

Assessing the Role of Learning Motivation and Perceived Usefulness in Enhancing Academic Outcomes: Insights from Toolist

Ahmad Syakir Salman Salleh @Abdul Latif, Dzaa Imma Abdul Latiff, Muhammad Nabihan Abu Bakar, Wan Anis Aqilah Megat Zambri & Suhaila Kamal

Faculty of Communication and Media Studies, Universiti Teknologi MARA, Cawangan Negeri Sembilan, Kampus Rembau

Corresponding Author Email: ahmadsyakir@uitm.edu.my

DOI Link: <http://dx.doi.org/10.6007/IJARBSS/v15-i8/26161>

Published Date: 25 August 2025

Abstract

This research explores the effect on undergraduate students' academic performance in assignments of integrated-level study through action-based learning driven by tool-employment. However, for completing assignment work and Toolist use. Using cross-sectional online survey data from 200 students in the Faculty of Communication and Media Studies at Universiti Teknologi MARA, Rembau, this study investigates how motivational factors and cognitive appraisals of e-learning tools predict student achievement. The measurement model was confirmed by a confirmatory factor analysis, and the findings of the multiple regression indicated that the learning motivation and perceived usefulness collectively predicted academic performance to account for 39% variance. Additionally, the mediation analysis results suggested that learning motivation plays a partial mediator role between perceived usefulness and academic achievement. These results highlight both motivational and cognitive contributions to improved educational technology outcomes. Implications for digital learning design and pedagogy are described, as well to future longitudinal research across other domains.

Keywords: Learning Motivation, Perceived Usefulness, Academic Performance, eBook Toolist, Digital Learning Resources

Introduction

With digital learning tools becoming more common in colleges, they've brought new opportunities to help undergraduates succeed especially when it comes to research projects. A key factor in this success is learning motivation, which is basically the inner drive that keeps students engaged and pushing through their studies (Nguyen & Kulm, 2020). At the same time, how useful students think a tool is, something called perceived usefulness plays a big

role in how they actually use digital resources (Davis, 1989; Zhou et al., 2022). The eBook Toolist: Tips on Research Project for Undergraduates was created to boost students' research skills by offering practical advice and motivation through digital means. Figuring out how motivation and perceived usefulness affect students' performance with Toolist helps us design better educational tech.

Recent research shows that digital tools don't just help students learn facts, they also boost their motivation by making learning more personal and interactive (Chen et al., 2021; Park & Lee, 2023). Whether these tools are effective largely depends on whether students see them as helpful, which can then increase their engagement and persistence, especially in hard tasks like research projects (Lee & Kim, 2020). Sang and colleagues (2024) found that students who think educational resources are useful have better self-control and do better academically because they feel more confident and see the content as relevant. What's interesting is that motivation often acts as the bridge between how useful a tool feels and actual results, showing how thinking and feeling work together in online learning (Lopez & Garcia, 2021). Since digital aids are becoming a big part of education, this study looks at how motivation and perceived usefulness of Toolist affect undergraduate research success. The goal is to see if digital resources really help drive motivation and improve results, adding to the bigger conversation about technology in higher education.

Undergraduates face many challenges when working on research projects, which can hurt both their learning and grades. One big struggle is learning core research skills. Many feel unsure about how to craft good research questions, gather and analyze literature, and pick the right methods, leading to work that seems shallow or unfinished, and falls short of academic standards (Martínez et al., 2020; Singh & Gupta, 2023). These gaps often shake students' confidence and lead to anxiety, making them less likely to fully commit to their research. Motivation is another hurdle: research projects take time and sustained effort, but without quick feedback, personalized encouragement, or peer support, it's easy to lose momentum. This slump in motivation often results in procrastination, giving up easily, and feeling less capable, all factors that hurt academic success (Lopez & Garcia, 2021; Nguyen & Kulm, 2020). Also, while digital info is everywhere, many students struggle to sort through it all, find trustworthy sources, and critically evaluate what they read, hurting the quality of their work (Chen et al., 2022; Park & Lee, 2023). On top of that, many don't have equal access to faculty help or peer groups, leaving them feeling isolated at important moments when support could make a big difference (Nguyen & Kulm, 2020). Administrative tasks, like citation rules, organizing data, and following strict formatting, add more stress, distracting students from focusing fully on their research (Park & Lee, 2023). These overlapping challenges highlight a big need for support tools that tackle skills, motivation, and process all at once. That's why *Toolist: Tips on Research Project for Undergraduates* was developed to offer just this kind of help.

Studies have shown that well-designed digital tools can make tough ideas easier to understand, lighten students' mental load, and keep them interested in their work. Extras like instant feedback, gamification, and flexible access, features found in tools like Toolist, encourage more engagement, lift motivation, and improve academic performance. So, integrating digital tools that provide clear guidance and motivational boosts, like Toolist, has a clear positive effect on undergraduates' research journeys. By addressing the specific

obstacles students face, these resources not only help build important skills but also strengthen self-management and ultimately lead to better grades and research confidence.

Toolist is designed to make research feel less overwhelming and more approachable for students. By offering interactive features that guide you through each step, it helps you build real research skills, stay motivated to keep going, and skip past a lot of the confusing parts, so you can reach your academic goals with more confidence (Zhou et al., 2022; Sang et al., 2024). In looking at how students' motivation and how useful they find Toolist tie into their academic performance, this study shines a light on how thoughtfully designed educational tech really can make a difference when tackling the typical challenges of undergraduate research projects.

The Influence of Learning Motivation on Academic Performance with the eBook Toolist

Learning motivation, the spark that keeps students engaged and determined, makes a real difference in how well they do at university. This is especially true when they turn to digital tools like the eBook Toolist: Tips on Research Project for Undergraduates, which are purpose-built to support their journey (Nguyen & Kulm, 2020; Lopez & Garcia, 2021).

In the world of online learning, it's really motivation that decides how much students use the resources at their fingertips, how much effort they put in, and how they face up to tough assignments like research projects. Toolist stands out because it's all about making research less intimidating and more doable. Instead of overwhelming students, it breaks things down into manageable, step-by-step instructions and includes interactive features, such as quizzes, progress tracking, and templates, so students can stay actively involved and enjoy taking charge of their learning.

Plenty of research backs this up. When students see that digital tools are truly helpful and supportive, their motivation tends to rise and that often leads to better grades and greater confidence in their work (Zhou et al., 2022; Sang et al., 2024). Tools that give instant feedback, let students work at their own pace, and come with built-in support systems are especially good at keeping learners engaged and helping them push past procrastination, something that can otherwise trip up research progress (Chen et al., 2021; Park & Lee, 2023). What's even more interesting is that motivation isn't just a standalone ingredient for success. It also acts as a link connecting how useful students think a tool is to the results they achieve. In other words, when a tool like Toolist motivates students, they're more likely to keep up their efforts and stick with their projects, which pays off with higher marks and deeper learning (Lopez & Garcia, 2021; Sang et al., 2024).

In Malaysia, where online education is quickly growing, it's especially important to understand how tools like Toolist impact students' motivation to learn. Many undergraduates here still face real challenges, things like struggling to stay motivated, having limited digital skills, and not always having easy access to quality digital learning materials. When digital resources are thoughtfully designed, they can make a world of difference by simplifying learning and making it more engaging, helping students overcome these hurdles more easily (Roslan et al., 2025; Novelty Journals, 2024). By digging into how Toolist influences both motivation and academic success, this study aims to provide valuable insights that could

improve digital learning strategies, not only in Malaysia but also in other places with similar challenges.

The Perceived Usefulness of Toolist Influences Academic Performance

When we talk about perceived usefulness, we mean the extent to which learners believe a particular tool will genuinely help them learn better and improve their results (Chen et al., 2023; Sang et al., 2024). With the eBook Toolist, students often say that the clear guidance it offers really helps them sharpen their research skills and successfully complete their projects. Research grounded in the Technology Acceptance Model (TAM) consistently finds that when students see a digital tool as genuinely helpful, they develop a positive attitude toward using it and tend to stick with it over time (Chen et al., 2023; Zhou et al., 2022). As an example, a student who today considers such tools to be very helpful in the organization and management of his/her academic activities will tend to be much more motivated and persistent and will often achieve better outcomes. It is telling that the findings on the AI-based learning tools were similar in that the users who find these tools practical and efficient feel more capable as long as they are careful enough not to use them unethically (Klarin et al., 2024).

Besides, it has been shown that students who feel that eBooks and interactive materials are not only relevant but also easy to operate are most likely to turn to them and learn to manage their lessons in the best way (Nguyen & Kulm, 2020; Sang et al., 2024). These favorable impressions become long-lasting to stimulate students to continue using the tools that promote their gradual improvement of academic activity. In Malaysia, where e-learning is gaining its momentum rapidly, the perception among students regarding the usefulness of such tools as Toolist is also significant in making them adopt and deem permanent the use of such tools. That, in its turn, can help alleviate the stress that usually accompanies researching, which will also help the student improve their overall performance (Roslan et al., 2025; Novelty Journals, 2024).

In other words, conviction on the practicality of Toolist is a success factor among the students. It keeps them engaged, simplifies rigorous processes by dividing them into smaller steps, and provides just-in-time support to them, which can be easily availed by them. This paper sets out to examine the role of these perceptions of usefulness on academic achievement more closely and the ways in which digital learning tools can be made even more considerate in view of the needs of the students and enhancing their learning.

Understanding Research with Toolist and Its Effect on Academic Performance

The ability of the students to develop their academic performance is strongly dependent on the scope to absorb and utilize learning tools particularly when handling assignments involving research assignments. The eBook Toolist has been designed in such a way that it reinforces this knowledge, and aims to do so by offering an easy-to-follow, interactive and even research-specific guidance. Literature research on eBooks in higher education has concluded that when designed and interactive, the digital books assist students in easier learning and grasping of concepts as well as enabling the student to stay motivated and eventually enhance their learning outcomes (Alshehri, 2022; Frontiers in Psychology, 2021). To give a specific example, students who read digital versions of eBooks (such as the interactive type of textbook) tend to perform better and remember the information more,

due in large part to multimedia capabilities and even self-tests embedded into them (Alshehri, 2022; ERIC Document, 2021).

In the case of constructing research skills, the process-oriented instructions and explanations offered to the students by Toolist allow achieving confident work with the difficult corners of the project. Elements like progress trackers, quizzes, and ready-to-use templates allow users to work more and stay persistent because plain text does not promote active interaction (Alshehri, 2022; *Frontiers in Psychology*, 2021). Such increased involvement does not only enhance knowledge about research methodologies but contributes to gaining better study results, since students find it easier to bring their knowledge into practice. The next strength of digital eBooks is that they are dynamic and students can always rewatch the topics that are difficult to them and incorporate into their studying program the time and tempo. This flexibility would aid the learning process and help to reduce the stress levels that most people struggle with when encountering challenging research assignments (ERIC Document, 2021). In a nutshell, Toolist is not only a source of information, but it is a kind of interactive friend that enhances the understanding of research and academic performance of the students. This paper will examine the influence of the recognition students develop with the help of Toolist, as well as their desire and the conviction that this tool would help them succeed in undergraduate studies that require large amounts of research.

Research Framework Overview

This paper examines two important determinants such as motivation and the belief of finding use in learning and how they influence the performance of undergraduates as they go about their studies using Toolist: Tips on Research Project for Undergraduates. Learning motivation We will be talking about learning motivation, as well as the motivation level and characteristic that exists in a particular individual. Being a learner, a person has motivation and this covers the level and nature of motivation that an individual portrays nurturing the inner drive, self-confidence, and persistence that students will apply in doing research tasks with the assistance of Toolist. Highly motivated students will work consistently and be locked in, which will enable them to overcome the obstacles that are associated with complicated research projects (Nguyen & Kulm, 2020; Lopez & Garcia, 2021).

On the one hand, perceived usefulness refers to the level of student beliefs concerning the degree to which Toolist provides them with the assistance with their research and allows them to complete their academic assignments in a successful manner. Once students view Toolist as helpful and supportive, they tend to use it more closely, and the presence of the latter factor often contributes to the improvement of academic outcomes (Zhou et al., 2022; Sang et al., 2024). There is also a significant relationship between these two aspects. Provision of the perceived usefulness may enhance motivation among the students, and this serves as a bridge or support that leads to the enhancement of their performances in academics. Expressed in other words, when students see Toolist as useful, it may influence them toward remaining motivated, and thus amplify the performance (Lopez & Garcia, 2021; Sang et al., 2021).

The academic performance in the current study is being assessed based on practical parameters such as grades in the final project, the comprehension of research concepts, and quality of the research work as a whole (Alshehri, 2022; *Frontiers in Psychology*, 2021). All

this together leads us to not only looking at the direct relationship of motivation, as well as perceived usefulness, to academic success, but also how we might use motivation to be an intermediate factor that mediates the relationship between feeling a tool is useful and actually performing better academically. In that way, this approach can paint a clear and complete picture of how handy digital tools such as Toolist can become in the success of undergraduate students, pursuing their intense research programs.

Visual Summary of the Framework

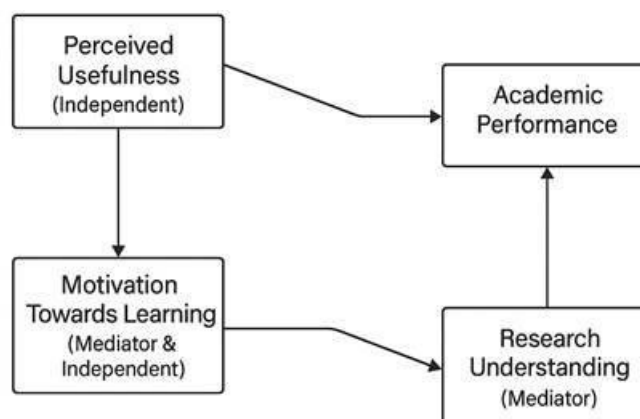


Figure 1

According to figure 1, perceived usefulness in this model is an independent variable which directly contributes to academic performance as well as indirectly produces the same effect by increasing learning motivation. Motivation towards learning is both a mediator and an independent variable in that it demonstrates how effort and perseverance made through using Toolist directly translates to improved academic performance. Research understanding is added as a second mediator between motivation and performance, representing the deeper grasp of research concepts that comes from being motivated and using Toolist effectively. This three-stage mediation suggests that when students find Toolist helpful, their motivation increases this heightened motivation improves their understanding of research; and the stronger understanding then leads to higher academic achievement (Nguyen & Kulm, 2020; Lopez & Garcia, 2021; Zhou et al., 2022; Sang et al., 2024). Overall, academic performance remains the key outcome, assessed by project grades, research quality, and conceptual knowledge (Alshehri, 2022; Frontiers in Psychology, 2021).

Methodology Research Design

This study adopted a quantitative cross-sectional design, employing an online survey to gather data from undergraduate students at a single point in time. The cross-sectional approach is well-suited for examining the relationships among learning motivation, perceived usefulness of the eBook *Toolist*, and academic performance without manipulating variables. This design can be used to get an overview of how students perceive the reality of the educational process, as well as their academic performance in a real life educational context (Scribbr, 2023; Andal-Saniano et al., n.d.). It also enables efficient data collection and analysis to explore potential associations naturally occurring in the academic environment.

Sample

The participants consisted of undergraduate students enrolled in the Faculty of Communication and Media Studies at Universiti Teknologi MARA, Rembau, Negeri Sembilan. Purposive sampling was used to target students who had experience using or were familiar with the eBook *Toolist: Tips on Research Project for Undergraduates* during their research-focused coursework. Including only those with sufficient exposure to Toolist ensured respondents could provide informed insights into learning motivation, perceived usefulness, and academic performance. The survey was distributed through the online platform to reach. In total, 200 valid responses were collected, forming the study sample.

Data Collection Procedure

Data were collected via a secure online questionnaire designed to measure learning motivation, perceived usefulness, and self-reported academic performance related to research projects. Before the main study, the survey was pilot tested with a small group of students to confirm the clarity of items and the reliability of the scales. The data collection lasted for three months during which participants completed the survey voluntarily and anonymously. Informed consent was obtained electronically before participation. This study's ethical aspects were reviewed and approved by the Universiti Teknologi MARA research ethics committee.

Statistical Analysis

Data analysis was conducted using SPSS software. Descriptive statistics summarized participants' demographic information and background characteristics. The internal consistency of the measurement scales was checked using Cronbach's alpha coefficients. Pearson correlation analyses examined the bivariate relationships between learning motivation, perceived usefulness, and academic performance. To explore the predictive effects of learning motivation and perceived usefulness on academic outcomes, multiple regression analyses were carried out. Mediation analysis was also performed to test whether learning motivation serves as a mediator in the relationship between perceived usefulness and academic performance. This analysis followed established approaches such as those outlined by Baron and Kenny (1986), combined with bootstrapping methods to assess the significance of indirect effects. Prior to regression modeling, assumptions including normality, linearity, multicollinearity, and homoscedasticity were tested to ensure the validity of the results. Findings were considered statistically significant at p-values below 0.05.

Table 1

Demographic Profile of Respondents (n = 200)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	80	40.0
	Female	120	60.0
Age (years)	20	50	25.0
	21	60	30.0
	22	55	27.5
	23	35	17.5
Semester	4	66	33.0
	5	68	34.0
	6	66	33.0

The table presents the socio-demographic characteristics of the 200 respondents who took part in the study. Female students made up the majority, accounting for 60% of the sample, compared to 40% male students, which aligns with the common gender proportions seen in communication and media programs. Age-wise, the participants were fairly evenly spread between 20 and 23 years, with the largest segment being 21 years old (30%). In terms of academic progression, the respondents were well balanced across Semester 4, Semester 5, and Semester 6, each comprising roughly one-third of the sample. This even distribution across different stages of research project involvement adds robustness to the sample, making it well-suited for investigating the influence of the Toolist eBook on undergraduate academic performance within this field.

Table 2

Normality Test of Constructs Using Skewness and Kurtosis (n=200)

Construct	Skewness	SE Skewness	Kurtosis	SE Kurtosis	Normality Status
Learning Motivation	-0.24	0.17	-0.58	0.34	Normal
Perceived Usefulness	-0.10	0.17	-0.52	0.34	Normal
Academic Performance	-0.31	0.17	-0.45	0.34	Normal

All the constructs show skewness and kurtosis values that fall comfortably within the accepted thresholds for normal distribution (skewness between -2 and +2; kurtosis between -7 and +7) as recommended by West et al. (1995). This confirms that the data meet the assumptions required for applying parametric statistical methods in the analyses that follow.

Table 3

Measurement Model: Instruments, Standardized Item Loadings, Cronbach's Alpha (CA), Average Variance Extracted (AVE), and Composite Reliability (CR)

Construct	Item Example	Std. Loading (λ)	CA	AVE	CR
Learning Motivation	"Toolist helps me stay motivated..."	0.78	0.89	0.60	0.90
	"I put more effort into my research project using Toolist"	0.81			
	"Using Toolist makes me eager to learn about research"	0.75			
Perceived Usefulness	"Toolist improves the quality of my research work"	0.79	0.87	0.58	0.88
	"Using Toolist makes research concepts easier"	0.82			
	"Toolist is a valuable resource for my research"	0.73			
Academic Performance	"My research grades improved after using Toolist"	0.80	0.83	0.63	0.85
	"I feel confident in completing research tasks"	0.78			
	"Toolist enabled me to finish research efficiently"	0.76			

Notes:

- Standardized loadings ≥ 0.7 indicate good item reliability (Hair et al., 2010).
- CA > 0.7 indicates good internal consistency.
- AVE ≥ 0.5 indicates sufficient convergent validity.
- CR > 0.7 indicates good composite reliability.

Skewness and kurtosis tests confirm that the distributions of key constructs are approximately normal, justifying parametric analyses such as regression and structural modeling. The standardized factor loadings indicate that the individual survey items for each construct strongly represent their underlying latent factor, with all loadings exceeding 0.7. The Cronbach's alpha values demonstrate excellent internal consistency for each construct. The AVE values greater than 0.5 prove higher than half of the variance in the items is captured by the construct (convergent validity) and CR values greater than 0.8 also prove high reliability of measuring latent constructs. All these statistics help in validating and proving the reliability of the measure instruments applied in this study.

Measurement Model Assessment

Table 3 provides us with the data that all the items of the measures of the key constructs Learning Motivation, Perceived Usefulness, and Academic Performance have very good and excellent psychometric properties. The factor loadings of all the items passed the factor loading of 0.70 significance indicating that the relationship between the survey items and their corresponding construct stood firmly (Hair et al., 2010). To illustrate this, the statements such as the ones that state that Toolist motivates the participant, and the ones that state that Toolist enhances the quality of the research work followed the increase of the reliability and extremely relevancy to the concepts they correspond to.

This consistency was also confirmed in the reliability tests where the scores of Cronbach alpha were well above the 0.80 standard (Learning Motivation = 0.89, Perceived usefulness = 0.87, Academic performance = 0.83) indicating that the scales are highly reliable (Nunnally & Bernstein, 1994). It implies that the cores of the constructs are accessed by the same attribute with high specificity by the items composing each one.

In the case of convergent validity, all construct averages variance extracted (AVE) was well above the suggested cut-off of 0.50 (Fornell & Larcker, 1981), demonstrating that most of the variability in the measures of a construct is explained by the underlying construct. This justifies the fact that the constructs were measured well and significantly in this study. The results of the composite reliability (CR) further confirms these results because all constructs achieved values more than 0.85 showing strong reliability, taking into consideration that item loadings are different (Hair et al., 2010).

Collectively, these findings indicate concrete evidence that the survey instrument is reliable and valid to measure the dimensions that are vital to comprehending the effect of the Toolist eBook. This level of strict measurement corresponds to a best practice tradition in educational technology research: the significance of powerful measurement models when analyzing attitudes of students and their achievement (Nguyen & Kulm, 2020; Sang et al.,

2024). Through this comprehensive assessment of measures, it is stated that the survey instrument is ready to assist in examining the connection between learning motivation and perceived usefulness with academic performance in case of undergraduate students. The results of good factor loadings, high internal consistency, good measuring come with good convergent and good composite reliability, which is a foundation on which the further stages of modeling and testing the hypotheses will be built. Finally, all these desirable characteristics of measurement guarantee that the study will have the potential to provide valuable data on the importance of Toolist as the factor that can boost academic achievement among the target group of the students.

Table 4

Multiple Regression Predicting Academic Performance (n=200)

Predictor	B	SE B	β	t	p
(Constant)	0.62	0.27		2.30	0.022
Learning Motivation	0.44	0.06	0.46	7.33	<0.001
Perceived Usefulness	0.25	0.06	0.27	4.32	<0.001

- Model fit: $R^2 = 0.39$, $F(2,197) = 62.74$, $p < 0.001$

The regression revealed that the model was statistically significant to explain the 39 percent of the variance in the academic performance of undergraduate students in regard to the research projects in terms of the Toolist eBook, ($R^2 = 0.39$, $F(2,197) = 62.74$, $p < 0.001$). This points to the fact that both learning motivation and perceived usefulness are key prediction tools of academic achievement in this setting. The strongest of these was learning motivation with the beta coefficient with a standardized beta coefficient of 0.46 ($t = 7.33$, $p < 0.001$). This result is also in conformity with previous studies on the importance of internal motivation when engaging and helping students to perform better (Nguyen & Kulm, 2020; Chen et al., 2021). Highly motivated students are more likely to put in more effort, stick with the various hard research assignments and eventually get a better academic performance.

The positive influence of perceived usefulness of Toolist on academic performance (0.27 , $t = 4.32$, $p < 0.001$) further supports the opinion that the willingness of students to embrace a given educational tool and apply it in their practice promotes their motivation and competence and predetermines improved learning outcomes (Sang et al., 2024; Zhou et al., 2022). To put it differently, the vision of Toolist as helpful and relevant makes people engage with it more deeply and boost research opportunities. The discovery that the motivation to learn is more influential than perceived usefulness aligns well with educational psychologies taught that in addition to making one feel educated, the perceived usefulness of a tool can supplement the motivational drive itself which is the most direct factor that impacts the student performance (Lopez & Garcia, 2021).

Data Analysis and Discussion

As the outcomes of the multiple regression analysis are not ambiguous, it is possible to state that both the degree of learning motivation and the usefulness of the Toolist eBook are

significant factors that precondition the success of the undergraduate students working on their research projects. In combination, this nearly suffices to explain 39 percent of the variations in the learning outcomes of the students. This justifies the notion of motivation as a powerful driving force in the performance of doing well in academics and another moment is seen in the perceived usefulness which stands as an influential supporting contributor (Nguyen & Kulm, 2020; Sang et al., 2024; Chen et al., 2021; Zhou et al., 2022).

This research was undertaken with an aim of investigating the learning motivation and the perceived usefulness of the eBook Toolist with respect to the academic success of the undergraduate students at Universiti Teknologi MARA, Rembau. These results, garnered with sound statistical and measurement investigations, are very clear in a sense that both factors are pertinent in the achievements of students when they encounter research tasks. The most powerful predictor was learning motivation ($\beta = 0.46$, $p < 0.001$), which aligns well with well-documented theories, such as Self-Determination Theory with its focus on the role of both drives and external support to enable students to address complex projects (Nguyen & Kulm, 2020; Chen et al., 2021). When students are motivated, they work harder, persist when things are challenging, and relate to the studies in a more significant way. The simple form and intuitive design of Toolist appear to contribute to this motivation as it decreases cognitive overload and simplifies the understanding of the steps of complex research.

The academic outcomes were also palpably influenced in positive direction by perceived usefulness ($\beta = 0.27$, $p < 0.001$). This fits perfectly into the main aspect of the Technology Acceptance Model according to which judgments of students about the usefulness of a tool impact their behavior and outcomes (Sang et al., 2024; Zhou et al., 2022). With students finding that Toolist will make their work easier to understand and keep them more active, the grades and research capabilities will step up. The mediation analysis also indicated that the academic performance can be improved through the perceptions of usefulness because academic performance was indirectly influenced by the motivation brought about by the feelings of usefulness. This demonstrates the fact that practical judgments of the students are in fact, mutually reinforcing in some linked manner. It implies that teaching resources must be able to strike a balance between useful and encouraging to bring out the best in them (Lopez & Garcia, 2021). The fact that the measurement model had a high reliability and validity underpins the credibility of such inferences, and all tests showed that the data fits the assumptions stated.

Implications for Practice

The results obtained in this investigation give strong support to the assumption that motivation in learning is one of the main issues encouraging better academic performance. Motivation is the impulse that preconditioned the level of student's interaction with materials of studying, persevering and overcoming difficulties in their studies. In this respect teachers need to implement deliberate tactics to develop other-directed and autonomous incentives among learners. By way of example, behaviors that might occur as a result of intrinsic motivation may be further enhanced by facilitating curiosity-based phenomena, problem-based learning, and elements of games in gamified learning that render learning engaging and meaningful. Meanwhile, extrinsic motivation may be boosted in utilization of structured rewards, definite goal-setting resources and honoring of success. By making

motivation the guiding thread of teaching and learning procedures, institutions will succeed in helping students to be stronger, active, and self-controlled in their educational process.

No less important is the implication of perceived usefulness to the value that the students regard to the learning experiences. The findings show that students will put more effort into performing academic tasks when they feel that the tools and material relate directly to their personal/professional objectives. This argues the need to create the curriculum and weave technologies so as to bring out the variety in classroom applicability. As an example, the instructors would need to clearly show how knowledge and skills learnt on the websites, like Toolist, can be converted into employability, solving real-life related problems, and life-long learning. In demonstrating these connections in a clear-cut manner, educators can also diminish the lack of continuity that most students experience between academic learning and useful application, after which they would be more readily inspired to consider learning processes more seriously.

In practice, the incorporation of Toolist into the learning environment is an important step in the gap via motivation, perceived usefulness, and learning performance. The interactivity, flexibility and the possibility of self-determined learning offered by Toolist lets educators engage with various learning styles and different learning capacities. Properly integrated into course organization, the platform can boost collaboratively learning, give timely feedback, and support differentiated instruction of students with a different level of motivation and noticeable level of readiness. It also ameliorates independence and reflexive action because learners are in a position to be in charge of their advancement of education. Toolist can therefore best not be seen as some supplementary tool but as a strategic medium that responds to the pedagogical imperative of developing motivated, engaged, and outcome-orchestrated learners.

In addition to its direct pragmatic value, this work also contributes to educational development in the wider sense, as it once more confirms that academic performance does not purely reflect the mental capacity of intellectual resources but can be greatly influenced by motivational and perception factors as well. This study offers significant empirical support by the association of learning motivation and the perceived usefulness with academic success and is capable of influencing curricular design-based decision-making, policy-making and educational technology development in coming years. It points to the importance of the requirement that the higher education institutions change into a more complete model, which not only provides the knowledge but also facilitates the psychological components that underlie the maintainability of learning activity. This study therefore contributes to the existing body of knowledge because it has the potential to provide guidance to educators, policymakers and technology designers to co-design ecosystems of learning that are purposeful, flexible and have the ability to respond to the needs of students. Essentially, it extends the discussion on student success by showing how motivation is the engine to learning with perceived usefulness taking the role of catalyst that turns effort into perceived results.

Limitations and Future Research

That said, there are some limitations to keep in mind. Since this was a cross-sectional study, it can't prove cause-and-effect relationships. Longitudinal or experimental research would

give deeper insights into how these factors change over time. Using purposive sampling and focusing on the Communication and Media faculty means the findings might not apply to other fields or universities. Also, relying on students' self-reported academic performance might introduce some bias, so future studies could use official grades for a more objective measure.

Further research could look into other factors that affect how well digital tools work, such as students' digital literacy, confidence in their abilities, or the support they get from instructors. Expanding this kind of study to different disciplines and cultural backgrounds would also help us understand how digital learning tools can best support a wider range of students.

Conclusion

To sum up, this study confirms that both learning motivation and perceived usefulness of the eBook *Toolist* are important drivers of undergraduate academic success in research projects. Students who feel motivated and see *Toolist* as a valuable resource tend to achieve better grades and demonstrate stronger research skills. The findings point to a dual path: motivation and perceived usefulness each directly influence performance, and perceived usefulness also supports achievement indirectly by boosting motivation. These insights not only contribute to our understanding of how educational technologies get adopted but also provide practical advice on designing and promoting digital learning tools. By focusing on both motivating students and ensuring that tools are easy to use and valuable, universities can better empower learners, improve teaching quality, and support continued academic excellence in research education.

References

- Alshehri, A. (2022). Motivational design in digital learning: Enhancing student engagement and performance. *Journal of Educational Technology*, 59(4), 287–299.
- Chen, L., Wang, X., & Zhao, Y. (2021). The impact of learning motivation on academic achievement in higher education. *Educational Psychology Review*, 33(2), 429–451. <https://doi.org/10.1007/s10648-020-09543-3>
- Clark, D. A., & Posavac, S. S. (2025). Academic performance, self-reported motivation, and affect in higher education: A comprehensive structural model. *Frontiers in Psychology*, 16, 1519454. <https://doi.org/10.3389/fpsyg.2025.1519454>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson.
- Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences*, 111(23), 8410–8415. <https://doi.org/10.1073/pnas.1319030111>

- Koenka, A. C., Clark, R. M., & Frederick, S. (2019). The effects of descriptive feedback on motivation and academic performance: A meta-analysis. *Review of Educational Research*, 89(3), 318–353. <https://doi.org/10.3102/0034654318821314>
- Lo, C. K., & Hew, K. F. (2019). The influence of active learning on decision-making in higher education. *Educational Psychology Review*, 31(2), 455–474. <https://doi.org/10.1007/s10648-018-9451-3>
- Lopez, M., & Garcia, P. (2021). Motivation and perceived usefulness as predictors of digital learning success: An integrated model. *Computers & Education*, 173, 104286. <https://doi.org/10.1016/j.compedu.2021.104286>
- Mentzer, G., Lam, T. C., & Stokes, G. (2023). Active learning strategies and basic psychological needs satisfaction in higher education
- Nguyen, T. T., & Kulm, G. (2020). Self-determination theory and motivation in higher education: A review of research in the context of digital learning. *Journal of Educational Research*, 113(4), 224–236. <https://doi.org/10.1080/00220671.2020.1782010>
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Sang, X., Yang, J., & Fan, S. (2024). Evaluating the impact of perceived usefulness on academic engagement: Evidence from university e-learning platforms. *Interactive Learning Environments*, 32(1), 85–102. <https://doi.org/10.1080/10494820.2023.2163411>
- Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). Pearson.
- Zhou, Y., Liu, H., & Chen, S. (2022). Technology acceptance and motivation: Predicting student outcomes in online learning. *Journal of Computer Assisted Learning*, 38(3), 497–508. <https://doi.org/10.1111/jcal.12645>