

EXPLORING KEY FACTORS AFFECTING STUDENT RETENTION IN A DISTANCE LEARNING ENVIRONMENT: A STUDY AT UNIVERSITAS TERBUKA MAKASSAR

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Abstract

Distance education students face a range of challenges, including isolation, ineffective time management, the need for self-motivation, and independent learning skills, such as planning, initiative, and intrinsic motivation. These challenges directly affect student retention—the ability to persist and complete their studies—which remains a critical issue in higher education, particularly in distance learning settings. This study aims to analyze the factors influencing student retention at Universitas Terbuka Makassar, focusing on students identified as at risk of academic withdrawal. A quantitative approach was employed using a survey method with 200 active students selected through purposive sampling. Data were analyzed using multiple linear regression. The results indicate that academic, social, institutional, motivational, and external factors significantly affect student retention, with an Adjusted R Square value of 0.704. This suggests that the five variables collectively explain 70.4% of the variation in student retention. The F-test confirms the model's overall significance ($p < 0.05$). The findings offer strategic recommendations for Universitas Terbuka Makassar, including strengthening technology-based learning systems, enhancing the quality of academic advising, and fostering an inclusive learning community to support student success and promote sustained engagement in distance education.

Keywords: student retention, distance education, academic support, learning motivation

1 INTRODUCTION

Open Education represents an educational system that navigates diverse groups toward broad access to education by nurturing true inclusivity at minimum barriers. The concept advocates flexibility that breaks down barriers such as place, time, economy, geography, and age. Open and Distance Education (ODE) internalizes distance-learning methodology with the principles of openness and flexibility—thus corresponding to the overarching framework of Open Distance Learning (ODL). Universitas Terbuka of Makassar has seen a growing trend in Gross Enrollment Ratio in each semester. However, it is important to note that ODE calls for core self-regulated learning skills and essential time management strategies—

thereby requiring student adaptability to digital environments. Student retention has accordingly become a more complex issue in ODE setting than that in its counterpart setting.

Universitas Terbuka (UT) commitment involves a dedication to being part of open education across 21 regencies and 3 cities in South Sulawesi. This commitment offers excellence in ODE setting that embraces openness, affordability, and flexibility through digital innovation. Student retention, which is measurable metric of the institutional ability to support study completion, remains a major persistent challenge for ODE setting at UT of Makassar. Data showed that a large number of students did not register for courses for more than three consecutive semesters due to varied issues such as difficulties in self-regulated learning skills, isolation from teachers and peers, and lack of time management skills. These issues are attributed to academic, social, motivational, and external factors. With a shrinking pool of prospective students, UT of Makassar has therefore outlined effective and sustainable strategic plans for tackling early departure by narrowly focusing on institutional support and community, that is providing channels of communication (i.e., WhatsApp, Instagram, and Zoom) and capitalizing on UT SALUT (a unit of student support) for maximum student service.

The current development of distance education has explored ways through which education becomes possible for everyone without physical presence in classroom, removing traditional barriers of time and place. Distance education has its downsides, notwithstanding. Key issues include isolation, poor time management, motivation struggles, and a lack of self-management skills. With this in mind, use of technology is paramount for UT commitment to excellence in student service. A state university with legal entity (PTN-BH) since October 2022, UT has persistently explored digital settings by integrating registration service, library, resources, and interactive learning into digital online platforms. Online learning, as Dritsas and Trigka (2025) put it, nurtures engagement, retention, and accessibility, but issues including digital gap, data privacy, and technology resistance remain to be tackled. UT commitment presents an overall picture of sustainable and inclusive digital education ecosystem-based strategic schemes for maximum outcome.

Innovation is essential in promoting equality and accessibility in education, but student retention is posing serious challenges across higher education institutions. The inherent nature of online environments leads students to inadequate opportunities for instructor and

peer engagement, insufficient supervision, and high pressure of self-regulated behaviors to foster study habits and time management. In that respect, thriving in educational trajectory with consistent support from family and friends has positive outcomes for nurturing motivation and navigating students toward their academic goals. In line with this, Van Dinther, Dochy, and Segers (2011) assert that self-efficacy that stems from social cognitive theory highlights a significant variable that affects motivation, learning process, and how students see themselves and their own academic potential. Strong confidence is a fundamental catalyst for motivation in making progress in ODE environment.

Government initiatives have aimed to break down inherent barriers that give rise to educational inequality. Catherine et al. (2025) identify positive effects of technology on student performance and retention. With systematic integration of technology, institutions alongside instructors can develop a more effective distance-learning environment tailored to the diverse learning needs. However, student retention persists as a multi-faceted issue. Disengagement from online instructors and classmates (and therefore minimum participation), poor classroom supervision, and struggles with high pressure of self-regulated learning have commonly contributed to this issue. Perceived academic encouragement from family and peers is therefore vital to cope with adversity in academic trajectories.

External facets such as socio-economic background and the time available for study are also influencing student retention behavior. Acknowledging the socio-economics behind ODE landscape is about addressing the complex web of educational expenses, learning infrastructure (primarily stable Internet connection), and balancing employment and education for working students. UT of Makassar is characterized by stark diversity in the socio-economic background including their self-potential alongside part-time or full-time employment. Understanding the diversity in ODE landscape carries crucial decisions that result in relevant support and solution to student retention, including scholarship programs, low cost Internet assistance, and flexible scheduling. This strategically influences student decision to complete their study as they explore cost-saving options and negotiate flexible work and study hours.

From an academic standpoint, one's ability to navigate independently through learning materials and their preparedness for distance-learning experience makes up their academic success to a great extent and student retention in turn. Academic preparedness influences

how they effectively leverage technological tools and how actively they engage in their own learning process. At UT of Makassar, it is vital to look into the extent to which academic support including online tutoring, webinar tutoring, digital materials, online exams, and academic counseling can help them navigate challenges they encounter during school years. UT of Makassar approaches student retention by looking more specifically at adaptive learning environment.

UT of Makassar constantly highlights the importance of striving for excellence in education across 21 regencies and 3 cities in South Sulawesi. It is therefore critical to enhance student retention as it denotes institutional ability and effectiveness to pave the way for study completion—an essential metric of success for UT of Makassar. The number of students not enrolling for more than three consecutive semesters is substantial. Student adaptability to self-regulated learning is low, and the ability to self-direct their learning trajectory is not consistent. This suggests the complex nature of aspects influencing student retention in social, academic, institutional, motivational, and external realms. At the heart of these enrollment challenges is UT initiative for effective and sustainable strategic plans for student support and conducive learning environment. Smith and Martin (2022) find that inclusivity in learning resources has positive effects on retention. Further, Ohee, Yuniawan, and Perdhana (2019) state that integration, social support, self-efficacy, and psychological stress significantly affect retention. Innovation for which digital transformation thrives allows UT to foster institutional growth, contributing to fulfilling stakeholders' needs with perceived ease of use and flexibility.

This study looks into the effect of social, academic, institutional, motivational, and external factors on student retention at Universitas Terbuka of Makassar. Findings provide guidance to strategic recommendations for student retention according to diverse needs. While UT has long ventured into online service to sustain ODL, its effectiveness for retention remains an under-researched area. Prior studies highlighted significant effects of learning preparedness, independent learning skills, and time management skills on academic success. Another finding addressed the importance and benefits of inclusive learning resources, institutional support, and digital learning ecosystem in the application of MyUT as an integrated system facilitating the entire student service using Single Sign On (SSO).

2 METHODOLOGY

2.1 Respondent

A group of 200 students in semester 7 and 8 at Universitas Terbuka of Makassar is defined as the population of the study, from which samples are selected using simple random sampling to create objective representation. Building off of quantitative approach and Likert-scale questionnaire, the study taps into the effects of social, academic, motivational, institutional, and external factors on student retention. Data analysis draws from multiple regressions to examine direct and indirect effects between variables. Results present comprehensive insights into the broad importance of the factors, the prospective impact on policymaking, and the direction of new improvement in student retention at Universitas Terbuka of Makassar.

3. FINDINGS AND DISCUSSION

3.1 FINDINGS

Result of the simultaneous effect of the independent variable on the dependent variable is shown in Table 1.

Table. 1 Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846 ^a	.715	.707	1.02667

a. Predictors: (Constant), X5, X2, X3, X4, X1

Adjusted R squared of 0,704 indicates that the independent variables simultaneously account for 70% of the variation in the dependent variable.

Table. 2 F Test (Simultaneous)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	466.136	5	93.227	88.447	.000 ^b
	Residual	185.512	176	1.054		
	Total	651.648	181			

a. Dependent Variable: Y

b. Predictors: (Constant), X5, X2, X3, X4, X1

Result of the F Test provides a good fit for the data at a significance 0,000 (< 0,05), demonstrating that the independent variables simultaneously and significantly contribute to explaining the dependent variable.

Table 3. Output Coefficients^a

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.486	.629		.773	.440
	X1	-.170	.083	-.154	-2.045	.042
	X2	.182	.078	.166	2.318	.022
	X3	.071	.075	.068	.944	.347
	X4	.432	.049	.643	8.759	.000
	X5	.167	.063	.174	2.657	.009

a. Dependent Variable: Y

- b. Variable X2 at a significance 0,022 (< 0,05) indicates that academic factors affect Variable Y student retention.
- c. Variable X3 at a significance 0,347 (> 0,05) indicates that institutional factors affect Variable Y student retention.
- d. Variable X4 at a significance 0,000 (< 0,05) indicates that motivational factors affect Variable Y student retention.
- e. Variable X5 at a significance 0,009 (< 0,05) indicates that external factors affect Variable Y student retention.

3.1.1 Analysis of Multiple Regression

$$0,486 - 0,170X1 + 0,182X2 + 0,071X3 + 0,432X4 + 0,167X5$$

- a. The value of constant (a) is positive at 0,486. A positive constant indicates that a unidirectional effect occurs between independent variables and dependent variable. In this specific type of effect, if all independent variables including social factors (X1), academic factors (X2), institutional factors (X3), motivational factors (X4),

and external factors (X5) are zero percent or unchanging, the value of student retention is 0,486.

- b. The regression coefficient for social factors (X1) is -0,170, demonstrating negative effect (opposite direction) between social factors and student retention. As social factors increase by 1%, student retention decreases by 0,038, while holding other variables constant.
- c. The regression coefficient for academic factors (X2) is positive at 0,182, demonstrating unidirectional effect between academic factors and student retention. 1% increase in academic factors accounts for 0,182 increase in student retention, assuming that all other independent variables remain constant.
- d. The regression coefficient for institutional factors (X3) is positive at 0,071, and therefore unidirectional with the dependent variable. 1% increase in institutional factors accounts for 0,071 increase in student retention, with all other independent variables being held constant.
- e. The regression coefficient for motivational factors (X4) is positive at 0,432, and therefore unidirectional with the dependent variable. 1% increase in motivational factors accounts for 0,432 increase in student retention, with all other independent variables being held constant.
- f. The regression coefficient for external factors (X5) is positive at 0,167, and therefore unidirectional with the dependent variable. 1% increase in motivational factors accounts for 0,167 increase in student retention, with all other independent variables being held constant.

3.1.2 Simultaneous Factors Affecting Student Retention at Universitas Terbuka of Makassar

A positive, unidirectional constant at 0,486 demonstrates a statistical notion where two different variables travel in one direction; one increases so does the other. Specifically, when all independent variables—social factors (X1), academic factors (X2), institutional factors (X3), motivational factors (X4), and external factors (X5)—are zero or remain unchanging, the predicted value of student retention is 0,486. The simultaneous correlation coefficient in Table 1 is 0,846, indicating a significant positive correlation between the Xs and student retention. A value in this range typically fits into a very strong relationship; the independent variables simultaneously have a tremendous predictive power to predict the variations in student retention. R^2 (R squared) 0,715 corresponds to a statistical concept where the

independent variables account for 71,5% in the variations in student retention, with the remaining attributed to other variables not controlled in the study. The coefficient subsequently takes on hypothesis testing. Similarly, R^2 0.707 indicates that the Xs account for 70,7% in the variations in student retention. The remaining 29% is unexplained variance—factors not included in the study design.

Delving into the improvement of distance education as well as exploring ways of enhancing student skills in distance learning can help the institution cultivate its overarching quality framework and reputation in ODL landscape. Institutions committed to excellence in quality would look more appealing to student candidates, and thus generate higher enrollment. Learning adaptability is paramount to student success in a self-regulated autonomy-based setting.

The current landscape of Universitas Terbuka of Makassar is characterized by its technology-driven learning system, enhanced academic counseling, and the development of SALUT (inclusive community-based service center) in each region. As the landscape continues to expand, UT of Makassar emphasizes the importance of student success and sustainable engagement in ODE environment through an array of distance-learning skills training including OSMB (new-student orientation), PKBJJ (distance learning courses), WT (workshop for coursework), and KU (Exam Clinic). Key elements of the training relate to specific useful competencies to navigate through ODE environment as students often encounter a wide range of obstacles, including the pressure of self-paced learning, isolation from instructors and peers, and time management difficulty.

Institutions are increasingly embracing distance higher education systems to improve equal ICT-focused education. UT of Makassar as a leading force in ODE landscape in South Sulawesi has gained public trust with a total active student population of 11.529.000 in 2025.1 across 21 regencies and 3 cities.

Owing to technological advancement and stakeholder demands, Universitas Terbuka has transformed into Legal Entity Higher Education Institution (PTN-BH) since October 2022. The ever-changing and ever-growing digital innovation enhances excellence in quality, allowing for ease of use and flexibility. Innovations such as My-UT provides deeper understanding of academic practices and student experiences by facilitating the overall

processes of student services using Single Sign-On (SSO). Integration of this innovation handles the overarching future-oriented student needs with an emphasis on speed, accuracy, efficiency, and effectiveness. Balalle (2024) weighs down on the correlation between online learning, technology, and student engagement as well as giving key insights into the improvement of learning outcomes in a rapidly changing digital landscape. He argues that a culture of innovation provides access to digital information primarily through social networks and virtual environments, ultimately enabling flexible, location-independent learning for all students of Universitas Terbuka.

Educational institutions can cultivate student adaptability to self-regulated learning by extending support and training that promote self-directedness and autonomy strategies. This must include learning skills training programs, academic counseling, and other resources explicitly designed with clear procedures on how students can take control and responsibility for their own learning. Taufik, L. M., and Novianawati, N. (2020) highlight the effectiveness of digital guided note-taking strategies on students' knowledge retention and writing self-efficacy. They claim that online independent learning services are key to developing a distance education ecosystem. They find student support in the development of independent learning skills in a good category.

Digital platform has become central to Universitas Terbuka, facilitating online tutoring that presents course content, discussion forums, and assignment and enabling students to choose when and where to access it. Melinda, V. A., and Ningrum, D. E. A. F. (2020) develop digital dictionary to measure student retention. Interactive learning modules are designed to create an engaging learning environment through simulations, educational games, and interactive training that help students grasp concepts better. Online discussion forums encourage interactions with fellow students and instructors and help enrich learning experiences. Discussions may include queries, responses to course topics, and collaborative work in a project-based assignment. Online tutoring makes it easier for students to break down complex course content and complete an overwhelming assignment, providing them with essential, immediate, and accessible academic support.

The fundamental concern underlying this study is to acknowledge and address the distinct struggles and hardships that students encounter at UT of Makassar. When it comes to

retention, UT of Makassar must cope with student hurdles as retention rate is a measurable benchmark of its success and overall institutional effectiveness in supporting study completion. In distance environment, myriad factors affect the likelihood of student success, including social, academic, motivational, institutional, and external factors. Motivation and student retention are closely associated in terms of how students thrive for maximum academic performance in a challenging learning trajectory. While social factors have a weak effect on academic performance, academic factors strongly affect how students perceive the quality of online educational services (online tutoring) and nurture their academic milestones leading to graduation. They cultivate a pride and a genuine sense of belonging as UT students as well as the overall confidence in navigating the intricate process of distance-learning trajectories. External factors point to the total amount of time dedicated to learning activities and financial security, which significantly enhances student retention. Institutional factors embrace the overarching framework of structured policies that make up educational systems alongside technology support for learning access within the institution.

Self-regulated learning is prerequisite to distance education with a clear set of goals and strategies to achieve them. This is where the present study is relevant and crucial; to provide comprehensive understanding that motivation is the highest predictor variable for student retention at UT of Makassar—appearing at 0,071 of the models examined. By focusing on common student needs and barriers, UT of Makassar has identified and designed more effective support programs. Moesarofah, M. (2021) finds student retention a raising concern among teachers and higher education institutions and argues that at the core of retention is one's ability to resume studies until degree completion. Student retention embodies a combination of academic factors, learning skills, and learning engagement. Similar to the present study, Moesarofah defines motivation as the largest mean on the outcome.

3.1.3 The effect of social factors on student retention at Universitas Terbuka of Makassar

Social variable (X1) is characterized by how students interact with peers, their broader campus community, and the general social environment. The regression coefficient of social variable is -0,170, suggesting a negative effect (opposite direction) on student retention. When social variable increases by 1%, contrastingly student retention tends to decrease by 0,038, while holding all other variables constant.

Social factors encompass the extent to which students engage in organizations, interact in social setting, or develop interpersonal interaction within an online system. Universitas Terbuka emphasizes the importance of independence-centered approach in online learning process. However, while peer support is not identified to have individual direct effect on student retention in the models examined, the simultaneous effect is statistically significant. Social support may affect participation behavior during study group or discussion forum, developing a culture of easy, enjoyable, and flexible learning. However, social isolation is inexorable in online environment resulting from the lack of in-person interactions. In a recent study, Al-Adwan et al. (2024) explain that one's intention to adopt a learning approach is identified by attitudes, social influences, and perceived behavioral control. Additional facets may include the excitement of self-regulated learning, autonomy, and student innovation that may contribute to the aforementioned major factors.

Drawing from the practical implication, the lack of direct effect of social variables is attributable to the disposition that each student approaches learning processes and leads to academic success through individual strategies without group reliance. Student satisfaction has a vital mediating role in the effect of institutional reputation and service quality perceived by students, ultimately empowering students to stay on their academic pathways leading to graduation. Mazzeo, O., Monacis, L. et al. (2025) scrutinize the effect of cognitive engagement, strategic learning plans, and social support on academic success and student satisfaction in online learning landscape.

3.1.4 The effect of academic factors on student retention at Universitas Terbuka of Makassar

The regression coefficient of academic variable (X2) is positive at 0,182, suggesting a unidirectional correlation between independent variable and dependent variable; 1% increase in academic variable will lead to a decrease in student retention by 0,182, assuming that all other independent variables are held constant.

One of the chief predictors of student retention at UT of Makassar is student adaptability to technology-driven learning platforms such as online tutoring, online library, and RBV (virtual library). These platforms help create an active environment in which students stop wasting time and instead use active study by reading and listening to BMP (core learning content). As they delve into virtual libraries, multimedia content, and online databases, they

recognize how to adopt digital competencies and navigate online resources. This provides opportunities to enhance their preparedness to gain deeper understanding of a given subject matter in a constantly-evolving digital environment. Koçdar, S., Hamutoğlu, N. B., Erdoğan, E., and Uçar, H. (2024) contend that the effectiveness of open distance education for students with special educational needs relies on the roles of digital platforms in enhancing their academic pathways.

The success of higher education institutions, as Hakim, I., Wirawan, R., and Fitria, N. (2022) claim it, is subject to its student retention rates, to which student satisfaction becomes profoundly central. Van Dinther, Dochy, and Segers (2011) shed light on self-efficacy as a key part of social cognitive theory that influences motivation, learning process, and confidence to navigate academic achievement. Based on the practical implication, student satisfaction exerts a vital mediating role in the effect of institutional reputation and quality service on student intention to stay on academic pursuit leading to graduation.

3.1.5 The effect of institutional factors on student retention at Universitas Terbuka of Makassar

The regression coefficient of institutional variable (X3) is positive at 0,432, suggesting that an increase by 1% in institutional variable leads to an increase by 0,432 in student retention, assuming that all other independent variables are held constant. ICT-based online environment has become the staple in UT of Makassar, which has been ranked for its high public trust and reputation, reflected in the increasing numbers of students each semester. Harmen, H., Siburian, B., et al. (2024) argue that communication service and infrastructure bring about satisfying learning experiences, with findings indicating positive significant correlation between the two variables. At UT of Makassar, My-UT explores a new possibility to approach student personal page that contains administrative and academic systems that make up the overall learning practices using SSO for multiple services and functionalities. This breakthrough within the management of digital learning ecosystem (DLE) aligns with the tenets of Good Governance.

Institutional factors incorporate the conception of ease of access to administrative practices, including online registration, online library, online course content, online laboratory, and other online platforms. In a recent study, Osman, Ali, Aziz, and Yusoof (2024) find a significant correlation between academic support, learning design, teacher quality, immediate feedback, and student satisfaction, which in turn influences student retention.

These facets constitute the extent of excellence in academic and administrative services, flexibility of curriculum, and student perceptions of the provision and effectiveness in administrative systems.

Hakim, I. and Wirawan, R., et al. (2022) heavily associate the success of higher education institutions with the extent to which retention is addressed and assert that student satisfaction is a key impetus for that retention. They identify a vital mediation in the effect of perception of social values on student retention. The institution, service quality, student satisfaction, student retention, learning process, academic performance, and infrastructure at Universitas Terbuka are found interconnected. This also applies to the quality of teacher or tutor counseling and course content (modules, e-learning platforms) in online environment. Additionally, Harmen, H., Siburian, B., Pitaloka, D., Dongoran, D., and Amelia, B. (2024) claim that effective communication service and infrastructure are rudimentary to enjoyable learning experiences.

Communication service and infrastructure have positive significant effect on student satisfaction. Braxton et al. (2004) give emphasis on the importance of inclusive institutional culture to sustain student retention. Statistics show a positive value, suggesting a unidirectional correlation between independent variable and dependent variable. Variables include internal factors that affect student mental preparedness, self-esteem, motivation to complete studies timely, and a sense of pride of being part of campus community at Universitas Terbuka. Further, Maulana, M. R. (2024) highlights the effectiveness of e-learning modules in enhancing student understanding and motivation. However, he finds rooms for technical improvement and the need for developing additional supports for a comprehensive multi-faceted system to empower student understanding and motivation through interactive components in distance learning environment.

3.1.6 The effect of motivational factors on student retention at Universitas Terbuka of Makassar

The regression coefficient of motivational variable (X4) is positive at 0,071, demonstrating a unidirectional relation between motivation and student retention. This means that when motivation increases by 1%, student retention increases by 0,071, with other independent variable being held constant.

Degrees of intrinsic and extrinsic motivation, self-perception of academic ability, satisfaction of personal learning outcomes are interconnected aspects that lead to student

retention. Bean and Metzner (1985) look at how intrinsic motivation plays a pivotal role in student decision to stay enrolled in higher education. Further, Dyas, M. W., Dewi, A. R., and Anisa, R. (2022) associate student retention with academic performance; extracurricular activities may hinder student retention, and a positive learning environment contributes to academic performance, thereby positively affecting student retention. The most influential factor is the environment where online learning takes place along with motivation and self-efficacy to complete studies in a timely manner. One's pride of being part of the community at Universitas Terbuka is owing to the student autonomy it fosters; students leverage the benefits of mobile phones and laptops that inspire a flexible, location-independent learning mode. Purnama and Winarsih (2025) show that learning motivation and learning environment positively affect academic achievement, particularly among Generation Z who are highly responsive to their surroundings.

Amoozegar, A. (2017) breaks down the factors influencing student satisfaction in his research in Malaysia, including institutional factors (administrative support, technology, and university) and learner characteristics (motivation, learning autonomy, and self-efficacy). These variables draw from the theory of social presence and transactional distance in Malaysia. Understanding student retention not only lies on the degree to which student databases in a system are maintained, but also promoting efforts to ensure students remain motivated, actively engage in learning, and complete their studies.

3.1.7 The effect of external factors on student retention at Universitas Terbuka of Makassar

The regression coefficient of external variable (X5) is positive at 0,167, demonstrating a unidirectional relationship between external factors and student retention. This signifies that when external variable has 1% increase, student retention has 0,167 increase. External factors are typically elements beyond the control of an institution that affect student decision whether to stay in the academic trajectory or leave it. These include family support, occupational responsibility, and economics. The notion of external factors oftentimes is associated with an individual who while pursuing education is holding other responsibilities in work. Yorke and Longden (2004) mention that external hurdles like occupational commitment, insufficient time to study, and financial burden lead to major hardships in keeping up with academic work. In addition to workloads and financial security, lack of study time, family financial struggles, and access to supporting technologies (e.g., Internet

and laptop) are common grounds students leave academic programs. Building off of this conception, each variable is specifically measured to gain understanding of its effect on student retention at UT of Makassar.

Sickler (2013) refers to retention in higher open distance education as an institutional ability to retain students to remain enrolled and to continue their study from acceptance to degree completion. In this sense, student retention becomes a requisite benchmark for higher distance learning institutions and a core metric for academic performance and institutional sustainability such as graduation rates. Enhancing the use of technology for learning carries the importance of distance learning skills training to address student barriers and in turn to improve their engagement in learning. However, while this presents new opportunities for students to access education regardless of time and place, retention rates can be a challenging task, which serves as a key indicator of institutional ability to sustain academic progress.

By acknowledging factors affecting student retention and tapping into proven strategies from other institutions, Universitas Terbuka of Makassar can outline and carry out programs that fit its needs and circumstances. It is therefore crucial to foster academic environment that promotes the growth and success of every student's. Yustika, Subagyo, and Iswati, (2019) clarify that online learning and its face-to-face counterpart should be similar when it comes to effectiveness. Despite its numerous benefits, online learning continues to face considerable challenges, one of which is student retention that needs improving using data-driven approaches.

As hundreds of students fail to complete their studies, UT of Makassar strives to constantly improve online learning by training teachers and facilitators. However, it is important to note that evidence-based data shows that online learning remains an unpopular option. Data further indicates that major concerns over online education arise from the large numbers of inactive students and non re-enrollment.

3.1.8 Student Retention in Higher Distance Education Institution

Fostering student retention in distance education institutions means that they are able to retain and motivate students to keep engaged and enrolled until the completion of their study. Balalle (2024) discusses how online learning, technology, and student engagement are interrelated, and presents guidelines on how to thrive in digital-age learning. UT of Makassar has focused on student retention for fulfilling its institutional duty and

responsibility in providing distance education services. The focus on student retention becomes critical as it directly demonstrates its overall institutional ability and effectiveness in navigating its students to earn a degree.

Students who demonstrate distance learning proficiency are generally more efficient and effective when it comes to grasping course materials. Skilled distance students excel by developing strong time management skills, minimizing distractions, and navigating better focus and self-regulated learning. However, this is dependent on the degree to which they can cope with academic stress as distance environment typically calls for high level of learner autonomy. Boosting motivation and distance learning skills is vital to managing academic stress, improving mental well-being, and developing consistency toward long-term academic goals.

UT of Makassar provides optimal learning experiences not only by presenting a wealth of opportunities for distance learning skills training, but also developing online application called MyUT for students to manage time, set learning strategies, and leverage online resources more effectively. Kara, M. (2020) reveals recent progress in online tutoring in supporting distance education system that includes teaching and learning subsystems, course and program designs, technology infrastructure, and administrative and institutional policies. Further, Fitriati, A., Anggoro, S., Talib, C. A., and Toh, T. L. (2025) claim that self-efficacy nurtures students' optimism due to the confidence in their capacity for completing tasks and solving problems. Perceived enjoyment can boost this confidence, leading to useful and user-friendly learning. Users' confidence serves as the best predictor for their behavior in adopting technology-driven platforms. In addition to perceived usefulness and ease of use, users' technology self-efficacy is important when it comes to successfully navigating digital environment.

Self-regulated learning skills call for conducive learning environment and enjoyable online infrastructure. Guidance and technical support can help students access and leverage BMP (core course content) or modules. RBV (virtual library) and a web page (<http://UniversitasTerbukaKotobee.com>) serve as interactive online resources that effectively support students to access BMP by incorporating online notes. Mohamad, L., and Osman, Z. (2025) discuss organizational culture, attitude, intention and acceptance of innovations and find that organizational culture and attitude strongly affect intention, and that organizational culture strongly affects acceptance. Online learning institutions embrace a culture of innovations to

tackle the ever-changing educational challenges. Decisions in which students may transfer from face-to-face examination to online mode are based on the following; (1) for a live online examination, students may choose online location according to the scheduled time, date and place; and (2) remote proctoring examination may take place in a location desirable for the students using a laptop and supervision camera according to a given schedule.

Academic, motivational, institutional, and external variables have positive effect on student retention—all working to nurture an engaging academic experience within the system at Universitas Terbuka of Makassar. In that respect, the present study lays the importance of flexibility on distance education in terms of time, learning methods, and technologies. These findings may serve as a fundamental insight into academic policymaking that is more adaptive to student needs. A variety of flexible learning methods may incorporate a combination of interactive webinar tutoring (Tuweb) and online tutoring (Tuton) through online discussions. Online assignments can go beyond conventional text-based assignment, ultimately resulting in enhanced student engagement and learning motivation. Mazzeo, O., Monacis, L., and Contini, P. (2025) look at how cognitive engagement, learning strategies, and social support affect academic achievement and student satisfaction within online system. Together, these elements are interconnected and lead to academic success.

Assessment flexibility explores various ways in giving an assignment and its submission. In this sense, students are offered extended completion timelines for an assignment and diverse modes to submit them (video, essay, and online presentation). Flexibility that accommodates diversity ultimately contributes to retention in educational setting. Assessment designs may not only offer flexible submission options but also provide immediate feedback through digital systems. In terms of technology flexibility, students are allowed to learn across multiple devices (laptop or smart phone) and capitalize on user-friendly platforms, which lead to better student retention. This suggests a deeper emphasis on accessibility of digital platforms such as LMS across multiple devices with simple, easy navigation.

4 CONCLUSION

4.1 The present study reveals that institutional factors affect student retention at Universitas Terbuka of Makassar, with motivation factors demonstrating the greatest impact at regression coefficient 0,432, giving emphasis on mental preparedness, self-esteem, and intrinsic motivation to nurture a consistent study leading to timely graduation.

- 4.2 Institutional factors are positive at 0,071, with a focus on efficient administrative services, digital innovations (MyUT and RBV), and technology-driven learning that promotes student engagement.
- 4.3 Academic factors are positive at 0,182, with a focus on online tutoring and webinar tutoring that serve as primary educational services.
- 4.4 External factors are positive at 0,167, which entail family support, economic circumstance, and access to educational technologies. Academic factors (−0,170) and social factors, despite representing a negative value and opposite direction, are still interconnected and thus relevant.

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