penelitian ini mengkaji pengaruh persepsi siswa terhadap Pembelajaran Berbasis Proyek (PjBL) dan kemandirian belajar terhadap pencapaian hasil belajar di kalangan siswa kelas sebelas Manajemen Perkantoran dan Layanan Bisnis di SMK Negeri 3 Surakarta. Pendekatan survei kuantitatif digunakan dengan 85 responden yang dipilih dari 108 siswa melalui pengambilan sampel acak bertingkat proporsional. Data dikumpulkan menggunakan kuesioner skala Likert lima poin dan dianalisis melalui regresi linier berganda menggunakan IBM SPSS 26.0. Hasil menunjukkan bahwa persepsi PjBL berpengaruh positif dan signifikan terhadap hasil belajar ($t = 3,008$, $p = 0,003$), demikian pula kemandirian belajar ($t = 4,716$, $p = 0,000$). Secara bersamaan, kedua variabel tersebut berpengaruh signifikan terhadap hasil belajar ($F = 11,124$, $p = 0,000$), berkontribusi sebesar 19,4% terhadap varians hasil belajar ($\text{Adjusted } R^2 = 0,194$). Kemandirian belajar muncul sebagai prediktor yang lebih kuat ($\beta = 0,592$) dibandingkan dengan persepsi PjBL ($\beta = 0,378$). Temuan ini menegaskan bahwa pembelajaran berbasis proyek yang dikontekstualisasikan dengan praktik pengarsipan otentik, dikombinasikan dengan peningkatan pembelajaran mandiri, secara efektif meningkatkan hasil pendidikan kejuruan. Guru disarankan untuk merancang proyek pengarsipan otentik yang berlangsung selama 4–6 minggu sambil mendorong otonomi siswa melalui refleksi diri dan bimbingan perencanaan.

Keywords: kompetensi manajemen dokumen; pendidikan vokasional; self-regulated learning siswa SMK

Abstract

This study examined the effects of students' perceptions of Project-Based Learning (PjBL) and learning independence on archiving learning outcomes among eleventh-grade Office Management and Business Services students at SMK Negeri 3 Surakarta. A quantitative survey approach was employed with 85 respondents selected from 108 students through proportionate stratified random sampling. Data were collected using

* Corresponding author

Citation in APA style: Verawati, A.A., & Murwaningsih, T. (2026). Effects of project-based learning and learning independence on vocational students' archiving outcomes. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 88-99.
<https://dx.doi.org/10.20961/jikap.v10i1.109575>

a five-point Likert-scale questionnaire and analyzed through multiple linear regression using IBM SPSS 26.0. Results indicated that PjBL perceptions positively and significantly affected learning outcomes ($t = 3.008$, $p = .003$), as did learning independence ($t = 4.716$, $p = .000$). Simultaneously, both variables significantly influenced learning outcomes ($F = 11.124$, $p = .000$), contributing 19.4% to learning outcome variance (Adjusted $R^2 = .194$). Learning independence emerged as the stronger predictor ($\beta = .592$) compared to PjBL perceptions ($\beta = .378$). These findings confirm that project-based learning contextualized with authentic archiving practices, combined with self-regulated learning enhancement, effectively improves vocational education outcomes. Teachers are recommended to design authentic archiving projects lasting 4–6 weeks while fostering student autonomy through self-reflection and planning guidance.

Keywords: document management competence; vocational education; vocational students' self-regulated learning

Received October 04, 2025; Revised November 03, 2025; Accepted November 11, 2025; Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.109575>

Introduction

Learning outcomes represent observable and measurable behavioral changes in cognitive, affective, and psychomotor domains following the learning process (Anderson & Krathwohl, 2019). Optimal learning outcomes indicate students' success in comprehending material, applying concepts, and developing competency-aligned skills. In archiving courses, learning outcomes encompass not only theoretical understanding of document storage concepts but also practical abilities in managing archives systematically.

The relationship between students' perceptions of Project-Based Learning (PjBL) and learning independence lies in how these factors mutually reinforce improved learning outcomes. Students with high learning independence demonstrate greater effectiveness in project-based learning environments, as they can manage time, strategies, and resources efficiently. Conversely, PjBL implementation can foster student learning independence by assigning greater responsibility for project completion. Thus, the combination of positive PjBL perceptions and high learning independence levels is expected to significantly impact archiving learning outcomes.

Archiving education in vocational secondary schools plays a crucial role in preparing students with document management skills aligned with workplace demands. However, student learning outcomes remain suboptimal, with average scores falling below the Minimum Completeness Criteria (KKM). This condition indicates the need for innovative learning models such as Project-Based Learning (PjBL) to enhance student motivation, engagement, and learning independence.

Previous research has yielded varied findings. Datu et al. (2020) demonstrated that PjBL enhances motivation and learning outcomes through contextual projects relevant to real-world situations. Ramadani and Ubaidilah (2023) found that PjBL promotes learning independence through direct problem-solving experiences. However, these studies have not addressed how student perceptions of PjBL influence learning outcomes in vocational education contexts, particularly in archiving. Meanwhile, Sa'ban et al. (2023) confirmed PjBL effectiveness in STEAM domains without examining its application in document management competencies. Consequently, a research

gap exists in understanding how student perceptions of PjBL implementation contribute to learning outcomes in office-related vocational education.

Furthermore, the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek, 2017) has nationally emphasized the importance of implementing 21st-century learning models such as Project-Based Learning to develop critical thinking, collaboration, communication, and creativity skills in vocational school environments. However, field implementation continues to face challenges regarding operational execution, teacher readiness, and student perceptions of PjBL effectiveness. This context reinforces the urgency of examining how student perceptions of project-based learning genuinely influence learning outcomes in vocational secondary schools.

Previous research also exhibits limitations. For instance, Fitri et al. (2018) examined only the relationship between motivation and higher-order thinking skills without incorporating student perception factors regarding learning models. Meanwhile, Ramadianti (2021) measured only learning outcome improvements without considering the role of learning independence as a mediating variable. Therefore, this research addresses these gaps by analyzing the influence of students' perceptions of PjBL-based learning and learning independence on archiving learning outcomes simultaneously.

This study integrates perception variables toward PjBL and learning independence within office-related vocational education contexts. The research contributes by providing new empirical evidence that project-based learning effectiveness substantially depends on student perceptions as primary learning agents, rather than solely on teacher implementation methods. Practically, these findings offer recommendations for vocational school teachers to strengthen contextual learning strategies and enhance students' self-regulated learning through authentic and measurable archiving projects.

Based on the foregoing discussion, this research aims to address the following questions: (1) How do students' perceptions of PjBL-based learning influence the archiving learning outcomes of eleventh-grade MPLB students at SMK Negeri 3 Surakarta? (2) How does learning independence influence students' archiving learning outcomes? (3) How do perceptions of PjBL and learning independence simultaneously influence the archiving learning outcomes of eleventh-grade MPLB students at SMK Negeri 3 Surakarta? By answering these questions, this research is expected to provide deeper insights for schools, teachers, students, and other researchers.

Research Methods

This study employed a quantitative approach with a survey method to examine the influence of students' perceptions of PjBL-based learning and learning independence on the learning outcomes of eleventh-grade MPLB students at SMK Negeri 3 Surakarta. The research was conducted through seven stages: preparation, proposal development, instrument construction, data collection, data processing, data analysis, and report writing. The research period extended from October 2024 to June 2025. The population comprised 108 students, with a sample of 85 students selected using stratified random sampling to ensure representativeness. The instrument consisted of a closed questionnaire with a five-point Likert scale containing indicators for PjBL perception, learning independence, and learning outcomes. Validity and reliability tests were conducted using SPSS 26.0. Data analysis employed multiple linear regression following classical assumption tests (normality, linearity, multicollinearity, and heteroscedasticity). Research ethics were observed by obtaining respondent consent, maintaining identity confidentiality, and ensuring data use exclusively for academic purposes.

Proportionate stratified random sampling was selected because the population consisted of multiple classes (strata) with varying student numbers. This technique ensured each class received proportional and representative sampling opportunities, thus accurately reflecting population conditions. Sample size calculation employed the Slovin formula: $n = N / (1 + N(e)^2)$, yielding $n =$

$108 / (1 + 108(0.05)^2) = 108 / 1.27 = 85.03 \approx 85$ students. The research instrument consisted of a five-point Likert scale questionnaire measuring PjBL perception, learning independence, and archiving learning outcomes.

Validity testing was conducted on data from 23 respondents as a pilot group. Based on this number, the *r*-table value at 5% significance was 0.3961. Items with *r*-calculated ≥ 0.3961 were deemed valid and suitable for subsequent research. Validity testing in this study used SPSS Statistics 26. Validity level testing employed the Pearson product-moment correlation formula; results were compared with the product-moment table, and items with *r*-calculated $> r$ -table at 5% significance were declared valid and usable as research measurement instruments.

Instrument reliability was determined by the following criteria: if $\alpha > 0.60$, the research instrument was deemed reliable; if $\alpha < 0.60$, the instrument was deemed unreliable. Formula results were subsequently interpreted against reliability correlation levels. Reliability testing in this study also used IBM SPSS 26.0 software with Cronbach's Alpha reliability testing. Data analysis proceeded as follows:

Analysis was conducted using classical assumption tests (normality, linearity, multicollinearity, heteroscedasticity) and multiple linear regression. Multiple linear regression was employed because two independent variables (PjBL and learning independence) simultaneously influence the dependent variable (learning outcomes). This analysis enabled both partial and simultaneous effect testing.

Result and Discussion

Research Result

Based on descriptive data analysis results, the learning outcomes variable had a minimum score of 70 and maximum of 89, with a mean of 81.88 and standard deviation of 6.267. This indicates that student learning achievement was generally in the good category and relatively homogeneous, as the standard deviation was less than 10. The PjBL perception variable had a minimum score of 15 and maximum of 60, with a mean of 27.76 and standard deviation of 7.665. Meanwhile, the learning independence variable had a minimum score of 18 and maximum of 66, with a mean of 35.26 and standard deviation of 8.207. These research variables were measured using instruments consisting of 10 to 18 statement items with a five-point Likert scale.

Before conducting multiple linear regression analysis, prerequisite tests including normality, linearity, and multicollinearity tests were performed. Normality test results using the Kolmogorov-Smirnov Test showed an Asymp. Sig. (2-tailed) value of 0.068. This value exceeded 0.05, indicating that residual data in the regression model were normally distributed. Thus, the analysis model was suitable for further testing.

Linearity test results between students' PjBL perception (X_1) and learning outcomes (Y) showed a significance value on the Deviation from Linearity row of 0.437. Meanwhile, linearity test results between learning independence (X_2) and learning outcomes (Y) showed a significance value of 0.477. Because the significance values for both variables exceeded 0.05, it was concluded that PjBL, learning independence, and learning outcomes had linear relationships. This means that better student perceptions of PjBL and higher learning independence correspond to improved learning outcomes.

Subsequently, multicollinearity test results showed Tolerance values of 0.608 and Variance Inflation Factor (VIF) values of 1.645 for both independent variables. Because Tolerance > 0.1 and VIF < 10 , it was concluded that no multicollinearity existed between PjBL and learning independence variables. Thus, both variables could be simultaneously included in the regression model without excessive mutual influence.

Multiple linear regression analysis was conducted to determine the magnitude of influence of students' PjBL perception (X_1) and learning independence (X_2) on archiving learning outcomes

(Y). Results indicated that partially, the PjBL variable had a positive and significant effect on learning outcomes, with $t = 3.008 > t\text{-table} = 1.990$ and significance value of $0.003 < 0.05$. This indicates that more positive student perceptions of project-based learning correspond to higher archiving learning outcomes. Similarly, the learning independence variable showed a positive and significant effect on learning outcomes, with $t = 4.716 > t\text{-table} = 1.990$ and significance value of $0.000 < 0.05$. This means that higher student learning independence levels correspond to higher learning outcomes.

Simultaneous test results (F-test) reinforced these findings, with $F = 11.124 > F\text{-table} = 3.11$ and significance of $0.000 < 0.05$. This indicates that PjBL perception and learning independence variables together significantly influenced student learning outcomes. The coefficient of determination (R^2) value of 0.194 indicates that both independent variables contributed 19.4% to learning outcome variance, while the remaining 80.6% was influenced by factors outside the research model, such as learning interest, teacher support, and student learning environment.

Tests employed in this study included validity, reliability, normality, linearity, and multicollinearity tests. Validity testing compared r-calculated values from SPSS data processing with r-table values. With 23 student respondents and 0.05 significance level, the r-table value was 0.3961. This value served as the reference for determining item validity. Validity test results showed that for variable X_1 (Student Perception of Project-Based Learning/PjBL), all 15 statement items had r-calculated $> r\text{-table}$ and were declared valid. Meanwhile, for variable X_2 (Learning Independence), all 18 statement items had r-calculated $> r\text{-table}$ and were declared valid.

Table 1
Descriptive Statistics

		Learning Outcomes	PjBL	Learning Independence
N	Valid	85	85	85
	Missing	0	0	0
Mean		81.88	27.76	35.26
Std. Error of Mean		.680	.831	.890
Median		85	28	35
Mode		88	29	30
Std. Deviation		6.267	7.665	8.207
Variance		39.272	58.754	67.361
Range		19	45	48
Minimum		70	15	18
Maximum		89	60	66
Sum		6960	2360	2997

Source: Data processed by researchers (2025)

Based on Table 1, test results indicate that the highest mean value was found in the learning outcomes variable (81.88), demonstrating that students generally achieved good learning outcomes. Each variable's standard deviation < 10 indicates relatively homogeneous data distribution.

Table 2
Validity Test Results

Variable	Number of Items	r-calculated	r-table (0.3961)	Status
PjBL Perception (X_1)	15	0.456–0.785	> 0.3961	Valid
Learning Independence (X_2)	18	0.472–0.802	> 0.3961	Valid

Source: Data processed by researchers (2025)

Based on Table 2, reliability testing was employed to determine the extent to which research instruments provide consistent results when re-measured at different times. This study showed Cronbach's Alpha values above 0.7, indicating that all indicators possessed good internal consistency. These values demonstrate that each item within constructs consistently reflected the measured variables.

Table 3*Reliability Test Results*

Construct	Cronbach's Alpha	Status
PjBL	0,760	Reliable
Learning Independence	0,743	Reliable

Source: Data processed by researchers (2025)

Based on Table 3, normality testing was conducted to determine whether research data were normally distributed. Calculations used the Kolmogorov-Smirnov technique through IBM SPSS 26 software with a 5% or 0.05 significance level. Data were considered normally distributed if significance values > 0.05 ; conversely, data were considered non-normally distributed if significance values < 0.05 .

Table 4*Normality Test Results*

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		85
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.00085443
Most Extreme Differences	Absolute	.093
	Positive	.093
	Negative	-.089
Test Statistic		.093
Asymp. Sig. (2-tailed)		.068 ^c

Source: Data processed by researchers (2025)

Based on Table 4, the Asymptotic Significance (2-tailed) value was 0.068. This value indicates that $0.068 > 0.05$; therefore, it was concluded that residual data in this regression model were normally distributed because the value exceeded 0.05.

Table 5*Linearity Test: PjBL and Learning Outcomes*

		Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	(Combined)	841.518	21	40.072	1.027	.446
	Linearity	33.622	1	33.622	.862	.357
	Deviation from Linearity	807.895	20	40.395	1.036	.437
Within Groups		2457.306	63	39.005		
Total		3298.824	84			

Source: Data processed by researchers (2025)

Table 6*Linearity Test: Learning Independence and Learning Outcomes*

		Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	(Combined)	1118.143	29	38.557	.972	.521
	Linearity	.143	1	.143	.004	.952
	Deviation from Linearity	1118.000	28	39.929	1.007	.477
Within Groups		2180.681	55	39.649		
Total		3298.824	84			

Source: Data processed by researchers (2025)

Based on Tables 5 and 6, the significance values (p-value Sig.) on the Deviation from Linearity row were 0.437 and 0.477, respectively. Because significance values exceeded 0.05, it was concluded that students' PjBL perception (X_1) and learning independence (X_2) each had linear relationships with archiving learning outcomes (Y).

Table 7*Multicollinearity Test Results*

Coefficients ^a		
Collinearity Statistics		
	Tolerance	VIF
PjBL	0,608	1,645
Kemandirian	0,608	1,645

Source: Data processed by researchers (2025)

Based on Table 7, test results showed that all Tolerance values produced were > 0.10 and VIF (Variance Inflation Factor) values were < 10 ; specifically, the PjBL variable had a Tolerance value of 0.608 and VIF of 1.645, and the learning independence variable had a Tolerance value of 0.608 and VIF of 1.645. Thus, it was concluded that no multicollinearity existed, and the data were suitable for use.

Table 8*Multiple Linear Regression Analysis Results*

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.008	.001		9.423	.000
PjBL	.038	.013	.378	3.008	.003
Learning Independence	6.750	.000	.592	4.716	.000

Source: Data processed by researchers (2025)

Based on Table 8, the constant value was 0.008, meaning that if PjBL and learning independence variables equaled 0 (zero), the learning outcomes variable value would be 0.008. The PjBL coefficient value of 0.038 indicates that if the PjBL variable increased, the learning outcomes variable would decrease by 0.038, and vice versa. Meanwhile, the learning independence coefficient value of 6.750 indicates that if the learning independence variable increased, the learning outcomes variable would also increase by 6.750. This demonstrates that learning independence had a stronger influence on learning outcomes compared to students' PjBL perceptions.

Table 9*t-Test Results*

	t-calculated	Significance
(Constant)	9,423	0,00
PjBL	3,008	0,03
Learning Independence	4,716	0,00

Source: Data processed by researchers (2025)

Based on Table 9, test results indicated that PjBL (X_1) significance values showed positive and significant influence on learning outcomes (Y), with $t = 3.008 > t\text{-table} = 1.990$ and significance of $0.003 < 0.05$. Based on significance values less than 0.05 and t-calculated values greater than t-table, H_0 was rejected; therefore, a significant partial influence existed between the PjBL variable (X_1) and learning outcomes (Y). Learning independence (X_2) significance value was 0.00. The t-test results showed that the independence variable had a t value of 4.716, which was absolutely greater than the t-table value of 1.990 at 0.05 significance level. Additionally, the significance value (Sig.) of $0.000 < 0.05$ indicated statistically significant influence. Learning independence had a positive and significant effect on learning outcomes.

Table 10*F-Test Results (Simultaneous Test) - ANOVA*

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	517,826	2	258,913	11,124	0,00
Residual	165,626	82	2,097		
Total	683,452	84			

Source: Data processed by researchers (2025)

Based on the F-test results, $F = 11.124 > F\text{-table} = 3.11$ with significance $0.000 < 0.05$; thus, it was concluded that PjBL and learning independence simultaneously had significant effects on learning outcomes.

Table 11*Coefficient of Determination Analysis Results (Model Summary)*

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,462	0,213	0,194	0,0009

Source: Data processed by researchers (2025)

Based on Table 11, the coefficient of determination (R^2) value was 0.194, meaning 19.4% of the dependent variable (learning outcomes) could be explained by the independent variables (PjBL and learning independence). The remaining 80.6% ($100\% - 19.4\%$) of the dependent variable was explained by variables outside the research model.

Discussion

Research findings demonstrated that students' perceptions of PjBL exerted positive and significant effects on learning outcomes, with significance value of $0.003 < 0.05$. Learning independence also exerted positive and significant effects on learning outcomes, with significance value of $0.000 < 0.05$. Simultaneously, both variables contributed 19.4% to learning outcomes

(Adjusted $R^2 = 0.194$). This value indicates that other factors such as learning interest, teacher support, and learning environment also influenced learning outcomes.

These findings align with Vygotsky's social constructivist theory and self-determination theory, which emphasize the importance of independence and active student engagement in the learning process. Thus, the integration of PjBL and learning independence proved capable of strengthening archiving learning outcomes in vocational education.

The Effect of Students' Perceptions of Project-Based Learning (PjBL) on Student Learning Outcomes

Research findings demonstrated that students' perceptions of Project-Based Learning (PjBL) exerted positive and significant effects on archiving learning outcomes of eleventh-grade MPLB students at SMK Negeri 3 Surakarta. This was evidenced by t value of 3.008, which was greater than t -table (1.990), with significance value of $0.003 < 0.05$. This indicates that better student perceptions of PjBL implementation correspond to higher learning outcomes achieved.

Theoretically, PjBL proves effective because its model characteristics align with the essence of vocational learning, which emphasizes learning by doing. In the archiving context, PjBL enables students not only to understand archive concepts but also to directly practice management, storage, and archive retrieval activities authentically. Through project stages, students learn to solve authentic problems and produce final products in the form of documents or archive systems relevant to office work environments. This strengthens conceptual understanding while simultaneously enhancing procedural skills.

These findings are consistent with Ramadani's (2023) research, which found that PjBL implementation improved archiving course learning outcomes because students became more active, developed responsibility toward projects, and connected learning with real work situations. Similarly, Fitria and Rahmawati (2022) noted that PjBL develops students' collaborative and critical thinking abilities two essential elements in completing administrative tasks.

The theoretical contribution of these findings strengthens Vygotsky's social constructivist theory, which emphasizes that effective learning occurs when students actively construct their knowledge through social and contextual activities. PjBL becomes a tangible medium for students to build meaning through interaction and structured project experiences.

Practically, these results indicate that archiving teachers in vocational schools can improve learning outcomes by expanding PjBL implementation oriented toward real work practices, such as digital archiving system simulations, dynamic archive arrangement projects, or archive classification development. Such implementation helps students not only understand theory but also become technically skilled.

The Effect of Learning Independence on Learning Outcomes of Eleventh-Grade MPLB Students at SMK Negeri 3 Surakarta

Research findings demonstrated that learning independence exerted positive and significant effects on student learning outcomes. The t value of 4.716 exceeded t -table (1.990), with significance value of $0.000 < 0.05$. The beta coefficient value of 0.592 indicates that learning independence was a more dominant predictor compared to PjBL. Learning independence plays a crucial role because independent students possess abilities to manage time, determine learning strategies, and evaluate their understanding independently. In the archiving learning context, students with high independence are more active in seeking information sources about archiving systems, attempting archive management practices independently, and not relying entirely on teachers. This mechanism explains how learning independence strengthens learning outcomes: through self-regulated learning, students can set learning goals, monitor processes, and correct errors when managing archives.

These findings align with Sari's (2021) research, which stated that students with high independence levels tend to achieve better learning outcomes because they are more disciplined and goal-oriented. However, this study also demonstrated that although independence exerted positive

effects, its contribution to learning outcomes could still be enhanced with supportive learning environment support.

The theoretical contribution of these findings strengthens the self-determination theory perspective, which explains that when students' autonomy and competence needs are met, their intrinsic motivation increases and impacts better learning outcomes. Thus, enhancing learning independence is not solely the student's responsibility but must also be facilitated through learning designs that provide freedom and responsibility.

Practically, teachers are advised to provide self-reflection opportunities, project planning guidance, and self-evaluation sheets that can help students monitor their learning progress. These steps will encourage the growth of effective learning independence.

The Simultaneous Effect of PjBL and Learning Independence on Learning Outcomes

Simultaneous test results indicated that PjBL perception and learning independence variables together significantly influenced learning outcomes ($F = 11.124 > F\text{-table} = 3.11$; $\text{Sig.} = 0.000 < 0.05$). However, the regression model showed relatively small combined regression coefficients, and the simultaneous effect direction appeared negative. This phenomenon represents a statistical paradox explainable through several possibilities.

First, moderate multicollinearity effects between PjBL perception and learning independence can cause regression coefficient direction changes even though each variable's relationship with learning outcomes is positive. This means that when both variables are tested together, part of the learning outcome variance is explained by overlapping relationships between them. Students with high PjBL perceptions tend to already possess high learning independence; thus, the marginal effect of each variable becomes smaller or even mathematically reverses direction.

Second, these results can also be interpreted pedagogically: positive perceptions toward PjBL do not necessarily correspond to optimal implementation practices. If project implementation is inconsistent, students' positive perceptions may not directly correspond to actual learning outcomes, especially for students who lack discipline in project management. This confirms that positive perceptions must be balanced with effective PjBL implementation and strong guidance.

Nevertheless, the coefficient of determination (Adjusted R^2) was only 0.194, meaning both variables could explain only approximately 19.4% of learning outcome variance, while the remaining 80.6% was influenced by other factors such as learning interest, teacher support, learning facilities, and school social environment. Low R^2 values do not indicate an invalid model but demonstrate that archiving learning outcomes are multidimensional phenomena influenced by complex affective, cognitive, and contextual factors.

Clarification: PjBL as a Method versus Perceptions of PjBL

This research did not assess the direct effectiveness of the PjBL method but rather students' perceptions of PjBL implementation. Thus, the influence found reflects the extent to which students perceive PjBL as an interesting, relevant method that helps them understand archiving material.

Positive perceptions toward PjBL are not necessarily identical to effective PjBL implementation. If project execution is poorly directed or teacher guidance is less intensive, student perceptions may be high, but learning outcomes may remain suboptimal. Conversely, when students are genuinely involved in project planning, execution, and evaluation, PjBL becomes a method capable of tangibly improving learning outcomes.

Conclusion

Based on data analysis results and hypothesis testing conducted using SPSS, the following conclusions were obtained: (1) A positive and significant influence exists between Project-Based Learning (PjBL) and archiving learning outcomes of eleventh-grade MPLB students at SMK Negeri 3 Surakarta, with $t = 3.008 > t\text{-table} = 1.990$ and significance of $0.003 < 0.05$. This indicates that

more positive student perceptions of PjBL correspond to higher learning outcomes achieved. (2) A positive and significant influence exists between learning independence and learning outcomes, with $t = 4.716 > t\text{-table} = 1.990$ and significance of $0.000 < 0.05$. This demonstrates that students with high independence levels tend to achieve better learning outcomes. (3) Simultaneously, PjBL and learning independence exerted positive and significant effects on archiving learning outcomes, with $F = 17.808 > F\text{-table} = 3.11$ and significance of $0.000 < 0.05$. The coefficient of determination ($R^2 = 0.304$) indicates that both variables contributed 30.4% to archiving learning outcomes, while the remaining 69.6% was influenced by factors outside this research. The integration of the PjBL model and learning independence creates effective synergy in improving learning outcomes. PjBL encourages active engagement, collaboration, and real problem-solving, while learning independence strengthens responsibility and student learning strategy management. Their synergy enriches learning experiences and strengthens conceptual understanding in the archiving context. Practically, teachers are advised to design authentic projects lasting 4–6 weeks, such as office archive management, document digitization, or archive classification system simulations. Such contextual projects connect theory with practice while training 21st-century skills such as critical thinking, communication, and individual responsibility. This research has several limitations: (1) the absence of a comparison control group, (2) potential self-report bias from student questionnaire responses, and (3) the lack of measurement of PjBL implementation quality in the classroom. Future research is recommended to employ experimental designs with pre-tests and post-tests, add control groups, and assess PjBL implementation quality for more valid and comprehensive results.

References

- Anderson, L. W., & Krathwohl, D. R. (2019). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. Longman.
- Datu, J. A. D., Valdez, J. P. M., & King, R. B. (2020). The role of project-based learning in student engagement: A study of Filipino high school students. *Journal of Educational Psychology*, 112(1), 10–25. <https://doi.org/10.1037/edu0000345>
- Dimiyati, & Mudjiono. (2019). *Belajar dan pembelajaran*. Rineka Cipta.
- Fitri, A., Kurniawati, D., & Ramadhani, A. (2018). Hubungan antara motivasi berprestasi dan kemampuan berpikir tingkat tinggi dalam pembelajaran PjBL. *Jurnal Pendidikan*, 19(2), 140–148. <https://doi.org/10.21831/jp.v19i2.10312>
- Hamalik, O. (2020). *Proses belajar mengajar*. Bumi Aksara.
- Kementerian Pendidikan dan Kebudayaan. (2017). *Panduan implementasi model pembelajaran abad 21*. Kemendikbud.
- Mukaromah, N., Susanti, S., & Khasanah, U. (2022). Penerapan model project-based learning (PjBL) dalam meningkatkan kemampuan analisis data. *Jurnal Inovasi Pendidikan*, 14(1), 72–80. <https://doi.org/10.21009/jip.v14i1.24837>
- Mulyasa, E. (2018). *Manajemen berbasis sekolah: Konsep, strategi, dan implementasi*. Bumi Aksara.
- Museliza, M. (2018). *Kearsipan dan manajemen informasi*. UMM Press.
- Nursalam. (2018). *Metodologi penelitian ilmu keperawatan: Pendekatan praktis*. Salemba Medika.
- Ramadani, F., & Ubaidilah, A. (2023). Pengaruh PjBL terhadap hasil belajar siswa pada pelajaran ekonomi. *Jurnal Pendidikan Ekonomi Indonesia*, 7(1), 35–42. <https://doi.org/10.21009/jpei.v7i1.30452>
- Ramadiani, F. (2021). Penerapan model pembelajaran berbasis proyek untuk meningkatkan hasil belajar siswa. *Jurnal Edukasi*, 9(2), 118–125. <https://doi.org/10.31227/osf.io/xyj8q>
- Ranjan, M., & Prakash, S. (2018). Efficient records management in educational institutions. *International Journal of Library and Information Studies*, 8(3), 34–42.
- Ratu, A., Herawati, N., & Santosa, A. (2021). Project-based learning (PjBL) dalam meningkatkan efikasi diri dan kemampuan berpikir kritis. *Jurnal Inovasi Pendidikan Dasar*, 6(2), 102–112. <https://doi.org/10.24036/jipd.v6i2.1254>

- Riyanto, Y. (2018). *Paradigma baru pembelajaran: Sebagai referensi bagi pendidik dalam implementasi pembelajaran yang efektif dan berkualitas*. SIC.
- Sa'ban, M., Kartika, A., & Hidayat, R. (2023). Integrasi PjBL dan STEAM untuk hasil belajar kognitif siswa. *Jurnal Ilmiah Pendidikan*, 11(1), 87–96.
<https://doi.org/10.5281/zenodo.7864532>
- Sardiman, A. M. (2018). *Interaksi dan motivasi belajar mengajar*. Rajawali Pers.
- Setiono, A., Dwiatmanto, & Widiarti, W. (2020). Pendidikan dan tantangan revolusi industri 4.0. *Jurnal Kependidikan*, 24(1), 45–58. <https://doi.org/10.23917/jk.v24i1.9812>
- Sudirman, S. (2018). *Interaksi dan motivasi belajar siswa*. Alfabeta.
- Sukmadinata, N. S. (2017). *Pengembangan kurikulum: Teori dan praktik*. Remaja Rosdakarya.
- Sukmana, Y., & Amalia, D. (2021). Kemandirian belajar dan keterlibatan siswa dalam pembelajaran daring. *Jurnal Pendidikan dan Pembelajaran*, 12(3), 213–220.
<https://doi.org/10.26858/jpp.v12i3.18435>
- Supriyadi, S. (2018). *Dasar-dasar kearsipan*. Graha Ilmu.
- Widiastuti, L. (2022). Kompetensi lulusan kearsipan dan peluang kerja. *Jurnal Manajemen Informasi dan Arsip*, 10(1), 59–68. <https://doi.org/10.33592/jmia.v10i1.5462>

The role of psychological safety and belonging in classroom engagement among first-year undergraduates

Silfi Ananta*

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: anantaasilfi@gmail.com

Abstrak

Tujuan penelitian ini adalah mengeksplorasi pengaruh Psychological Safety dan Sense of Belonging terhadap keaktifan mahasiswa baru Program Studi Pendidikan Administrasi Perkantoran Universitas Sebelas Maret Angkatan 2024. Data diperoleh melalui metode kuantitatif dengan teknik simple random sampling yang diterapkan pada 75 responden melalui kuesioner terstruktur dan dianalisis menggunakan teknik regresi berganda. Hasil penelitian menunjukkan bahwa Psychological Safety ($t = 3,232$, $p = 0,002$) berpengaruh positif dan signifikan terhadap keaktifan mahasiswa, yang berarti semakin tinggi rasa aman psikologis, semakin besar partisipasi mahasiswa dalam kegiatan akademik maupun nonakademik. Demikian pula, Sense of Belonging ($t = 6,703$, $p < 0,001$) secara signifikan meningkatkan keaktifan mahasiswa, menunjukkan bahwa keterikatan sosial yang lebih kuat terhadap komunitas kampus mendorong keterlibatan yang lebih aktif. Analisis simultan ($F = 106,370$, $p < 0,001$) mengonfirmasi bahwa kedua variabel tersebut secara bersama-sama memengaruhi keaktifan mahasiswa, dengan nilai R^2 sebesar 0,737 yang berarti 73,7% varians dapat dijelaskan oleh prediktor tersebut. Temuan ini menegaskan pentingnya lingkungan kampus yang suportif dan inklusif dalam mendorong partisipasi aktif mahasiswa. Oleh karena itu, penguatan Psychological Safety dan penumbuhan Sense of Belonging perlu diprioritaskan sebagai upaya strategis untuk meningkatkan keaktifan mahasiswa dan mengoptimalkan hasil belajar.

Kata kunci: interaksi teman sebaya; lingkungan belajar; penyesuaian mahasiswa baru; psikologi pendidikan; transisi akademik

Abstract

This study investigates the influence of Psychological Safety and Sense of Belonging on the engagement of first-year students in the Office Administration Education Program at Universitas Sebelas Maret, Cohort 2024. Using a quantitative methodology with a *simple random sampling*, data were obtained from 75 participants through a structured questionnaire and subsequently analyzed with multiple regression techniques. The results demonstrate that Psychological Safety ($t = 3.232$, $p = 0.002$) has a positive and significant effect on student engagement, indicating that higher

* Corresponding author

levels of psychological security foster greater participation in academic and non-academic activities. Similarly, Sense of Belonging ($t = 6.703$, $p < 0.001$) significantly enhances student engagement, suggesting that stronger social attachment to the campus community increases active involvement. The simultaneous analysis ($F = 106.370$, $p < 0.001$) confirms that both variables jointly affect student engagement, with an R^2 value of 0.737, meaning that 73.7% of the variance is explained by these predictors. These findings highlight the crucial role of supportive and inclusive campus environments in promoting active student participation. Strengthening Psychological Safety and fostering a Sense of Belonging should therefore be prioritized as strategic efforts to enhance student engagement and optimize learning outcomes.

Keywords: academic transition; educational psychology; freshmen adjustment; learning environment; peer interaction

Received September 03, 2025; Revised November 11, 2025; Accepted November 22, 2025; Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.108676>

Introduction

Student engagement is widely acknowledged as a key indicator of learning quality. This construct encompasses cognitive, affective, and behavioral involvement in the learning process (Bond, 2020). Students who actively participate in discussions, pose questions, and share ideas tend to achieve better academic outcomes and exhibit stronger preparedness for professional careers (Fredricks, 2019). Active participation further contributes to the development of students' academic identities as members of a scholarly community (Kahu & Nelson, 2018). Nevertheless, research in Indonesia indicates that student engagement remains relatively low. For instance, a study conducted at Universitas Jenderal Soedirman revealed that although 75% of students participated actively in small group discussions, only 15% were willing to contribute during class-wide discussions (Martono, 2016). Similar patterns emerged in online learning environments, where participation in discussion forums reached 90% per topic but did not translate into verbal engagement in face-to-face classes (Syahputra, 2020). These findings reinforce the observation that Indonesian students tend to remain passive and reluctant to engage verbally in classroom interactions.

The engagement of first-year students presents unique challenges. Transitioning from secondary to higher education is often accompanied by academic pressure, differences in learning culture, and heightened social demands (Nelson, 2018; Korhonen et al., 2019). The first year is regarded as a critical period that strongly determines subsequent academic involvement (van Rooij et al., 2018). In the Indonesian context, first-year students often display hesitancy, reluctance to express opinions, and limited participation in discussions—factors that ultimately hinder learning quality (Sutarto, 2020; Raharjo & Pramudibyanto, 2021).

Psychological safety, defined as the belief that expressing ideas, asking questions, or making mistakes will not result in embarrassment or penalties, helps explain why first-year students often exhibit low participation (Edmondson, 2018). Recent studies highlight that psychologically safe learning environments encourage students to take intellectual risks, explore ideas, and participate actively (Newman et al., 2017; Newman et al., 2020). Thus, psychological safety serves as a crucial foundation for fostering a conducive classroom atmosphere for first-year students.

In addition to psychological safety, sense of belonging plays a key role in fostering student engagement. This concept refers to the experience of being accepted, valued, and recognized as an integral part of the academic community (Hagerty & Patusky, 1995; Kahu & Nelson, 2018). Research demonstrates that a strong sense of belonging enhances motivation, persistence, and academic achievement (Gopalan & Brady, 2019; Thomas, 2021). For first-year students, developing a sense of belonging toward their institution and learning community provides essential psychosocial

resources that mitigate feelings of alienation and enhance classroom participation (Walton & Brady, 2017).

Previous empirical studies have confirmed the relevance of these two factors. Newman et al. (2017) and Frazier et al. (2017) demonstrated that psychological safety positively contributes to creativity, collaboration, and engagement, although their studies were predominantly situated within organizational contexts rather than classroom settings. Similarly, Strayhorn (2019) emphasized that sense of belonging is a strong predictor of motivation and academic persistence, but his research largely addressed the general student population without focusing on the critical transitional phase of first-year students. Furthermore, limited research in Indonesia has fully examined the influence of hierarchical academic culture on student engagement (Raharjo & Pramudibyanto, 2021).

These research gaps underscore the need for further investigation. Few studies have simultaneously assessed how psychological safety and sense of belonging shape first-year student engagement, particularly within the Indonesian higher education context. Given that the early stages of university life are critical in determining sustained academic involvement, the challenges of hierarchical academic culture, students' passive tendencies, and the lack of psychosocial support highlight the importance of context-sensitive analysis. Accordingly, this study addresses the following research questions: (1) whether psychological safety significantly influences first-year students' engagement, (2) whether sense of belonging significantly influences their engagement, and (3) whether both variables together exert a simultaneous effect on students' engagement levels.

The present study aims to examine the influence of psychological safety and sense of belonging on the classroom engagement of first-year students. Based on the theoretical framework and previous empirical findings, this study hypothesizes that: (H1) psychological safety positively and significantly affects student engagement; (H2) sense of belonging positively and significantly influences student engagement; and (H3) both variables jointly contribute to enhancing first-year students' classroom engagement. Theoretically, this research seeks to enrich the educational psychology literature by emphasizing the role of psychosocial factors in student engagement.

Research Methods

This study employed a quantitative approach with an associative research design to assess the role of psychological safety and sense of belonging on the classroom engagement of the 2024 cohort after completing their first year of study in the Office Administration Education Program at Universitas Sebelas Maret. The study focused on testing causal relationships among variables that could be empirically measured using numerical data.

The study population consisted of 93 students. The sample size was calculated using Slovin's formula with a 5% margin of error, yielding a minimum of 75 participants. Simple random sampling was employed to give each member of the population an equal opportunity to be selected, thereby enhancing representativeness and minimizing bias.

The research instruments covered three main variables. The validity and reliability of these instruments were not retested in this study because each scale had already been formally validated and widely used in prior research. Psychological safety was measured using the Psychological Safety Scale developed by Edmondson (1999), which contains seven items and has demonstrated good reliability (Cronbach's $\alpha = 0.82$). Sense of belonging was assessed with the Sense of Belonging Instrument (Hagerty & Patusky, 1995), consisting of 13 items and showing acceptable validity and reliability ($F = 5.69$, $p = 0.01$). Student engagement was measured using the Indonesian version of the University Student Engagement Inventory (USEI) adapted and validated by Maroco et al. (2016) and Prananto (2025), with 15 items across cognitive, affective, and behavioral dimensions (Cronbach's $\alpha > 0.82$). All items were rated on a five-point Likert scale.

Data were collected via an online questionnaire distributed through Google Forms, ensuring confidentiality and voluntary participation. The analysis was conducted using JASP with multiple linear regression. Preliminary assumption tests included checking residual normality (Q-Q plot), multicollinearity (collinearity diagnostics), and autocorrelation (Durbin-Watson test). Additionally, heteroscedasticity and linearity tests were conducted as essential prerequisites for multiple regression analysis. The heteroscedasticity test determined whether the variance of residuals remained constant across observations, while the linearity test examined whether the relationship

between independent variables and the dependent variable followed a linear pattern.

The analysis focused exclusively on multiple regression, consistent with the study's objective of assessing direct and simultaneous effects of predictor variables on engagement. The F-test was employed as part of the regression model to evaluate overall model fit, not as an ANOVA test for group mean differences. This methodological approach ensures the analysis remains aligned with the study's quantitative objectives and enhances the validity of the results.

Results and Discussion

Research Result

Describing respondent characteristics is essential in quantitative research because it provides context for the data, ensures representativeness, and aids in interpreting findings accurately (Saunders et al., 2019). In this study, respondent characteristics are presented based on age, gender, admission pathway, and program study preference.

Table 1
Distribution of Respondents by Age

Age (Years)	Frequency	Percentage (%)
19	63	84
20	12	16
Total	75	100

As shown in Table 1, the majority of respondents were 19 years old (84%), while only a small proportion were 20 years old (16%), indicating that most participants were first-year students within the typical age range for undergraduates.

Table 2
Distribution of Respondents by Gender

Gender	Frequency	Percentage (%)
Female	68	91.2
Male	7	8.8
Total	75	100

Table 2 presents the gender distribution of respondents, showing that most participants were female (91.2%) compared to only 8.8% male, reflecting the gender composition commonly found in education-related programs.

Table 3
Distribution of Respondents by Admission Pathway

Admission Pathway	Frequency	Percentage (%)
Mandiri	32	42.7
SNBT	26	34.7
SNBP	17	22.6
Total	75	100

As indicated in Table 3, 42.7% of students entered through the Mandiri pathway, followed by 34.7% via SNBT and 22.6% through SNBP, suggesting a relatively diverse admission background among respondents.

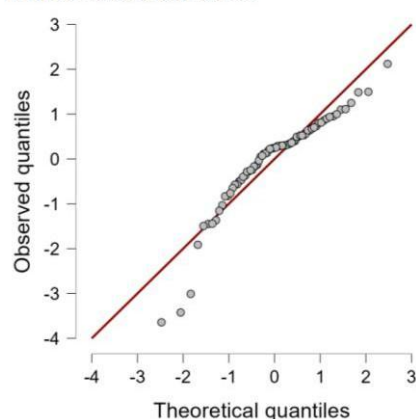
Table 4 shows that the majority of respondents (69.3%) selected the Office Administration Education Program as their first choice, implying a high level of initial interest and commitment toward the study program.

Table 4*Distribution of Respondents by Program Study Preference*

Program Study Preference	Frequency	Percentage (%)
First choice	52	69.3
Second choice	20	26.7
Third choice	3	4.0
Total	75	100

In regression analysis, the accuracy and validity of parameter estimation depend on the extent to which the underlying statistical assumptions are satisfied. Classical assumption tests evaluate whether the regression model fulfills the requirements of homoscedasticity, normality, and the absence of multicollinearity (Wooldridge, 2016).

A normality test was conducted to determine whether the variables' data were normally distributed. According to Sujarweni (2015), data are considered normally distributed when the significance value exceeds 0.05.

Figure 1*Q-Q Plot Standardized Chart***Q-Q Plot Standardized Residuals**

Based on the Q-Q plot of standardized residuals in Figure 1, most data points closely followed the diagonal reference line, with only minor deviations at the extremes. This pattern indicates that the regression residuals were approximately normally distributed, thereby satisfying the normality assumption. Consequently, the application of parametric tests, including t-tests and F-tests, was deemed valid.

Multicollinearity refers to a condition in regression analysis where two or more independent variables exhibit high linear intercorrelations, complicating the isolation of their individual effects on the dependent variable. Gujarati (2016) notes that multicollinearity can inflate variance estimates, destabilize regression coefficients, and hinder interpretability.

Table 5*Collinearity Diagnostics*

Model	Dimension	Eigenvalue	Condition Index	X1	X2
M1	1	2.980	1.000	0.001	0.001
	2	0.014	14.682	0.169	0.086
	3	0.006	22.564	0.830	0.913

Table 5 shows the results of the collinearity diagnostics, which indicated that the highest condition index was 22.564, below the threshold value of 30, suggesting no severe multicollinearity. However, both X1 (0.830) and X2 (0.913) showed relatively high variance proportions in the third dimension, indicating the presence of moderate multicollinearity.

Heteroscedasticity is present when residuals exhibit non-constant variance across observations, leading to less precise regression estimates and questionable statistical significance (Wooldridge, 2016; Asteriou & Hall, 2015). According to Nachrowi and Usman (2015), non-constant residual variance violates classical regression assumptions and may bias coefficient interpretation.

Figure 2
Heteroskedasticity Chart

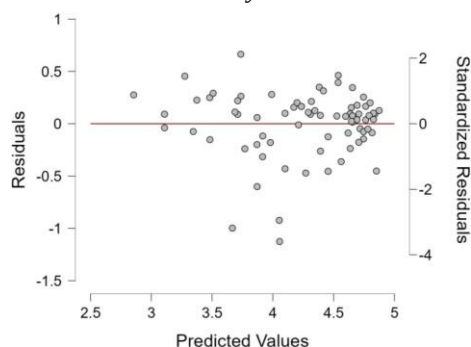


Figure 2 presents the scatterplot of predicted values against residuals, which revealed a random distribution of points around the horizontal axis without forming a discernible pattern. This indicates the absence of heteroscedasticity, thereby confirming homoscedasticity of residuals in the regression model.

The autocorrelation test was employed to determine whether residuals from one observation were correlated with residuals from another. Autocorrelation is typically a concern in time-series data, where successive observations are naturally dependent (Brooks, 2019).

Table 6
Durbin-Watson Autocorrelation Test Results

Autocorrelation	Statistic	p
-0.029	1.993	0.974
0.144	1.587	0.070

According to the Durbin-Watson analysis presented in Table 6, the statistic of 1.587 and p-value of 0.070 indicate that the residuals did not exhibit significant autocorrelation, as the value is close to the ideal reference of 2 and the p-value exceeds the 0.05 threshold.

Multiple Linear Regression Analysis

Regression analysis serves as a statistical tool to determine the strength and direction of relationships among variables (Ghozali, 2018). Multiple linear regression, in particular, examines how a single dependent variable (Y) is linearly related to multiple independent variables (X).

Table 7
Multiple Linear Regression Model Summary

Model	R	R ²	Adjusted R ²	df1	df2
M0	0.000	0.000	0.000	0	74
M1	0.858	0.737	0.730	2	72

The regression analysis presented in Table 7 revealed an R value of 0.858, indicating a very strong association between psychological safety (X1) and sense of belonging (X2) with student engagement (Y). The R² of 0.737 suggests that 73.7% of the variance in student engagement can be accounted for by X1 and X2, with the remaining 26.3% attributable to other factors not included in the model. The adjusted R² of 0.730 further supports the reliability and stability of the regression model.

In quantitative research, hypotheses serve as tentative statements that predict relationships between variables and guide statistical testing. Hypothesis testing is a fundamental procedure for determining whether empirical evidence supports or rejects the assumptions proposed in a study. According to Saunders et al. (2019), hypotheses provide a logical framework that connects theoretical concepts with empirical data, enabling researchers to test causal relationships systematically.

The t-test in regression analysis examines whether each independent variable significantly influences the dependent variable. Specifically, it tests whether the estimated regression coefficient is statistically distinct from zero. According to Hair et al. (2019), the t-test allows researchers to identify the unique impact of each predictor on the outcome variable.

Table 8*Results of t-test*

Variable	B	SE	Beta	t	p
(Intercept)	0.791	0.256	—	3.087	0.003
X1	0.257	0.084	0.286	3.048	0.003
X2	0.580	0.088	0.615	6.559	< 0.001

According to the t-test results presented in Table 8, both predictors exerted statistically significant effects on the dependent variable. Specifically, psychological safety (X1: $B = 0.257$, $t = 3.048$, $p = 0.003$) positively and significantly affected student engagement. Sense of belonging (X2: $B = 0.580$, $t = 6.559$, $p < 0.001$) demonstrated a stronger and highly significant influence, indicating that X2 plays a more dominant role in explaining variations in student engagement.

The F-test evaluates whether the predictors jointly explain a significant proportion of variance in the dependent variable. According to Montgomery (2017), this test assesses the overall significance of the regression model.

Table 9*Result of ANOVA Test*

Source	SS	df	MS	F	p
Regression	18.888	2	9.444	93.753	< 0.001
Residual	7.253	72	0.101	—	—
Total	26.141	74	—	—	—

The ANOVA results presented in Table 9 indicate that the model containing X1 and X2 significantly predicted the dependent variable, $F(2, 72) = 93.753$, $p < 0.001$. The regression sum of squares (18.888) relative to the residual sum of squares (7.253) indicates that most of the total variance (26.141) was captured by the independent variables. These findings provide robust evidence that the inclusion of psychological safety and sense of belonging significantly improves prediction compared to an intercept-only model.

In multiple regression, the coefficients table reveals the effect of each explanatory variable on the dependent variable. Unstandardized coefficients (B) indicate how much the dependent variable changes for a one-unit increase in the predictor, while standardized coefficients (Beta) allow comparison of the relative importance of predictors. Hair et al. (2019) note that coefficients are central to interpreting regression results.

Table 10*Result of Coefficient Test*

Predictor	B	SE	Beta	t	p
Constant	0.890	0.167	—	5.323	< 0.001
X1 (Psychological Safety)	0.257	0.084	0.257	3.048	0.003
X2 (Sense of Belonging)	0.580	0.088	0.580	6.559	< 0.001

The regression coefficient results presented in Table 10 reveal that both X1 and X2 exerted significant effects on the dependent variable. The intercept ($B = 0.890$, $p < 0.001$) indicates the baseline level of Y in the absence of predictors. Psychological safety coefficient of 0.257 ($t = 3.048$, $p = 0.003$) confirms a significant positive contribution, meaning that a unit increase in psychological safety corresponds to a 0.257 increase in student engagement, *ceteris paribus*. Sense of belonging exhibited a larger coefficient of 0.580 ($t = 6.559$, $p < 0.001$), suggesting a stronger contribution to the variation of Y. Collectively, these findings affirm that both predictors are crucial determinants of student engagement, with sense of belonging emerging as the dominant explanatory factor.

Discussion

The classical assumption tests confirmed that the regression model met the required statistical criteria. The multicollinearity test revealed no serious collinearity among the predictors, as indicated by condition index values below the critical threshold, ensuring that each independent variable contributed unique explanatory power. Similarly, the autocorrelation test produced a coefficient close to zero, suggesting the absence of serial correlation in the residuals. These findings validate the appropriateness of the regression model for hypothesis testing.

The analysis indicates that the predictors jointly exerted a significant influence on the dependent variable. The ANOVA results demonstrate that the model explains a significant proportion of variance, $F(2, 72) = 93.753$, $p < 0.001$, with a regression sum of squares of 18.888 compared to a residual sum of squares of 7.253, demonstrating substantial explanatory power.

The coefficients table provided detailed insights into the individual contributions of each predictor. Both predictors significantly affected the dependent variable, with psychological safety ($B = 0.257$, $p = 0.003$) exerting a positive influence, while sense of belonging ($B = 0.580$, $p < 0.001$) emerged as the dominant predictor with a stronger and highly significant effect. These findings highlight that while both factors are important, sense of belonging contributes more substantially to variations in student engagement.

The t-test results aligned with these observations, confirming that each predictor independently demonstrated a statistically significant relationship with student engagement. The consistent significance across both t-test and ANOVA strengthens the robustness of the findings, thereby supporting the rejection of the null hypotheses. The empirical evidence underscores the theoretical expectation that psychological safety and sense of belonging jointly and individually play crucial roles in shaping student engagement.

These findings are consistent with Newman et al. (2017), who found that psychological safety enhances learners' willingness to take intellectual risks and actively participate in discussions. This alignment suggests that when students perceive their classroom as a safe space for expression, they are more likely to engage cognitively and behaviorally. Similarly, Frazier et al. (2017) confirmed that psychological safety is a strong determinant of engagement and innovation, although their research focused primarily on workplace contexts. The present study extends this finding into the educational setting of Indonesian first-year students.

Furthermore, the significant effect of sense of belonging supports Strayhorn's (2019) argument that belongingness serves as a fundamental motivator of persistence and academic involvement. Thomas (2021) also emphasized that feeling valued and connected within the learning community strengthens students' motivation to participate. In contrast, Raharjo and Pramudibyanto (2021) highlighted that hierarchical academic culture in Indonesia often limits students' voice and confidence to engage. The present study adds new insight by demonstrating that both psychological safety and sense of belonging can counteract this passivity and foster a more inclusive learning environment.

Based on both partial and simultaneous analyses, psychological safety and sense of belonging make substantial contributions to enhancing first-year student engagement. Therefore, efforts to strengthen students' sense of psychological safety and belonging within the campus environment constitute important strategies for promoting student participation and involvement.

Conclusion

This study demonstrates that psychological safety and sense of belonging significantly influence the engagement of first-year students in the Office Administration Education Program, Cohort 2024. Students who perceive a higher degree of psychological security and experience stronger belonging within the academic community tend to participate more actively in both academic and non-academic activities. These findings highlight that engagement is not solely an individual disposition but is strongly shaped by the psychosocial context of the learning environment. The results carry both theoretical and practical implications. Theoretically, the study contributes to the refinement of student engagement frameworks by integrating psychosocial dimensions into the analysis of learning involvement, thereby underscoring the relational and contextual nature of engagement. Practically, the findings suggest that higher education institutions should foster inclusive and supportive classroom climates where students feel safe to express ideas and develop a sense of community. Such efforts can enhance motivation, participation, and academic adjustment, particularly during the critical transition period of the first year. Despite these contributions, the study has limitations that must be acknowledged. The sample was limited to a single program and relied on self-reported measures, which may affect the generalizability and objectivity of the findings. Future research should expand the scope by including more diverse student populations, employing longitudinal or mixed-method approaches, and further examining the mechanisms linking psychological safety and sense of belonging to engagement. In sum, this study advances theoretical discourse by affirming that engagement is shaped not only by individual agency but also by the broader psychosocial environment, offering both scholarly and practical insights for strengthening student participation in higher education.

References

- Asteriou, D., & Hall, S. G. (2015). *Applied econometrics* (3rd ed.). Palgrave Macmillan.
- Bond, M. (2020). Facilitating student engagement through the flipped learning approach in K–12: A systematic review. *Computers & Education*, 151, 103819. <https://doi.org/10.1016/j.compedu.2020.103819>
- Brooks, C. (2019). *Introductory econometrics for finance* (4th ed.). Cambridge University Press.
- Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383. <https://doi.org/10.2307/2666999>
- Edmondson, A. C. (2018). *The fearless organization: Creating psychological safety in the workplace for learning, innovation, and growth*. Wiley.
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage.
- Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vacheva, V. (2017). Psychological safety: A meta-analytic review and extension. *Personnel Psychology*, 70(1), 113–165. <https://doi.org/10.1111/peps.12183>
- Fredricks, J. A. (2019). *Handbook of student engagement interventions: Working with disengaged students*. Academic Press.
- Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.
- Gopalan, M., & Brady, S. T. (2019). College students' sense of belonging: A national perspective. *Educational Researcher*, 49(2), 134–137. <https://doi.org/10.3102/0013189X19897622>
- Gujarati, D. N. (2016). *Basic econometrics* (5th ed.). McGraw-Hill Education.
- Hagerty, B. M. K., & Patusky, K. (1995). Developing a measure of sense of belonging. *Nursing Research*, 44(1), 9–13. <https://doi.org/10.1097/00006199-199501000-00003>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.
- Kahu, E. R., & Nelson, K. (2018). Student engagement in the educational interface: Understanding the mechanisms of student success. *Higher Education Research & Development*, 37(1), 58–71. <https://doi.org/10.1080/07294360.2017.1344197>
- Korhonen, V., Ruhalhti, S., & Veermans, M. (2019). The online learning process and scaffolding in student teachers' personal learning environments. *Education and Information*

- Technologies*, 24(1), 755–779. <https://doi.org/10.1007/s10639-018-9793-4>
- Marôco, J., Marôco, A. L., Campos, J. A. D. B., & Fredricks, J. A. (2016). University student engagement inventory (USEI): Psychometric properties. *Current Psychology*, 35(4), 598–612. <https://doi.org/10.1007/s12144-015-9333-1>
- Martono, N. (2016). *Metode penelitian kuantitatif: Analisis isi dan analisis data sekunder*. Rajawali Pers.
- Montgomery, D. C. (2017). *Design and analysis of experiments* (9th ed.). Wiley.
- Nachrowi, N. D., & Usman, H. (2015). *Pendekatan populer dan praktis ekonometrika untuk analisis ekonomi dan keuangan*. Fakultas Ekonomi UI.
- Nelson, K. (2018). The first year in higher education: Where to from here? *The International Journal of the First Year in Higher Education*, 9(1), 1–8. <https://doi.org/10.5204/intjfyhe.v9i1.999>
- Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. *Human Resource Management Review*, 27(3), 521–535. <https://doi.org/10.1016/j.hrmr.2016.11.001>
- Newman, A., Round, H., Wang, S., & Mount, M. (2020). Innovation climate: A systematic review and future research agenda. *Journal of Occupational and Organizational Psychology*, 93(1), 73–109. <https://doi.org/10.1111/joop.12283>
- Prananto, A. (2025). Adaptasi dan validasi University Student Engagement Inventory versi bahasa Indonesia. *Jurnal Psikologi Pendidikan*, 21(1), 45–58.
- Raharjo, W., & Pramudibyanto, H. (2021). Student engagement in Indonesian higher education: Challenges and opportunities. *Journal of Education and Learning*, 15(2), 120–133.
- Strayhorn, T. L. (2019). *College students' sense of belonging: A key to educational success for all students* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315297293>
- Sugiyono. (2017). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Sujarweni, V. W. (2015). *Metodologi penelitian bisnis dan ekonomi*. Pustaka Baru Press.
- Sutarto, J. (2020). Student engagement and passive learning culture in Indonesian universities. *Jurnal Pendidikan*, 5(1), 14–26.
- Syahputra, R. (2020). Online learning and student participation: Evidence from Indonesian universities. *Jurnal Teknologi Pendidikan*, 22(3), 233–245.
- Thomas, L. (2021). Student engagement, belonging, and motivation in higher education. *Student Success*, 12(2), 1–7. <https://doi.org/10.5204/ssj.1671>
- van Rooij, E. C. M., Jansen, E. P. W. A., & van de Grift, W. J. C. M. (2018). First-year university students' academic success: The importance of academic adjustment. *European Journal of Psychology of Education*, 33(4), 749–767. <https://doi.org/10.1007/s10212-017-0347-8>
- Walton, G. M., & Brady, S. T. (2017). The many questions of belonging. In A. J. Elliot, C. S. Dweck, & D. S. Yeager (Eds.), *Handbook of competence and motivation: Theory and application* (pp. 272–293). Guilford Press.
- Wooldridge, J. M. (2016). *Introductory econometrics: A modern approach* (6th ed.). Cengage Learning.

Brand image and perceived education costs: effects on interest in higher education

Jendra Raihan Putra*, Susantiningrum Susantiningrum

Office Administration Education, Sebelas Maret University, Surakarta, Indonesia

Email: jendraraihan33@gmail.com

Abstrak

Penelitian ini mengkaji pengaruh brand image dan persepsi biaya pendidikan terhadap minat siswa SMK melanjutkan studi ke perguruan tinggi. Menggunakan pendekatan kuantitatif dengan analisis deskriptif dan inferensial, data dikumpulkan dari 178 siswa kelas XII SMK Negeri 1 Surakarta melalui proportional random sampling. Instrumen penelitian berupa kuesioner dengan skala Likert 1-5, divalidasi menggunakan korelasi Product Moment Pearson ($r > 0,361$) dan diuji reliabilitasnya menggunakan Cronbach's Alpha ($\alpha > 0,6$). Analisis regresi linear berganda menunjukkan bahwa brand image berpengaruh signifikan terhadap minat melanjutkan studi ($t = 7,102$; $p < 0,001$), demikian pula persepsi biaya pendidikan ($t = 4,323$; $p < 0,001$). Secara simultan, kedua variabel menunjukkan pengaruh positif signifikan ($F = 133,223$; $p < 0,001$), dengan koefisien determinasi (R^2) sebesar 0,604, yang menunjukkan bahwa 60,4% varians minat siswa dijelaskan oleh kedua prediktor tersebut.

Kata kunci: aspirasi karier; citra lembaga pendidikan; motivasi akademik; persepsi ekonomi siswa

Abstract

This study examined the influence of brand image and perceived education costs on vocational high school students' interest in pursuing higher education. Using a quantitative approach with descriptive and inferential analysis, data were collected from 178 Grade XII students at SMK Negeri 1 Surakarta through proportional random sampling. The research instrument was a questionnaire using a 5-point Likert scale, validated through Pearson's Product Moment correlation ($r > 0.361$) and reliability tested using Cronbach's Alpha ($\alpha > 0.6$). Multiple linear regression analysis revealed that brand image significantly influenced interest in continuing studies ($t = 7.102$, $p < .001$), as did perceived education costs ($t = 4.323$, $p < .001$). Simultaneously, both variables demonstrated a significant positive effect ($F = 133.223$, $p < .001$), with a

* Corresponding author

Citation in APA style: Putra, J.R., & Susantiningrum, S. (2026). Brand image and perceived education costs: effects on interest in higher education. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 110-122. <https://dx.doi.org/10.20961/jikap.v10i1.109990>

coefficient of determination (R^2) of .604, indicating that 60.4% of variance in students' interest was explained by these predictors.

Keywords: academic motivation; career aspirations; image of educational institutions; students' economic perceptions

Received September 03, 2025; Revised November 11, 2025; Accepted November 22, 2025; Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.109990>

Introduction

Education serves as a fundamental right for all Indonesian citizens across every stage of life, enabling individuals to acquire essential knowledge and skills, including literacy, numeracy, and Indonesian language proficiency. According to Damarjati (as cited in Suhendar et al., 2022), education enhances individual quality, liberates people from backwardness and ignorance, and prepares them to become agents of national change and development. Consequently, a nation's progress is substantially determined by the quality of its human resources.

The formal education system in Indonesia comprises three levels: basic education (elementary and junior high school), secondary education (senior high school and vocational high school), and higher education (Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System). At the secondary level, senior high schools emphasize theoretical and conceptual learning as preparation for higher education, whereas vocational high schools focus on practical learning and specialized skills aligned with vocational fields such as automotive engineering, accounting, multimedia, hospitality, and office management. This aligns with Sofiyanti and Sukirman's (2019) assertion that vocational secondary education is designed to prepare students for workforce entry or professional education, while general education prepares students for higher academic pursuits.

Education is expected to improve quality of life, expand knowledge, and develop future generations intellectually. However, public awareness regarding higher education in Indonesia remains relatively low. Data from the Central Statistics Agency indicate that in 2024, the gross enrollment rate for elementary school reached 104.82%, declining at the junior high school level (92.21%), further decreasing at the senior/vocational high school level (87.29%), and dropping significantly at the higher education level (32.00%) (Commission X of the Indonesian House of Representatives, 2025).

These data reveal a concerning issue: the quantitative expansion of vocational high schools has not been accompanied by corresponding quality improvements. Consequently, the government has undertaken massive and substantive educational reforms at the secondary level. One such initiative involves implementing the principle of work, continue education, and entrepreneurship, known by the acronym "BMW." This principle aims to provide clear and flexible career guidance for vocational high school graduates, offering three primary pathways aligned with individual interests, talents, and circumstances. Through this initiative, the expected learning outcomes of vocational education encompass three aspects: employment, continuing education, and entrepreneurship (Indahri et al., 2020). Thus, the success of vocational graduates is measured not only by their ability to secure employment but also by their capacity to pursue higher education or entrepreneurship.

The principle of continuing to higher education emphasizes that educational success should not be measured solely by immediate workforce entry but also by opportunities for further academic pursuits. However, vocational high school students' interest in pursuing higher education remains relatively low. Data from the Directorate General of Vocational Education (2024) indicate that of 702,312 SNBP 2024 participants, only 99,578 originated from vocational high schools, while 503,041 came from senior high schools, with the remainder from Islamic senior high schools. This

condition confirms that vocational students' interest in pursuing higher education is comparatively lower than their senior high school counterparts.

According to Slameto (as cited in Moonti et al., 2022), interest represents a preference or attraction toward something or an activity without external compulsion. Students' interest in continuing their studies develops from awareness of higher education benefits, self-competence perceptions, and social environmental support (Moonti et al., 2022). Interest in pursuing higher education constitutes a complex phenomenon influenced by various internal and external factors, including financial availability, information access, and environmental support (Fani et al., 2022). Therefore, prospective students must consider multiple aspects before making educational decisions.

Factors hypothesized to substantially influence students' interest in pursuing higher education include the brand image and perceived education costs of the selected institution. According to Kotler et al. and Kotler and Armstrong (as cited in Wardhana, 2020), a brand is not merely a name or symbol but a key element in the relationship between a company and its customers. Brand image plays a crucial role in influencing decisions, including higher education choices (Nguyen et al., 2016). Universities with strong brand images more readily attract prospective students while retaining existing ones. A positive institutional image not only fulfills prospective students' educational needs but also represents institutional quality in public perception.

Perceptions of education costs also play a significant role in influencing students' interest in continuing their studies. Baiturrahman et al. (2021) defined perceived education costs as students' perspectives in evaluating education costs, whether considered affordable, expensive, or fair. This reflects how they view the accessibility and reasonableness of educational expenses. For many prospective students and their families, tuition fees are often perceived as a primary barrier. High costs raise concerns about financial capability, which can diminish interest in pursuing higher education (Haryanni & Nasib, 2023). Conversely, positive perceptions of education costs, supported by offered educational facilities, tend to increase students' motivation to pursue higher education.

Research on the influence of brand image and perceived education costs on interest in continuing studies has been conducted both domestically and internationally. Harwani et al. (2018) stated that prospective students consider the quality and image of higher education institutions, with universities possessing good brand images more easily attracting applicants, although cost factors remain significant considerations. Research by Firmansyah et al. (2019) in Indonesia also found that students' perceptions of campus brand image and parental socioeconomic status significantly influence interest in continuing studies. These findings underscore the importance of higher education institutions understanding prospective students' perceptions regarding both brand image and acceptable, affordable education costs.

This study differs from previous research in its context and subjects. While previous studies predominantly focused on senior high school students or prospective students in general, this study specifically examines vocational high school students at SMK Negeri 1 Surakarta, who have vocational orientations and different tendencies regarding continuing education. Additionally, this study integrates brand image and perceived education costs analysis within a single regression model to examine the relative contribution of each variable, thereby providing more comprehensive understanding of factors influencing vocational students' interest in continuing their studies.

Low rates of continuing to higher education were observed at SMK Negeri 1 Surakarta, as demonstrated in Table 1.

Table 1

Percentage of Students Continuing to Higher Education at SMK Negeri 1 Surakarta

Department	Year		
	2021	2022	2023
Multimedia	30,3%	14,3%	14,3%
Online Business and Marketing	9,3%	9,8%	2,9%
Office Automation and Governance	10,6%	12,4%	4,8%
Accounting and Institutional Finance	15,17%	19,2%	11,4%

Source: Guidance and counseling data of SMK Negeri 1 Surakarta (2024)

Based on Table 1, the percentage of SMK Negeri 1 Surakarta students continuing to higher education over the past three years (2021-2023) demonstrated a consistently declining trend across all departments. In the Multimedia department, for instance, continuation rates dropped dramatically from 30.3% in 2021 to only 14.3% in 2022 and remained at this level in 2023. Similar declines were observed in the Online Business and Marketing department, which decreased from 9.8% (2022) to 2.9% (2023). The Office Automation and Governance department and the Accounting and Institutional Finance department exhibited similar patterns of year-over-year percentage decreases. These data indicate that students' tendency to pursue higher education continues to weaken, despite each department possessing distinct characteristics and career opportunities. Many vocational students still perceive higher education as unsuitable for their needs, practically irrelevant, or lacking a strong image as a quality institution.

Furthermore, students' and families' perceptions of higher education costs constitute a primary barrier. Higher education is often perceived as a significant economic burden, particularly for lower-middle-income families. Although the government has provided various assistance schemes, such as KIP-Kuliah, scholarships, and tuition subsidies, information about these programs has not been adequately disseminated. Consequently, some students abandon their intention to continue their studies because they perceive education costs as unaffordable.

Although previous research has highlighted the role of brand image and perceived education costs in influencing interest in continuing studies, most of these studies focused on senior high school rather than vocational high school students. To date, no research has specifically analyzed the influence of these two variables on interest in continuing studies in the context of SMK Negeri 1 Surakarta, which possesses distinct characteristics and continuation tendencies. This research gap forms the basis for this study's importance and the empirical question that requires investigation.

Based on the background presented, this research aimed to: (1) determine the influence of brand image on interest in continuing studies to higher education among Grade XII students at SMK Negeri 1 Surakarta, (2) determine the influence of perceived education costs on interest in continuing studies to higher education among Grade XII students at SMK Negeri 1 Surakarta, and (3) determine the simultaneous influence of brand image and perceived education costs on interest in continuing studies to higher education among Grade XII students at SMK Negeri 1 Surakarta.

Research Methods

This research was conducted at SMK Negeri 1 Surakarta, selected based on the identified problem of low student interest in pursuing higher education as demonstrated through observation and tracer study data. Site selection was also based on relevant data availability and official permission from the school. The research was conducted from December 2024 to October 2025, encompassing the proposal stage through report writing.

This study employed a quantitative approach with descriptive and inferential analysis to describe phenomena based on numerical data. The examined variables consisted of two independent variables (brand image and perceived education costs) and one dependent variable (interest in continuing studies to higher education). Brand image was defined as the overall reputation of faculties and universities, encompassing how students evaluate higher education institutions in terms of educational quality, supporting facilities, and the capacity to produce competent graduates, as reflected in respondent assessment scores. Indicators followed Schiffman and Kanuk (as cited in Alfarizi et al., 2022): quality, promotion, cost, and popularity. Perceived education costs was defined as prospective students' perceptions regarding per-semester costs, such as Single Tuition Fees (UKT) or other costs directly related to core educational processes, and the extent to which these costs are commensurate with the educational quality and career prospects offered by the institution, as reflected in respondent assessment scores. Indicators followed Nuryanti (2019): cost affordability, administrative fees, tuition fees, and expenditures during study. Interest was defined as SMK Negeri 1 Surakarta graduates' feelings of preference, attitude, and attraction toward continuing studies to higher education, also reflected in respondent assessment scores. Indicators followed Slameto (2010): happiness, attention, interest, and desire.

The population comprised all 351 Grade XII students at SMK Negeri 1 Surakarta for the 2024/2025 academic year, consisting of 36 students from the Visual Communication Design (DKV) department, 107 from Accounting and Institutional Finance (AKL), 101 from Marketing (PM), and 107 from Office Management and Business Services (MPLB). Sample size was determined using the Slovin formula with a 5% error margin. From the total population of 351 students, 30 students from Grade XII Marketing 2 were used for instrument pilot testing and thus excluded from the main sample calculation, resulting in a calculated population of 321 students. Based on the Slovin formula ($n = 321 / (1 + 321 \times 0.05^2) = 321 / 1.8025$), a sample of 178 students was obtained. Sampling employed proportional random sampling, a technique for random sample selection while considering group proportions (Ismail, as cited in Syam et al., 2023). This technique was selected because the research sample comprised all Grade XII students distributed across four different departments with relatively homogeneous numbers. The sample distribution across departments is presented in Table 2.

Table 2
Sample Distribution by Department

Department	Calculation	Sample Size
Visual Communication Design	$36/321 \times 178 = 19,96$	20
Accounting and Institutional Finance	$107/321 \times 178 = 59,33$	59
Marketing	$71/321 \times 178 = 39,37$	40
Office Management and Business Services	$107/321 \times 178 = 59,33$	59
Total		178

Source: Data processed by researchers (2025)

Based on Table 2, the sample comprised 20 students from the DKV department (from 36 students), 59 from AKL (from 107 students), 40 from Marketing (from 71 students after excluding 30 pilot test participants), and 59 from MPLB. Data collection was conducted in August 2025 through closed questionnaire distribution, where respondents could only select from provided answer alternatives. The research instrument used a Likert scale to measure respondents' agreement levels with statements, offering five response options: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD).

This research adhered to scientific research ethical principles. Official permission was obtained from the school to ensure legality. Prior to data collection, the researcher explained the research purpose and procedures to respondents to ensure transparency. All collected data were guaranteed to be used solely for research purposes, and respondent data confidentiality was maintained to ensure the safety and comfort of all research participants.

According to Sujarweni (2025), "the quality of a research instrument is determined by its validity and reliability levels" (p. 79). Therefore, instrument validity was tested using Pearson's Product Moment correlation by correlating each item score against the total score, administered to 30 respondents from Grade XII Marketing 2. A critical *r*-table value of 0.361 at the 5% significance level was used as the validity criterion. Reliability testing was conducted on all statement items using Cronbach's Alpha, with instruments considered reliable if Cronbach's Alpha exceeded 0.6. All validity and reliability tests were performed using IBM SPSS Statistics version 22.

Collected data were grouped by variable and respondent type, tabulated, and processed to test the established hypotheses. Data analysis employed multiple linear regression, including classical assumption tests (normality, linearity, multicollinearity, and heteroscedasticity) and hypothesis testing through partial tests (*t*-test), simultaneous tests (*F*-test), coefficient of determination (*R*²), and effective and relative contribution analysis.

The research procedure was comprehensively executed through the following stages: (1) problem identification and formulation, (2) literature review, (3) research instrument development, (4) population and sample determination, (5) data collection, (6) data analysis, and (7) results interpretation and final report preparation. All stages were systematically designed to ensure the research process aligned with the established objectives.

Results and Discussion

Research Result

Validity test results indicated that for the interest in continuing studies variable (Y), of 18 tested statement items, 16 items were valid with r -calculated > 0.361 and Cronbach's Alpha of $.941 > 0.6$. For the brand image variable (X_1), of 17 tested statement items, 15 items were valid with r -calculated > 0.361 and Cronbach's Alpha of $.925 > 0.6$. For the perceived education costs variable (X_2), of 20 tested statement items, 18 items were valid with r -calculated > 0.361 and Cronbach's Alpha of $.903 > 0.6$. Based on these results, all research instruments were deemed valid and reliable for further analysis.

Following instrument validation and reliability confirmation, data analysis was conducted on 178 Grade XII student respondents from SMK Negeri 1 Surakarta for the 2024/2025 academic year. Data collected through questionnaires were analyzed using IBM SPSS Statistics version 22, providing descriptive statistics for each research variable as presented in Table 3.

Table 3
Descriptive Statistics Results

	Brand Image	Education Costs	Interest in Continuing Studies
Valid	178	178	178
Missing	0	0	0
Mean	55,95	64,70	61,57
Std. Error of Mean	,783	,819	,934
Median	56,00	65,00	65,00
Mode	58	68	69 ^a
Std. Deviation	10,445	10,932	12,466
Variance	109,088	119,510	155,399
Range	60	72	64
Minimum	15	18	16
Maximum	75	90	80
Sum	9959	11517	10959

Source: Data processed by researchers (2025)

Based on Table 3, descriptive statistical analysis of the three research variables (brand image [X_1], education costs [X_2], and interest in continuing studies [Y]) revealed that the interest in continuing studies variable (Y) had a minimum score of 16, maximum score of 80, range of 64, standard deviation of 12.466, sum of 10,959, mean of 61.57, median of 65, and mode at 69. These findings indicate that most respondents tended to provide high ratings for interest in continuing studies, as evidenced by data concentration above the mean. Generally, respondents demonstrated strong interest in continuing their studies, and the highest standard deviation for this variable indicated more varied responses compared to other variables.

The brand image variable (X_1) had a minimum score of 15, maximum score of 75, range of 60, standard deviation of 10.445, sum of 9,959, mean of 55.95, median of 56, and mode at 58 with a frequency of 50 respondents (28%). This indicates that a substantial proportion of respondents rated brand image at this category, suggesting interval 58 represents the strongest characterization of students' general perception regarding higher education institution brand image.

The perceived education costs variable (X_2) had a minimum score of 18, maximum score of 90, range of 72, standard deviation of 10.932, sum of 11,517, mean of 64.70, median of 65, and mode at 68 with a frequency of 61 respondents (34%). This indicates that students' perceptions regarding education costs were relatively varied but tended to center on medium to high categories. This pattern is evident from the median positioned at the distribution midpoint and the mode with the highest frequency, indicating respondents' tendency in evaluating higher education costs.

Prior to hypothesis testing, classical assumption tests were conducted to ensure data met the requirements for multiple linear regression analysis. Testing was performed using IBM SPSS Statistics version 22. Normality test results using the Kolmogorov-Smirnov method showed a significance value of $.200 > .05$, indicating normally distributed residual data and a regression model suitable for further analysis. Subsequently, the linearity test through Test for Linearity yielded Deviation from Linearity values of $.062$ for brand image and $.738$ for perceived education costs. Both values exceeded $.05$, confirming linear relationships between independent and dependent variables.

Multicollinearity test results showed Tolerance values of $.433 (> 0.10)$ and Variance Inflation Factor (VIF) values of $2.309 (< 10.00)$ for both independent variables, indicating no multicollinearity symptoms in the regression model. Meanwhile, heteroscedasticity testing using the Glejser model yielded significance values of $.092$ for brand image and $.452$ for perceived education costs. Both exceeded $.05$, indicating no heteroscedasticity symptoms. This was further confirmed by Scatterplot results showing randomly dispersed points above and below the zero line without forming specific patterns such as converging, diverging, or wavy shapes. This dispersion pattern indicated constant or homogeneous residual variance.

With all classical assumptions satisfied, the regression model was deemed suitable for hypothesis testing. Subsequently, multiple linear regression analysis was conducted to determine the influence of brand image and perceived education costs on interest in continuing studies, both partially and simultaneously. Testing included t-tests for partial effect analysis, F-tests for simultaneous effect analysis, and calculation of the coefficient of determination and each independent variable's contribution to the dependent variable.

Based on multiple linear regression analysis results, the following equation model was obtained:

$$\hat{Y} = 6.546 + 0.591X_1 + 0.346X_2$$

This equation indicates that each one-unit increase in brand image (X_1) increases interest in continuing studies (Y) by 0.591 units. Similarly, each one-unit increase in perceived education costs (X_2) increases interest in continuing studies by 0.346 units, assuming other variables remain constant.

Table 4
t-Test Results

Coefficients ^a		
Model	t	Sig.
(Constant)	1,853	,066
Brand Image	7,102	,000
Education Costs	4,323	,000

Source: Data processed by researchers (2025)

Based on Table 4, t-test results indicated that both independent variables partially had significant positive effects on interest in continuing studies. Brand image had a significance value of $.000 (< .05)$ and t-calculated of $7.102 > t$ -table of 1.974 , while perceived education costs had a significance value of $.000 (< .05)$ and t-calculated of $4.323 > t$ -table of 1.974 . Thus, brand image and perceived education costs were proven to partially have significant positive effects on interest in continuing studies. This means that stronger institutional brand image correlates with higher student interest in continuing studies, and more affordable education costs based on student perceptions correlate with higher student interest in continuing studies.

Based on Table 5, F-test results showed a significance value of $.000 (< .05)$ and F-calculated of $133.223 > F$ -table of 3.05 . This indicates that brand image and perceived education costs simultaneously had significant positive effects on interest in continuing studies.

Table 5*F-Test Results (ANOVA)*

ANOVA ^a		
Model	F	Sig.
Regression	133,223	,000 ^b
Residual		
Total		

Source: Data processed by researchers (2025)

Table 6*Coefficient of Determination Results (Model Summary)*

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
,777 ^a	,604	,599	7,589

Source: Data processed by researchers (2025)

Based on Table 6, the coefficient of determination (R^2) was .604, indicating that brand image and perceived education costs jointly contributed 60.4% influence on interest in continuing studies. The remaining 39.6% (100% - 60.4%) may be influenced by factors outside this research model.

Table 7*Correlation and Regression Analysis Results*

Variable	Regression Coefficient (Beta)	Correlation Coefficient	R^2
Brand Image	0,514	0,749	60,4
Education Costs	0,313	0,700	60,4

Source: Data processed by researchers (2025)

Effective and relative contribution calculations were performed based on values in Table 7.

Table 8*Effective Contribution Results*

Variable	Effective Contribution: $SE(X)\% = \text{Beta} \times \text{Correlation Coefficient} \times 100\%$
Brand Image	$0,514 \times 0,749 \times 100\% = 38,5\%$
Education Costs	$0,313 \times 0,700 \times 100\% = 21,9\%$
Total	60,4%

Source: Data processed by researchers (2025)

Table 9*Relative Contribution Results*

Variable	Relative Contribution: $SR(X)\% = SE(X)\% / R^2$
Brand Image	$\frac{38,5\%}{60,4\%} = 63,7\%$
Perceived Education Costs	$\frac{21,9\%}{60,4\%} = 36,3\%$
Total	100%

Source: Data processed by researchers (2025)

Based on calculations in Table 8, the following conclusions were drawn: (1) the effective contribution of brand image to interest in continuing studies was 38.5%, and (2) the effective contribution of perceived education costs to interest in continuing studies was 21.9%.

Based on calculations in Table 9, the following conclusions were drawn: (1) the relative contribution of brand image to interest in continuing studies was 63.7%, and (2) the relative contribution of perceived education costs to interest in continuing studies was 36.3%. Overall, these research findings confirm that brand image and perceived education costs are significant factors influencing students' interest in continuing to higher education. The results also demonstrate that both independent variables provide substantial contributions, thus improving brand image and perceptions of education costs should be primary focuses in strategies and policies aimed at encouraging student interest in pursuing higher education.

Discussion

Based on t-test analysis results, the brand image variable (X_1) was proven to have a significant positive effect on Grade XII students' interest in continuing studies at SMK Negeri 1 Surakarta, with a significance value of .000 ($< .05$) and t-calculated of $7.102 > t$ -table of 1.974. Stronger institutional brand image correlates with higher student interest in continuing studies. Strong brand image cultivates positive perceptions regarding educational quality, reputation, and academic and career prospects, thereby encouraging students to pursue further education. These findings align with research by Ruslan and Situngkir (2019), Menhard (2018), and Puspandari and Rohayati (2020), which demonstrated that brand image has a significant positive effect on interest in continuing studies. Based on questionnaire results, item number 10 regarding facilities for applying for tuition reduction each semester obtained the highest score (747), confirming that financial accessibility plays a crucial role in strengthening higher education institution image among students. Conversely, item number 13 regarding the necessity of choosing nationally top-10 ranked universities obtained the lowest score (444), indicating that ranking is not students' primary priority. This confirms that cost affordability, accessibility, and program relevance are more determinant in influencing interest in continuing studies than institutional rankings alone.

The finding that brand image significantly influences interest can be explained through the Theory of Planned Behavior (TPB). In TPB, intention is influenced by attitude, representing individual beliefs about the benefits or consequences of an action. Positive brand image forms more favorable attitudes toward continuing studies because students believe that higher education institutions with good images will provide higher educational quality, broader career opportunities, and positive academic experiences. These beliefs become behavioral beliefs that strengthen positive attitudes toward the decision to pursue higher education. Thus, brand image increases interest because it directly strengthens the attitude component in TPB, which subsequently encourages intention formation to continue studies.

Furthermore, research results also demonstrated that the perceived education costs variable (X_2) has a significant positive effect on Grade XII students' interest in continuing studies at SMK Negeri 1 Surakarta, with a significance value of .000 ($< .05$) and t-calculated of $4.323 > t$ -table of 1.974. More affordable education costs according to student perceptions correlate with higher interest in continuing studies. Perceived education costs relate not only to nominal amounts but also to affordability, reasonableness, and alignment with obtained benefits. When costs are perceived as proportionate and facilities such as scholarships or flexible payment schemes are available, students tend to have higher interest, whereas costs perceived as burdensome can diminish interest. These findings align with research by Deltia et al. (2025) and Anjelina et al. (2023), which stated that education costs have a significant positive effect on interest in continuing studies. Based on questionnaire results, item number 2 regarding the belief that anyone can pursue higher education regardless of modest family background obtained the highest score (749), demonstrating student optimism that economic background is not the primary barrier to continuing studies. Conversely, item number 18 regarding concerns about additional campus activity costs obtained the lowest score

(481), indicating that transparency regarding miscellaneous cost components remains necessary to prevent such costs from becoming barriers to pursuing higher education.

The influence of perceived education costs can also be explained through TPB, particularly the perceived behavioral control (PBC) component, representing individual perceptions of ease or difficulty in performing an action. When students feel tuition is affordable, scholarships are available, and flexible payment schemes exist, they perceive continuing studies as an easily achievable action. High PBC makes students feel financially capable of pursuing higher education, thereby strengthening their interest. Conversely, if costs are perceived as burdensome, PBC decreases and intention to continue studies weakens. This aligns with the TPB concept that greater perceived control leads to stronger intention to perform the behavior.

Simultaneously, research results showed that brand image (X_1) and perceived education costs (X_2) have significant positive effects on Grade XII students' interest in continuing studies at SMK Negeri 1 Surakarta, with a significance value of .000 ($< .05$) and F-calculated of 133.223 $>$ F-table of 3.05. Multiple linear regression analysis yielded the equation $\hat{Y} = 6.546 + 0.591X_1 + 0.346X_2$, indicating that both independent variables contribute positively to interest in continuing studies. The coefficient of determination (R^2) of .604 shows that brand image and perceived education costs contribute 60.4%, while the remainder is influenced by factors outside this research. Brand image forms positive perceptions regarding educational quality and long-term benefits, while cost perception relates to affordability and financial realities that students must face. When both are viewed positively, student interest in continuing studies increases. This is reinforced by questionnaire results showing the highest score of 781 for item number 3, "I feel proud if I can study at a higher education institution," confirming that pride is an important factor in forming interest in continuing studies. Conversely, negative item number 14, "I am never interested in entering the university environment," obtained a score of 721, meaning most respondents disagreed, further strengthening evidence that students have high interest in becoming part of the university environment.

The interaction between both variables demonstrates that brand image (attitude) and perceived education costs (PBC) work simultaneously in forming student interest according to TPB theory. Brand image provides greater influence because decisions to continue studies are more determined by perceptions of quality and future prospects, while cost perception functions as a capability determinant factor. Thus, although costs are important, students tend to first consider how valuable an institution is before evaluating whether they can afford it. This explains why brand image (63.7%) is more dominant than cost perception (36.3%) in forming interest in continuing studies.

This research has several limitations. The sample originated from only one school, SMK Negeri 1 Surakarta, thus results cannot be generalized to all vocational schools that may have different conditions, school cultures, or student characteristics. The research instrument used self-report questionnaires, which potentially introduce biases such as perception bias and students' tendency to provide socially desirable responses. Research variables were limited to brand image and cost perception, whereas other factors such as parental support, peer influence, academic readiness, career motivation, and future expectations also have strong potential to influence interest in continuing studies but were not examined in this study.

Conclusion

Research results demonstrate a significant positive influence of brand image on interest in continuing to higher education among Grade XII students at SMK Negeri 1 Surakarta for the 2024/2025 academic year. This is evidenced by t-test results with a significance value of .000 $< .05$ and t-calculated of 7.102 $>$ t-table of 1.974. Additionally, there is a significant positive influence of perceived education costs on interest in continuing to higher education among Grade XII students at SMK Negeri 1 Surakarta for the 2024/2025 academic year, with a significance value of .000 $< .05$ and t-calculated of 4.323 $>$ t-table of 1.974. Simultaneously, both variables were proven to have significant positive effects on interest in continuing to higher education among Grade XII students at SMK Negeri 1 Surakarta for the 2024/2025 academic year, as demonstrated by F-test results with

a significance value of $.000 < .05$ and $F\text{-calculated of } 133.223 > F\text{-table of } 3.05$. The coefficient of determination (R^2) of .604 indicates that 60.4% of student interest in continuing to higher education can be predicted from brand image and perceived education costs, while the remaining 39.6% is influenced by factors outside this research. Based on effective contribution calculations, brand image contributes 38.5% and perceived education costs 21.9%, while relatively, brand image contributes 63.7% and perceived education costs 36.3%.

These research findings contribute to the development of the Theory of Planned Behavior (TPB) proposed by Ajzen (1991) in the higher education context. TPB states that behavioral intention is influenced by three main components: attitude toward behavior, subjective norm, and perceived behavioral control. In this research, brand image was proven to shape attitude toward behavior through evaluation of beliefs and positive outcomes, such as good career prospects, improved social status, high educational quality, and extensive networking access, thereby forming favorable attitudes toward continuing studies and increasing behavioral intention. This strengthens understanding that educational institution image can drive behavioral intention formation through positive attitudes toward the choice to continue studies. Meanwhile, perceived education costs represents perceived behavioral control (PBC), influenced by internal factors such as family financial capability and education fund availability, and external factors such as scholarship availability and education financing accessibility. Research findings indicate that more positive affordability perceptions lead to higher perceived behavioral control, and greater perceived control (feeling capable) leads to stronger intention to continue studies. Thus, these research results contribute to building theory regarding interest in continuing studies as influenced by brand image and perceived education costs.

Practically, these findings provide guidance for higher education institutions to improve brand image through strategies such as strengthening academic quality, improving accreditation, and providing relevant facilities. Education cost transparency and flexibility can be enhanced through merit-based scholarship schemes, tuition discounts for high-achieving students, and interest-free installment programs, which are expected to improve affordability perceptions and attract more students. For SMK Negeri 1 Surakarta, school principals should implement intensive mentoring programs, such as monthly workshops on university reputation and scholarship application simulations, and establish partnerships with universities for activities such as online seminars, virtual exhibitions, and free campus visits, which can broaden student perspectives. Students are encouraged to be proactive by building achievement portfolios, seeking online mentors, and utilizing platforms such as the Ministry of Education and Culture website for scholarship information, thereby developing self-motivation and belief that economic barriers can be overcome through effort.

This research has several limitations. First, focusing on two independent variables (brand image and perceived education costs) overlooks other factors such as subjective norms (family/peer influence) or intrinsic student motivation, which may explain additional variance up to 39.6% (based on R^2). Second, the sample was limited to SMK Negeri 1 Surakarta students only, thus results cannot be generalized to other schools with different characteristics (e.g., private vocational schools or those in rural areas), local cultures, or varying management systems. Third, the quantitative survey method has limitations including potential self-report bias because data were obtained based on respondents' own responses, and does not include longitudinal data that could illustrate continuous intention changes over time.

Future research should expand scope by adding variables such as subjective norms or family support, employing mixed methods (quantitative and qualitative, such as in-depth interviews) for comprehensive analysis. Additionally, longitudinal studies spanning 1-2 years should be conducted to track intention changes post-intervention, and locations should be expanded to multiple vocational schools in Central Java or nationally to improve generalizability. Moderation analysis (e.g., the role of gender or economic background) is also recommended to identify more complex variable interactions.

References

- Alfarizi, A., Alie, J., & Yustini, T. (2022). Pengaruh brand image, lokasi kampus dan dukungan fasilitas terhadap keputusan mahasiswa dalam memilih perguruan tinggi swasta (PTS) di Kota Palembang. *JUMBIWIRA: Jurnal Manajemen Bisnis Kewirausahaan*, 1(2), 31–44. <https://doi.org/10.56910/jumbiwira.v1i2.60>
- Anjelina, M. S., Stevani, & Harini, G. (2023). Pengaruh self efficacy, potensi diri, dukungan orang tua, biaya pendidikan dan lingkungan sekolah terhadap minat melanjutkan pendidikan ke perguruan tinggi pada siswa kelas XI di SMK Negeri 4 Sijunjung. *Jurnal Horizon Pendidikan*, 3(3), 334–345. <http://ejournal.upgrisba.ac.id/index.php/horizon>
- Baiturrahman, M., Mahsuni, A. W., & Junaidi, J. (2021). Faktor-faktor yang mempengaruhi minat mahasiswa mengikuti pendidikan profesi akuntansi (PPAk) (studi pada mahasiswa akuntansi FEB Universitas Islam Malang angkatan 2016–2017). *E-Jurnal Ilmiah Riset Akuntansi*, 10(4), 101–110. <https://doi.org/10.24127/exclusive.v3i1.5378>
- Deltia, Eprillison, V., & Stevani. (2025). Pengaruh self efficacy, potensi diri, dukungan orang tua, biaya pendidikan dan lingkungan sekolah terhadap minat melanjutkan pendidikan ke perguruan tinggi pada siswa kelas XII di SMAN Negeri 1 Ampek Nagari. *Jurnal Ilmiah Pendidikan Dasar*, 10(3), 240–250. <https://doi.org/10.23969/jp.v10i03.32309>
- Fani, J., Subagio, N., & Rahayu, V. P. (2022). Analisis faktor-faktor yang mempengaruhi minat siswa melanjutkan studi ke perguruan tinggi pada siswa kelas XII di SMA Negeri 14 Samarinda. *Jurnal Prospek: Pendidikan Ilmu Sosial dan Ekonomi*, 4(1), 24–34. <https://doi.org/10.30872/prospek.v4i1.1322>
- Firmansyah, M. A. (2019). *Buku pemasaran produk dan merek*. CV. Penerbit Qiara Media.
- Haryanni, D. S., & Nasib, A. Z. (2023). The influence of brand image, payment system, and promotion on interest in college at the Universitas Mahkota Tricom Unggul. *IJAMESC*, 1(3). <https://doi.org/10.61990/ijamesc.v1i3.17>
- Harwani, Y., Suharjo, B., Nurmalina, R., & Suprayitno, G. (2018). Brand name and customers' intention. *European Research Studies Journal*, 21(3), 299–315. <https://doi.org/10.35808/ersj/1062>
- Indahri, Y., Andina, E., & Kartika, S. D. (2020). *Sekolah menengah kejuruan dan tantangan revitalisasi*. Pusat Penelitian Badan Keahlian DPR RI.
- Komisi X Pendidikan, Olahraga, Sains, dan Teknologi. (2025). *Akses dan partisipasi pendidikan tinggi yang lebih inklusif*. DPR RI.
- Menhard. (2018). Brand image dan lokasi mempengaruhi terhadap minat mahasiswa masuk ke perguruan tinggi dan status ekonomi (studi kasus pada mahasiswa S1 Manajemen STIE Mahaputra Riau). *AJIE: Asian Journal of Innovation and Entrepreneurship*, 3(2), 116–122. <https://journal.uui.ac.id/ajie/article/view/8660>
- Moonti, U., Mahmud, M., Yantu, I., Bahsoan, A., & Albakir, A. K. (2022). Pengaruh persepsi siswa terhadap minat melanjutkan studi di Program Studi Pendidikan Ekonomi. *Jambura: Economic Education Journal*, 4(1), 66–72. <https://doi.org/10.37479/jeej.v4i1.13488>
- Nguyen, B., Yu, X., Melewar, T. C., & Hemsley-Brown, J. (2016). Brand ambidexterity and commitment in higher education: An exploratory study. *Journal of Business Research*, 69(8), 3105–3112. <https://doi.org/10.1016/j.jbusres.2016.01.026>
- Nuryanti. (2019). *Peran self-efficacy dalam memediasi pengaruh persepsi biaya pendidikan, kondisi ekonomi orang tua, dan lingkungan teman sebaya terhadap minat melanjutkan S2* [Skripsi tidak dipublikasikan, Universitas Negeri Semarang]. <https://lib.unnes.ac.id/41755/1/7101415125.pdf>
- Pusat Data dan Informasi Pendidikan, Badan Standar Nasional Pendidikan. (2003). *Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional*. Departemen Pendidikan Nasional.
- Puspandari, M. H., & Rohayati, S. (2020). Pengaruh citra merek prodi pendidikan akuntansi UNESA, status sosial ekonomi orang tua, dan persepsi biaya pendidikan terhadap minat melanjutkan studi ke perguruan tinggi siswa kelas XII SMA Negeri di Surabaya. *Jurnal*

Pendidikan Akuntansi, 5(3), 1–7.

<https://ejournal.unesa.ac.id/index.php/jpak/article/view/22058>

Ruslan, D., & Situngkir, E. (2019). Pengaruh brand image dan persepsi biaya pendidikan terhadap minat melanjutkan studi pada Prodi Pendidikan Ekonomi Unimed siswa kelas XI IPS SMA Negeri 1 Kabanjahe Tahun Ajaran 2018/2019. *Jurnal Pendidikan Ekonomi*, 7(1), 19–30.

<https://jurnal.unimed.ac.id/2012/index.php/ekodik/article/viewFile/16442/12735>

Slameto. (2010). *Belajar dan faktor-faktor yang mempengaruhinya*. Rineka Cipta.

Sofiyanti, U., & Sukirman. (2019). Minat melanjutkan pendidikan ke perguruan tinggi: Studi empiris tentang pengaruh mediasi prestasi belajar. *Economic Education Analysis Journal*, 8(2), 453–469. <https://doi.org/10.15294/eeaj.v8i2.31500>

Suhendar, N., Hatmawan, A. A., Ningsih, L., Arisna, P., Tanjung, I. I., Shifa, M., Hartini, & Hasni, J. (2022). Sosialisasi pentingnya pendidikan dalam menumbuhkan semangat kuliah ke perguruan tinggi di SMAN 1 Labuhanhaji. *Indonesian Journal of Community Service*, 2(4), 367–372. <https://ijocs.rcipublisher.org/index.php/ijocs/article/view/209>

Sujarweni, V. W. (2025). *Metodologi penelitian*. Pustaka Baru Press.

Syam, N., Usman, & Syam, N. A. A. (2023). Pengaruh penggunaan gawai terhadap perkembangan sosial anak siswa kelas V UPTD SD Negeri 28 Parepare. *Phinisi Integration Review*, 5(3), 818–823. <https://doi.org/10.26858/pir.v6i2.47739>

Wardhana, A. (2020). Brand image dan brand awareness. In Sudirman (Ed.), *Brand marketing: The art of branding* (pp. 206). Media Sains Indonesia.

Project-based learning implementation to enhance student learning outcomes in meeting management

Akhmad Firdaus Rizal Afifi*, Sekar Sabdo Wening, Yunisa Galuh Pramesti, Endang Retna Palupi, Tri Murwaningsih

Office Management and Business Services, Sebelas Maret University, Surakarta, Indonesia

Email: rizalfrds77@gmail.com

Abstrak

Penelitian ini mengkaji efektivitas Project-Based Learning (PjBL) dalam meningkatkan hasil belajar siswa pada materi pengelolaan rapat. Penelitian Tindakan Kelas dengan model Kemmis dan McTaggart dilaksanakan melalui dua siklus pembelajaran, masing-masing terdiri dari tahap perencanaan, pelaksanaan, observasi, dan refleksi. Subjek penelitian adalah 36 siswa Kelas XI MPLB 2 di SMK Negeri 6 Surakarta. Hasil menunjukkan peningkatan signifikan pada rerata hasil belajar, dari 81,33 pada pra-siklus menjadi 93,89 pada Siklus I dan 94,72 pada Siklus II. Selain pencapaian akademik, penerapan PjBL meningkatkan keterlibatan siswa, mendorong partisipasi aktif, dan mengembangkan keterampilan berpikir kritis. Temuan ini merekomendasikan PjBL sebagai strategi pembelajaran efektif yang selaras dengan penekanan Kurikulum Merdeka pada pengembangan kompetensi siswa secara komprehensif.

Keywords: berpikir kritis; kurikulum merdeka; partisipasi aktif; pendidikan vokasi; penelitian tindakan kelas

Abstract

This study examined the effectiveness of Project-Based Learning (PjBL) in improving student learning outcomes in meeting management. Classroom Action Research employing the Kemmis and McTaggart model was conducted through two learning cycles, each comprising planning, implementation, observation, and reflection stages. The study involved 36 students from Class XI MPLB 2 at SMK Negeri 6 Surakarta. Results demonstrated significant improvement in mean learning outcomes, increasing from 81.33 in the pre-cycle to 93.89 in Cycle I and 94.72 in Cycle II. Beyond academic achievement, PjBL implementation enhanced student engagement, encouraged active participation, and developed critical thinking skills. These findings recommend PjBL as an effective learning strategy aligned with the Merdeka Curriculum's emphasis on comprehensive student competency development.

* Corresponding author

Citation in APA style: Afifi, A.F.R., Wening, S.S., Pramesti, Y.G., Palupi, E.R., Murwaningsih, T. (2026). Project-based learning implementation to enhance student learning outcomes in meeting management. *Jurnal Informasi dan Komunikasi Administrasi Perkantoran*, 10(1), 123-131.
<https://dx.doi.org/10.20961/jikap.v10i1.104329>

Keywords : active participation; classroom action research; critical thinking; merdeka curriculum; vocational education

Received June 17, 2025; Revised September 10, 2025; Accepted October 03, 2025;
Published Online January 02, 2026

<https://dx.doi.org/10.20961/jikap.v10i1.104329>

Introduction

Education in the 21st century has undergone substantial transformation, driven primarily by accelerated innovation and technological advancement. These technological developments have fundamentally altered human interaction and work practices while demanding corresponding evolution in educational approaches to address contemporary challenges. Modern education extends beyond academic achievement to emphasize skill mastery essential for future success. Within this context, educators must master and implement the 4C skills Critical Thinking, Communication, Collaboration, and Creativity to develop students who demonstrate both intellectual capability and adaptability (Wulansari & Sunarya, 2023). Consequently, teachers assume a strategic role in developing innovative, contextually relevant, and meaningful learning models that optimally prepare students for evolving societal demands (Muthmainnah et al., 2023). This aligns with Government Regulation of the Republic of Indonesia No. 57 of 2021 concerning National Education Standards, which mandates interactive and inspiring learning processes capable of comprehensively enhancing student abilities.

In vocational education, particularly within the Office Management and Business Services (MPLB) program, the Office Management subject serves a critical function in preparing students for workforce entry. This subject provides both theoretical knowledge and practical skills alongside professional attitudes required in office administration. The learning process must therefore bridge theory with practice relevant to Business and Industrial World (DUDI) requirements. However, implementation challenges persist, notably insufficient innovation in instructional delivery methods. This condition results in diminished learning interest and reduced active student involvement, ultimately affecting learning outcomes negatively. Student engagement constitutes a crucial factor influencing motivation and learning effectiveness; actively engaged students demonstrate higher learning motivation and achieve more optimal outcomes (Waruwu & Helsa, 2025). Therefore, designing and implementing learning approaches that enhance student engagement across cognitive, affective, and psychomotor dimensions is essential.

Rahman (2023) describes learning outcomes as comprising two interconnected concepts: "outcomes" and "learning." Salsabila et al. (2024) define learning as a conceptual framework for understanding how individuals acquire new knowledge, skills, attitudes, or behaviors through educational experiences. Bahri and Nurhayati (2023) characterize outcomes as measurable and evaluable results obtained from structured activities such as learning. Synthesizing these definitions, learning outcomes represent student achievements encompassing knowledge, attitudes, and skills acquired through the learning process.

This study focused on Class XI students in the Office Management and Business Services (MPLB) 2 program at SMK Negeri 6 Surakarta. A preliminary study revealed that most students had not achieved the Learning Outcome Achievement Criteria (KKTP), indicating a gap between learning processes and student outcomes. Pre-cycle results showed a mean score of 81.33, with only 21 students (58.33%) of 36 total students meeting the 80% KKTP standard, while 15 students

(41.67%) did not. These findings underscore the necessity for strengthened learning strategies addressing not only cognitive and technical aspects but also social and emotional skill development to support comprehensive competency achievement. Within 21st-century learning contexts, 4C skill mastery is crucial for students facing increasingly complex work and life challenges. Project-Based Learning (PjBL) represents one alternative strategy for optimizing learning outcomes, particularly within the Merdeka Curriculum implementation. Ramadhani and Ardi (2024) demonstrate that this model effectively improves learning outcomes through contextual and applicative approaches.

Bulkini and Nurachadijat (2023) describe Project-Based Learning (PjBL) as a model integrating real-world contexts into learning, enabling students to learn through meaningful experiences. Sholekah (2020) reinforces this characterization, stating that PjBL actively involves students in problem-solving, investigation, and reflection based on authentic experiences under teacher guidance. The PjBL approach emphasizes student involvement in completing real projects. This study specifically applies PjBL to improve learning outcomes in Office Management and Business Services (MPLB), particularly meeting management material at SMK Negeri 6 Surakarta. Students are required to solve problems, explore topics, collaborate in groups, and apply knowledge and skills in contexts relevant to real-world situations (Banawi, 2019). Through this approach, students gain deep conceptual understanding while applying knowledge to authentic situations, making learning contextual and relevant. Project-based learning integrates cognitive aspects with skills, attitudes, values, and social-emotional abilities, constituting a holistic approach well-suited to office management competency requirements such as meeting management. Teacher-student collaboration in project-based learning implementation is expected to enhance learning process effectiveness while significantly improving student outcomes.

Based on preliminary study findings, this research aimed to improve student learning outcomes through Project-Based Learning (PjBL) application in meeting management material as an integral component of Office Management competencies. The application of this learning model was expected to enhance overall student engagement, resulting in significantly improved learning outcomes aligned with 21st-century education demands and contemporary workforce requirements.

Research Method

This study employed Classroom Action Research (CAR) using the Kemmis and McTaggart cycle model, comprising planning, action implementation, observation, and reflection stages. CAR was selected for its systematic, reflective, and continuous improvement orientation. Within this framework, the Project-Based Learning (PjBL) model served as an intervention to test its effectiveness in improving meeting management competencies. The research was conducted at SMK Negeri 6 Surakarta during the even semester of the 2024–2025 academic year, from February to April 2025, scheduled to avoid interference with regular academic activities.

The selection of Project-Based Learning (PjBL) as the primary intervention was positioned within the Classroom Action Research (CAR) framework. CAR provides a systematic research approach for improving learning practices, while PjBL represents a learning strategy tested for its effectiveness in improving meeting management competencies. Theoretically, PjBL emphasizes active student involvement in completing real projects, creating meaningful and contextual learning experiences. This model develops critical thinking, teamwork, problem-solving, and effective communication skills all essential aspects of professional meeting management competencies. Practically, activities such as agenda planning, minute-taking, meeting simulation, and meeting evaluation serve as concrete projects relevant to the workplace, enabling students to directly apply learned skills in realistic situations.

Research subjects comprised 36 students from Class XI MPLB 2, selected through purposive sampling based on class characteristic suitability for research needs, particularly readiness for PjBL implementation in meeting management material. Class XI MPLB 2 was selected because the

curriculum addressed material relevant to meeting management, student ability diversity allowed comprehensive observation of intervention effectiveness, and motivation and learning involvement levels were adequate for smooth action implementation. This class was therefore considered representative for testing PjBL implementation effectiveness in improving meeting management competencies.

Data collection combined quantitative and qualitative methods. Quantitative data were obtained from written tests (multiple-choice and essay questions) with instruments tested for validity and reliability to ensure accuracy in measuring competence and consistency of results. Qualitative data were collected through observation and field notes. Observation instruments were also tested for content validity and inter-rater reliability to ensure objective and reliable data. This approach provided comprehensive data in both numerical and descriptive forms.

Data analysis employed quantitative descriptive techniques to calculate mean scores, learning completeness percentages, and learning outcome improvement differences between cycles. Qualitative data analysis utilized data reduction, data presentation, and conclusion drawing techniques. This process began with selecting and grouping observation findings and field notes into specific categories: active involvement, collaboration, initiative, and student responsibility. Reduced data were then presented in descriptive narrative form to interpret learning dynamics more deeply and understand changes in student learning behavior during the intervention. Qualitative data interpretation was integrated with quantitative data to produce a comprehensive picture of PjBL effectiveness in improving learning quality.

Success criteria for this study were determined based on Minimum Completion Criteria (KKM) achievement by at least 75% of students, accompanied by increased student engagement as observed through designated indicators. Fulfillment of both indicators indicated successful PjBL application in improving student learning outcomes in meeting management competencies.

Results and Discussion

The classroom action research conducted across two cycles primarily aimed to examine the effectiveness of Project-Based Learning (PjBL) implementation in improving student learning outcomes, particularly in meeting management. Each research cycle was systematically designed to include several stages: planning to prepare learning needs and strategies, implementation involving direct PjBL application in the classroom, observation to document student activities and responses during learning, and reflection to evaluate results and determine improvement measures for subsequent cycles. The PjBL approach was selected for its advantages in increasing overall active student involvement while developing critical and collaborative thinking skills relevant to contemporary workforce demands. Additionally, this model was expected to increase student learning motivation through direct involvement in contextual, project-based learning processes.

Research results

Research results demonstrated that Project-Based Learning (PjBL) application significantly positively affected student learning outcomes in meeting management. These findings were obtained through classroom action research conducted in Class XI MPLB 2 at SMK Negeri 6 Surakarta. Collected data described individual learning achievement increases for each student. Based on data presented in Table 1 comparing student learning outcomes across pre-cycle, Cycle I, and Cycle II stages, significant learning achievement increases were evident among Class XI MPLB 2 students. These findings indicate that Project-Based Learning (PjBL) application effectively improves student understanding and skills, particularly in meeting management.

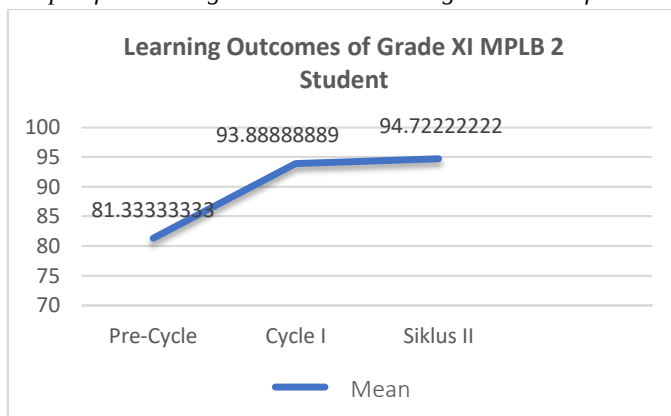
The initial step to identify student baseline conditions began with administering a pretest to Class XI MPLB 2 students before implementing the Project-Based Learning (PjBL) model. The subsequent stage involved PjBL learning model implementation to observe and measure changes during this approach application in learning activities. The final stage comprised a posttest to ensure applied learning model effectiveness and evaluate student learning outcomes comprehensively. Figure 1 presents a graph of mean learning outcome increases for Class XI MPLB 2 students during

the research process, visualizing a positive trend from the pre-cycle stage through Cycle II aligned with Project-Based Learning (PjBL) application.

Table 1

Comparison of Student Learning Outcomes in the Pre-Cycle, Cycle I, and Cycle II Stages

Student No.	Pre-Cycle	Cycle I	Cycle II
1	80	100	100
2	83	100	90
3	83	100	90
4	82	100	100
5	79	100	100
6	80	100	100
7	80	100	90
8	83	90	90
9	87	90	100
10	77	90	100
11	77	100	100
12	79	100	100
13	87	90	90
14	77	100	100
15	82	80	90
16	77	80	100
17	83	100	100
18	77	90	90
19	77	90	90
20	87	90	100
21	80	80	90
22	87	80	100
23	79	100	90
24	79	100	80
25	79	100	90
26	82	100	100
27	83	90	100
28	80	100	100
29	79	90	90
30	82	100	90
31	80	90	100
32	87	80	90
33	87	100	90
34	82	80	90
35	82	100	100
36	83	100	90
<i>Mean</i>	81.33	93.89	94.72

Figure 1*Graph of the Average Increase in Learning Outcomes of Grade XI MPLB 2 Students*

Learning achievement results for Class XI MPLB 2 students at SMK Negeri 6 Surakarta in meeting management during the pre-cycle stage indicated relatively low learning completeness levels. Of 36 total students, only 21 (58.33%) achieved or exceeded the established 80% Minimum Completion Criteria (KKM), while 15 students (41.67%) did not meet this standard. This condition illustrated the urgent need for more efficient and effective learning methods to enable all students to gain deeper understanding of meeting management material and demonstrate adequate competence in preparing and conducting meeting simulations according to office operational standards.

Entering Cycle I, learning evaluation results for Class XI MPLB 2 students on meeting management material showed significant improvement. Most students successfully achieved learning mastery with satisfactory results. The highest score achieved was 100, while the lowest was 80, with a class mean (M) of 93.89. Both median and mode scores were 100, indicating that most students achieved perfect evaluation scores. Score distribution showed 20 students (55.6%) scored 100, nine students (25%) scored 90, and seven students (19.4%) scored 80. These findings indicate that most students thoroughly mastered the material, although a small number required more intensive guidance to improve learning outcomes in the subsequent cycle.

In Cycle II, evaluation data demonstrated that most students exhibited excellent and consistent material mastery. Of 36 students, the highest score remained 100 while the lowest was 80, with the class mean score increasing to 94.72. Scores of 90 and 100 dominated the distribution with frequencies of 17 and 18 respectively, while the median remained 100. Only one student scored 80, while 17 students scored 90 and 18 students achieved 100. These data indicate that nearly all students demonstrated solid and deep understanding of learning material. Only a few students still required additional support for continued academic performance improvement. This condition demonstrates that the applied learning model effectively improved overall student learning outcomes.

Discussion

Study findings confirm that Project-Based Learning (PjBL) application contributes significantly to improving student learning achievement. These findings align with research by Rani et al. (2021), which states that PjBL application contributes significantly to improving learning outcomes because it encourages students to be more active, creative, and innovative through heightened curiosity about studied material, making learning more effective and concepts more easily understood. This is evidenced by data showing significant mean score increases from the pre-

cycle stage ($M = 81.33$) to Cycle I ($M = 93.89$) and further increase in Cycle II ($M = 94.72$). The larger score increase from pre-cycle to Cycle I can be explained by the novelty effect of the PjBL method, which substantially boosted student motivation and participation after prior acclimatization to lecture methods. The smaller increase from Cycle I to Cycle II occurred due to limited improvement potential, as mean scores were already very high (93.89) with minimal room for further increase, despite more mature project implementation in Cycle II following teacher reflection and improvements.

In the pre-cycle phase, the learning process remained dominated by the lecture method, which proved ineffective in optimally improving student learning outcomes. This condition demonstrates that lecture methods cannot significantly impact student achievement improvement due to their one-way nature, which positions students as passive listeners in teaching and learning processes (Dulyapit & Lestari, 2024). A primary weakness of this approach is low student involvement in deep material understanding, ultimately reducing opportunities for developing critical and creative thinking skills. Additionally, Wulandari (2022) states that this approach forces students to listen to learning material, making the learning process tedious and causing drowsiness, resulting in passive student learning.

Entering Cycle I, significant changes in student learning outcomes emerged. This improvement resulted from direct student involvement in learning projects implemented through the PjBL model. Active involvement positively affected material comprehension and increased overall student participation. Hulkin et al. (2024) support this finding, stating that through Project-Based Learning (PjBL) implementation, students become more active and involved in learning processes, are able to apply concepts practically, and demonstrate increased learning motivation. Overall, PjBL encourages students to assume greater responsibility as citizens and prepares them for future challenges.

In Cycle II, student learning outcomes again demonstrated further improvement. Students appeared more enthusiastic and motivated to achieve higher learning outcomes. These findings align with research by Bulkini and Nurachadijat (2023), which revealed that PjBL application in learning processes can increase student active participation and strengthen their sense of responsibility for achieving learning outcomes. Thus, the PjBL learning model effectively improves learning quality and student learning outcomes sustainably.

Conclusion

Study results indicate that Project-Based Learning (PjBL) application to meeting management material in Class XI MPLB 2 at SMK Negeri 6 Surakarta contributed significantly to improving student learning outcomes, reflected in mean score increases from 81.33 in the pre-cycle stage to 93.89 in Cycle I, and further to 94.72 in Cycle II. Beyond cognitive aspects, PjBL positively affected affective and psychomotor aspects, including increased learning motivation, active student involvement, collaboration ability, and individual responsibility in project completion. These findings imply that PjBL serves as an effective learning strategy for developing critical, collaborative, creative, and communicative thinking skills relevant to office management workforce requirements while supporting Merdeka Curriculum implementation, which emphasizes competency-based and differentiated learning. However, this study has several limitations, including implementation duration of only one semester, dependence on teacher readiness in designing and facilitating projects, and variations in student learning independence levels requiring intensive assistance for some students. Therefore, further research is recommended with broader scope and longer duration across various conditions and different subjects, considering PjBL integration with other learning models that are more flexible and adaptive to student characteristics to optimize learning outcomes.

References

- Bahri, S., & Nurhayati. (2023). The effect of learning models on student learning outcomes. *Journal of Education and Learning*, 10(1), 45–52.
<https://jurnalpendidikan.ac.id/index.php/jpp/article/view/1234>
- Banawi, A. (2019). Implementation of the scientific approach in discovery/inquiry learning, based learning, and project-based learning syntax. *Biosel (Biology Science and Education): Journal of Science and Education Research*, 8(1), Article 1.
<https://doi.org/10.33477/Bs.V8i1.850>
- Bulkini, J., & Nurachadijat, K. (2023). The potential of the PJBL (project-based learning) model in increasing student learning motivation at Azzainiyyah Nagrog Sukabumi Junior High School. *Journal of Innovation, Evaluation and Development of Learning (JIEPP)*, 3(1), 16–21. <https://journal.ainarapress.org/index.php/jiepp/article/download/241/235/1521>
- Dulyapit, A. D. A., & Lestari, S. (2024). Lecture methods in Madrasah Ibtidaiyah education: A literature analysis of implementation and impact. *Al-Ihtirafiah: Scientific Journal of Madrasah Ibtidaiyah Teacher Education*, 45–56.
<https://doi.org/10.47498/ihitirafiah.v4i2.4249>
- Fredricks, J. A., Wang, M. T., Schall Linn, J., Hofkens, T. L., Sung, H., Parr, A., & Allerton, J. (2019). Engagement in school: A multidimensional perspective. *Contemporary Educational Psychology*, 58, 1–13. <https://doi.org/10.1027/1015-5759/a000431>
- Hulkin, M., Divy, E. O., Sulfiani, S., & Prastowo, A. (2024). Developing student creativity and skills in civic education learning through a project-based learning approach. *JRPD (Journal of Basic Education Research)*, 7(1), 62–70.
- Khairunnisa, N. R. (2024). Application of the ICM (index card match) learning method to improve science learning outcomes of sixth grade students at SDN 25 Teluk Pakedai. *Journal of Management, Accounting and Education*, 480–486.
<https://doi.org/10.59971/jamapedik.v1i3.89>
- Ministry of Education and Culture of the Republic of Indonesia. (2021). *Government Regulation of the Republic of Indonesia Number 57 of 2021 concerning National Education Standards*. Ministry of Education and Culture.
https://spiritpusbanglin.kemendikdasmen.go.id/sakip/878_RENSTRA_BADAN_BAHASA_SUDAH_TTD.pdf
- Muthmainnah, A., Pertiwi, A. D., & Rustini, T. (2023). The role of teachers in developing 21st century skills in elementary school students. *Wahana Pendidikan Scientific Journal*, 9(4), 41–48. <https://doi.org/10.5281/zenodo.7677116>
- Rahman, S. (2022, January). The importance of learning motivation in improving learning outcomes. In *Proceedings of the National Seminar on Primary Education*.
- Rani, P. R., Lestari, A., Mutmainah, F., Ishak, K. A., Delima, R., Siregar, P. S., & Marta, E. (2021). The effect of the PJBL method on mathematics learning outcomes in elementary schools. *Journal for Lesson and Learning Studies*, 4(2), 264–270.
<https://doi.org/10.23887/jlls.v4i2.34570>
- Salsabila, S., Nugraha, A. B., & Gusmaneli, G. (2024). Basic concepts of learning and teaching in education. *PUSTAKA: Journal of Language and Education*, 4(2), 100–110.
<https://doi.org/10.56910/pustaka.v4i2.1390>
- Sholekah, A. W. (2020). Improving motivation and learning outcomes in science on environmental pollution through the PjBL model for seventh-grade students at SMPN 9 Salatiga. *Journal of Science Education*, 10(1), 16–22. <https://doi.org/10.37630/jpm.v10i1.260>
- Waruwu, P. I. M., & Helsa, Y. (2025). Implementation of active learning to increase student engagement in elementary schools. *Arjuna Journal: Publications in Education, Language, and Mathematics*, 3(3), 255–267. <https://doi.org/10.61132/arjuna.v3i3.1942>
- Wulandari, D. (2022). Learning methods to increase learning activity. *Aksioma Ad Diniyah: The Indonesian Journal of Islamic Studies*, 10(1). <https://doi.org/10.55171/jad.v10i1.690>
- Wulansari, K., & Sunarya, Y. (2023). The 4C skills (critical thinking, creativity, communication, and collaboration) of Indonesian language teachers in high school in 21st-century learning

in the era of industry 4.0. *Jurnal Basicedu*, 7(3), 1667–1674.
<https://doi.org/10.31004/basicedu.v7i3.5360>



UNS
UNIVERSITAS
SEBELAS MARET



PROGRAM STUDI PENDIDIKAN ADMINISTRASI PERKANTORAN
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
UNIVERSITAS SEBELAS MARET SURAKARTA
Jl. Ir. Sutami 36 A Kentingan, Jebres, Surakarta 57126
Telp/Fax. (0271) 669124, Email: pap@fkip.uns.ac.id
www.adp.fkip.uns.ac.id