

# Bite-Sized Learning on TikTok: Exploring the Platform's Educational Value within the Framework of TAM (Technology Acceptance Theory)

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**How to cite this paper:** Jai Lamimi, I., Alaoui, S. M., & Ouelfatmi, M. (2024). Bite-Sized Learning on TikTok: Exploring the Platform's Educational Value within the Framework of TAM (Technology Acceptance Theory). *Open Journal of Social Sciences*, 12, 228-245.

<https://doi.org/10.4236/jss.2024.124015>

**Received:** March 20, 2024

**Accepted:** April 19, 2024

**Published:** April 22, 2024

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## Abstract

Recent research has identified social media as a valuable pedagogical tool for bridging the gap between formal and informal learning. However, because TikTok is a new platform, the literature on its potential as a knowledge source is limited. In this study, we will attempt to investigate the educational value of TikTok and its potential for microlearning. Today, TikTok has become underrepresented in the education and social networking service (SNS) literature as a new emerging platform. Although it is primarily a source of entertainment, studies indicate that the platform also contains educational videos. We present an educational innovation in which TikTok, a social media platform based on creating and sharing 15-second to 3-minute videos that witnessed a significant breakthrough during the COVID-19 pandemic, is used as an educational tool. A quantitative methodology was used, utilizing an online questionnaire to collect responses from 153 master students from five different fields in the English department, of the Faculty of Letters and Human Sciences in Morocco, to unravel their perceptions of TikTok as an educational tool and assess the platform's usefulness for enhancing their learning performance using the TAM model (Technology Acceptance Theory). The findings of the study revealed that perceived usefulness, perceived ease of use, attitudes, and content richness significantly and positively influence behavioral intentions to use TikTok as a learning tool, particularly for providing short, bite-sized educational content.

## Keywords

Educational Content, Microlearning, TikTok, Perceived Usefulness, Perceived Ease of Use, Attitudes, Content Richness, Behavioral Intentions to Use

## 1. Introduction

The global shift to e-learning after the COVID-19 pandemic has led to the integration of social media into education. Social media platforms like Twitter, Instagram, and Snapchat, which gained popularity in the last decade, are now part of this transformation. TikTok, emerging as the most widely used platform in 2020 with over 800 million users, particularly among Generation Z, offers not just entertainment but also serves as a platform for creating educational content across various subjects. Despite its role in microlearning, TikTok has received limited recognition as an educational tool. This study aims to examine the educational value of TikTok, particularly in the context of microlearning, and evaluate its perceived potential as a learning tool among master's students in the English department of the faculty of letters and human sciences at a Moroccan university. Grounded in the Technology Acceptance Model (TAM) (Davis, 1989), the research explores the influence of perceived usefulness, perceived ease of use, attitudes, and content richness on master's students' behavioral intentions to utilize TikTok for delivering short, educational content. The study will employ a questionnaire-based approach to gather insights into master's students' perceptions and behaviors regarding TikTok as a learning tool. By focusing on this specific demographic and context, the study aims to contribute to the broader understanding of TikTok's role in facilitating microlearning experiences among higher education students. The research questions are as follows:

- 1) To what extent do master students perceive TikTok as a valuable tool for educational content delivery?
- 2) How do perceived usefulness, perceived ease of use, attitudes, and content richness collectively influence master students' behavioral intentions to use TikTok for delivering short, educational content?

## 2. Literature Review

### 2.1. The Educational Potential of TikTok

There are some features that make the TikTok application a potential educational tool, the most prominent one is the fact that TikTok videos last from 15 seconds up to 3 minutes. Short TikTok videos are shifting the way skills are taught among users by allowing collaborative learning through visually engaging materials. The brevity of TikTok videos allows for succinct and enduring learning. According to Mayer (2002), the segmentation of instructional knowledge reduces the cognitive load and helps to internalize information better. This is associated with the fact that attention declines over time particularly if information is consumed uninterrupted. Similarly, Hattie and Yates (2013) posited that the internalization of information is more effective if knowledge is distributed across several short sessions. This is why the TikTok application can be an effective educational tool, given its design of microlearning content, involving miniaturization of learning. Thus, the feature of short educational videos on TikTok can be suitable to fulfill learning objectives and facilitate the absorbance

of information more effectively. Moreover, TikTok's success as an educational app lies in Mayer's (2002) multimedia learning principle, emphasizing the effectiveness of combining words and images. The app encourages diverse content creation, integrating images, videos, animations, voiceovers, songs, and sound effects. Reflecting Mayer's principles, TikTok aligns with the spatial contiguity principle, where text is near visual content, and the temporal continuity principle, advocating simultaneous delivery of words and visuals for deep internalization and long-term memory stimulation.

Providing digestible small learning units, the TikTok platform has been proven by many previous researches that it can have an informative effect as another driver behind user behaviors. Yélamos-Guerra et al. (2022) posit that the TikTok app is a motivating source for students in higher education and promotes comprehension and active learning of the subject, thereby enhancing comprehension in a stimulating and motivating manner. Xiuwen and Razali (2021) have concluded that Web 0.2 technology (e.g. TikTok) has a foothold in the educational context particularly for its use in improving English communication competence. However, Hu and Du (2022) have reported, in their exploratory study on TikTok as a mobile-assisted English language tool, TikTok, which was used to complement classroom-based instruction, has no significant impact on language learning. Another study on the incorporation of TikTok in higher education by Escamilla-Fajardo et al. (2021) suggests that the TikTok platform exerts a profound improvement in students' skills and creativity in sports science, thereby it has the potential to be educationally beneficial. Some researchers have reported that TikTok is a potent learning tool in medical education (Compet et al., 2020). TikTok can provide microlearning experiences in the programming field (Garcia et al., 2021). This study asserts that this platform has informative videos for programming learners. Notably, TikTok's recent commitment to investing in education represents a significant advancement. Hayes et al. (2020) confirmed in their study that TikTok contributes to the improvement of students' engagement with chemistry and science as it is deemed to make chemistry fun and more engaging. The video-based content on this platform has proven to be a potent learning tool, as exemplified by YouTube and various other platforms, effectively engaging the app's predominantly young user base while still offering valuable opportunities for others to utilize it (Lunden, 2020). The prominence of the hashtag #LearnOnTikTok suggests that TikTok has played a role in popularizing online education. These observations indicate that TikTok has the potential to be a valuable application for students to acquire new knowledge in their lives, particularly within the realm of online education. Therefore, TikTok not only serves as a platform for entertainment but also presents an avenue for learning and personal growth.

## **2.2. Research Hypotheses and Conceptual Model**

### **2.2.1. Technology Acceptance Model**

The technology acceptance model (TAM) (Davis, 1989) suggests that two main

factors determine the acceptance of a new technology by potential users. The perceived ease of use and perceived usefulness are critical in determining users' attitudes or beliefs about the information system. They can be characterized by the extent to which users believe the system is simple and can improve their performance (Davis, 1989). The Technology Acceptance Model (TAM) by Venkatesh et al. (2003) focuses on how users' attitudes and intentions are shaped by perceived ease of use and perceived usefulness. Supporting this, Rauniar et al. (2014) and Tan & Chung (2005) underscore user-friendly technology's positive impact on efficiency and intention to use such platforms.

### 2.2.2. Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

Davis (1989) defined Perceived usefulness (PU), as the individual's belief that utilizing a technology, like TikTok in this study, enhances performance. This widely recognized concept emphasizes perceived utility's crucial role in influencing users' technology adoption. (Castañeda et al., 2007) assert that most individuals are inclined to adopt a technology when they believe it serves a practical purpose and aids them in accomplishing their goals. Perceived ease of use (PEOU) was defined as the individual's belief in the minimal effort required to use a specific system. Supported by Abdullah et al. (2016), this definition aligns with the broader literature. (PEOU), as it pertains to this study, is the idea that using the TikTok app requires no effort. Numerous studies emphasize PEOU's role in influencing people's inclination toward social media usage. However, Elkaseh et al. (2016), found its impact on social media intention to be 50% less than (PU). Also, many investigations have recognized the positive correlation between (PEOU) and (PU). Therefore, the following hypothesis was formed:

**H1:** Perceived ease of use positively influences the Perceived Usefulness of the app as a learning tool.

### 2.2.3. Behavioral Intentions (BIU) and Attitudes (ATT)

Attitudes (ATT) refer to an individual's positive or negative feelings toward a behavior, while intention refers to the individual's perceived likelihood of using the system. Several models concentrating on acceptance have investigated the precursors of Behavioral Intention to Use, (BIU) with Perceived Usefulness (PU) being extensively researched and largely accepted as a common element along with Perceived Ease of Use (PEOU) (Deng & Yu, 2023). Both (ATT) and (BIU) are influenced by (PU) and (PEOU). (PEOU) has a direct and indirect impact on (BIU) via (PU) and (ATT). In turn, both (PEOU) and (PU) have an immediate impact on (ATT), while (BIU) is directly influenced by (ATT). Therefore, the following hypotheses were determined:

**H2:** Perceived usefulness has a positive impact on users' attitudes toward the acceptance of TikTok as a learning tool.

**H3:** Perceived ease of use has a positive impact on users' attitudes toward the acceptance of TikTok as a learning tool.

**H4:** The perceived usefulness of TikTok positively influences users' behavioral

intention to use the app as a learning tool.

**H5:** Perceived ease of use positively influences behavioral intention to use the app as a learning tool.

**H6:** Attitudes towards the use of TikTok positively influence behavioral intentions to use the app as a learning tool.

#### **2.2.4. Content Richness (CR)**

Content richness, (CR) integrated by Lee & Lehto (2013) into TAM, underscores its influence on technology acceptance. Lee & Lehto (2013) suggests that technology is more likely to be accepted when its content is rich. Key elements of content richness, including relevance, sufficiency, and timeliness (Jung et al., 2009, as cited in Lee & Lehto, 2013), assess the usefulness, adequacy, and up-to-date nature of shared information. In essence, higher content richness corresponds to increased usefulness and, consequently, greater positive attitudes and intentions to use the technology.

**H7:** Content richness of TikTok positively influences users' perceived usefulness of the app in learning.

**H8:** Content Richness of TikTok positively influences user's attitudes.

**H9:** Content Richness of TikTok positively influences users' behavioral intentions.

#### **2.2.5. The Mediating Role of Attitudes and Perceived Usefulness**

We further propose that Attitudes (ATT) will serve as a mediator in the connections between Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Content Richness (CR) with Behavioral Intentions to Use (BIU). Students who find TikTok useful, user-friendly, and rich in content are likely to cultivate positive attitudes toward its educational utility, consequently fostering the intention to use the app for educational purposes. Additionally, both (ATT) and (PU) will act as mediators in the link between (PEOU) and (BIU). Furthermore, these mediators, (ATT), and, (PU) will play a mediating role in the association between (CR) and (BIU) (Figure 1).

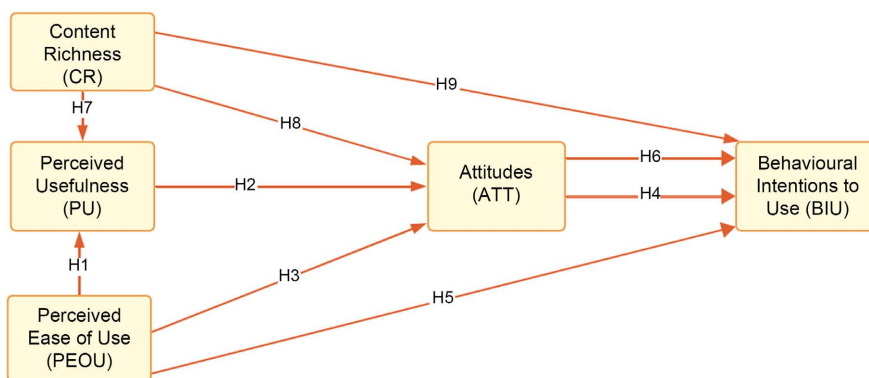
**H10:** Attitudes will mediate the relationship of Behavioral Intentions with Perceived Usefulness, Perceived Ease of Use, and Content Richness.

**H11:** Attitudes and Perceived Usefulness will mediate the relationship of Perceived Ease with Behavioral Intentions to Use.

**H11:** Attitudes and Perceived Usefulness will mediate the relationship of Content Richness with Behavioral Intentions to Use.

### **3. Method**

This study aims to investigate, the Faculty of Letters and Human Sciences English department, master students' perception of TikTok as an educational tool, and assess the platform's usefulness for learning using the TAM model (Technology Acceptance Theory), particularly for delivering short, bite-sized educational content. This study used a quantitative approach to describe the results of the research and to ensure objectivity and reliability.



**Figure 1.** The proposed research Model.

### 3.1. Participants and Procedures

The research was conducted, employing a rigorous sampling technique known as the convenience sampling method. The sample included 153 master's students, with experience using TikTok, from the English department at the Faculty of Letters and Human Sciences at a Moroccan university. They are enrolled in five different disciplines of study: Language Communication and society, Applied language studies, Cultural studies, Gender studies, and Translation and cross-cultural communication. Data collection involved an online questionnaire on Microsoft Forms, a secure Office 365 platform. Strategic distribution via widely-used channels like WhatsApp and Gmail aimed for maximum reach. Participants received confidentiality instructions. Precise data analysis employed Statistical Package for the Social Sciences (SPSS) version 22.0, enabling comprehensive examination and interpretation, ensuring reliability and validity of findings.

### 3.2. Instruments

The research instrument used in this study is a questionnaire. The questionnaire is aligned with research goals and literature and comprises five sections. Section one explores respondents' demographics (sex, education), and the questions were formulated in the format of multiple-choice questions. The second section employs qualitative questions based on the Technology Acceptance Model (TAM). Divided into five parts, the questionnaire measures Perceived Usefulness PU (4 items), and perceived ease of use PEOU (5 items), and predicts students' Attitudes (5 items) and Behavioral Intentions to Use BIU (4 items) the app for educational purposes. An additional factor, Content Richness CR (4 items), is included to enhance the TAM model, considering TikTok's wealth of educational content. The Likert scale (1 - 5) is used across all sections, focusing on attitudes, behavioral intention, perceived usefulness, perceived ease of use, and content richness.

## 4. Results

**Table 1** shows the demographic profile of the respondents. The sample com-

prised 52 (34.0%) males and 101 (66.0%) females. The majority of participants fell within the age range of 18 - 24 (58.2%), followed by those aged 25 - 30 (28.8%), and individuals above 30 years old (13.1%). **Table 1** presents the enrollment distribution of students across all master programs in the English department. Among the 153 students, the majority are enrolled in Cultural Studies (30.7%), followed by Language Communication (19.6%) and Applied Language Studies (17.6%). Gender Studies accounts for 15.7% of the enrollment, and Translation and Cross-Cultural Communication make up 16.3%.

#### 4.1. Measurement Model Assessment

Factor analysis, was employed to explore the underlying dimensions of the observed variables and to identify patterns or structures within the dataset. Specifically, we conducted exploratory factor analysis (EFA) to examine the relationships among the variables related to TikTok's educational value, guided by the Technology Acceptance Model (TAM) framework. The internal consistency reliability was tested by using composite reliability (CR) and Cronbach's alpha. The analysis revealed that the composite reliability, scores of all the constructs were above the minimum threshold ( $CR > 0.70$ ). Also, Cronbach's alpha of each item exceeded 0.7. Hence, indicating construct reliability.

An important step involved weighing the overall significance of the correlation matrix through Barlett's test of sphericity, which provides a measure of the statistical probability that the correlation matrix has a significant correlation among some of its components. The results were significant,  $\chi^2 (n = 153) = 3082.809 (p < 0.01)$ , which indicated its suitability for factor analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.942. In this regard, data MSA values above 0.8 are considered appropriate for factor analysis. Additional examinations revealed that the Average Variance Extracted (AVE) for the five constructs meets the recommended minimum threshold of 0.50, suggesting a satisfactory level of convergent validity (Fornell & Larcker, 1981; Hair et al., 2010). See **Table 2**.

**Table 1.** The profile of participants.

Item	Category	Frequency	Percentage (%)
Gender	Male	52	34
	Female	101	66
Age	18 - 24	89	58.2
	25 - 30	44	28.8
	Above 30	20	13.1
Enrollment	Language and communication	30	19.6
	Applied language studies	27	17.6
	Cultural Studies	47	30.7
	Gender Studies	24	15.7
	Translation and cross-cultural communication	25	16.3
Total		153	100

**Table 2.** Reliability and convergent validity of the measurement model.

Items	Loadings	CA	CR	AVE
<i>Attitudes</i>		0.924	0.916	0.689
1. Watching educational content on Tiktok can be interesting	0.842			
2. Learning with Tiktok can be fun	0.831			
3. Watching educational content on TikTok can add value to my learning	0.922			
4. Learning with Tiktok can be very informative	0.696			
5. I have a positive attitude towards using TikTok as a learning tool	0.843			
<i>Behavioral Intention to Use</i>		0.936	0.918	0.737
1. I intend to use the TikTok app not only for entertaining purposes but also for educational ones	0.793			
2. I expect to use Tiktok as a mobile-assisted medium of learning	0.968			
3. I plan to include TikTok in my regular learning activities	0.818			
4. I intend to use Tiktok for learning because it's informative, livelier, and fun	0.842			
<i>Perceived Usefulness</i>		0.933	0.803	0.510
1. I see value in using TikTok as a tool for acquiring new knowledge	0.6			
2. believe that TikTok could make it easier for me to learn new information	0.615			
3. Using educational content on TikTok can help students improve their school performance	0.777			
4. Short educational videos in Tiktok designed for teaching can be used to fulfill learning objectives and facilitate learning	0.835			
<i>Perceived Ease of Use</i>		0.906	0.875	0.587
1. I think that Tiktok is easy to use as a learning too	0.825			
2. I find it simple to navigate through educational content on TikTok	0.638			
3. TikTok features like facial filters, and text overlay make learning more engaging and easier	0.745			
4. Using TikTok for learning seems easy to me	0.778			
5. Learning with TikTok requires little effort on my part	0.83			
<i>Content Richness</i>		0.887	0.997	0.516
1. I find the content on TikTok to be rich and informative for learning purposes	0.675			
2. TikTok has the latest educational information that can be shared and applied	0.801			
3. The educational content on TikTok is comprehensive and covers a wide range of topics	0.774			
4. TikTok provides up-to-date information	0.609			

$p < 0.05$ , CA Cronbach's Alpha, CR composite reliability, AVE average variance extracted.

## 4.2. Correlation Analysis

Pearson's correlation analysis was performed to measure the direction and strength between variables. **Table 3** presents a comprehensive overview of the correlation analysis, revealing the interplay among key variables.



**Table 3.** Correlation analysis.

	1	2	3	4	5
1. Attitudes	1				
2. Behavioral Intentions	0.647**	1			
3. Perceived usefulness	0.696**	0.754**	1		
4. Perceived Ease of Use	0.620**	0.634**	0.789**	1	
5. Content Richness	0.630**	0.684**	0.793**	0.755**	1
M	2.33	2.75	2.42	2.44	2.73
SD	0.90	1.18	0.93	0.82	0.84
Skewness	0.60	0.51	0.7	0.54	0.17
Kurtosis	0.25	-0.78	0.16	0.137	-0.1

\*\*Correlation is significant at the 0.01 level (2-tailed). M: Mean, SD: Standard Deviation.

Notably, all correlation coefficients demonstrate positive associations. Perceived usefulness exhibits a moderate correlation with its antecedent variables—attitudes, intentions, perceived ease of use, and content richness, denoted by correlation coefficients of ( $r = 0.696^{**}$ ,  $0.754^{**}$ ,  $0.789^{**}$ , and  $0.793^{**}$ , respectively). The highest correlation within the independent variables is observed between perceived usefulness and content richness ( $r = 0.793^{**}$ ), suggesting the substantial influence of educational diversity in TikTok on the perceived usefulness of the platform. Furthermore, Behavioral Intention was influenced by Attitudes ( $r = 0.647^{**}$ ), Perceived Usefulness ( $r = 0.754^{**}$ ), Perceived Ease of Use ( $r = 0.634^{**}$ ,  $p < 0.01$ ), and Content Richness ( $r = 0.684^{**}$ ), indicating a consistent alignment between these independent variables and the dependent variable Behavioral intentions. These results also show that Perceived Usefulness is one of the most significant variables that leads to the intention to use the TikTok app as a learning tool. A notable relationship is observed between perceived ease of use and perceived usefulness, revealing a statistically significant moderate correlation ( $r = 0.789^{**}$ ). All the mentioned correlations are statistically significant at the 0.01 level, emphasizing the importance of Perceived Usefulness, Perceived Ease of use Content richness in shaping users' behavioral intentions. The mean

(M), standard deviation (SD); skewness, and kurtosis of the variables were measured. The values for attitude ( $M = 2.3386$ ,  $SD = 0.90096$ ) The skewness 0.609 indicates a slightly positively skewed distribution, and the kurtosis (0.252) suggests a relatively normal distribution. For behavioral intentions score is ( $M = 2.7582$ ), with a ( $SD = 1.18079$ ). The skewness (0.511) indicates a slightly positively skewed distribution, and the kurtosis ( $-0.781$ ) suggests a distribution with lighter tails compared to a normal distribution. For perceived usefulness ( $M = 2.4295$ ), with a ( $SD = 0.9334$ ). The skewness (0.7) indicates a positively skewed distribution, and the kurtosis (0.16) suggests a distribution slightly more peaked than a normal distribution. For perceived ease of use, ( $M = 2.4471$ ), with a ( $SD = 0.82039$ ). The skewness (0.543) indicates a slightly positively skewed distribution, and the kurtosis (0.137). Content richness ( $M = 2.7331$ ), ( $SD = 0.8417$ ). The skewness (0.176) indicates a slightly positively skewed distribution, and the kurtosis ( $-0.1$ ) suggests a distribution with lighter tails compared to a normal distribution. All the values of the skewness and kurtosis lie within the range of ( $-1$  to  $+1$ ) which conforms to the normality of the data regression.

### 4.3. Hypotheses Testing

We tested the study's hypotheses for direct and indirect effects using bootstrapping procedures and the number of bootstrap subsamples was set to 5000 to ensure robustness and reliability of the results.

As presented in **Table 4**, the findings showed that perceived ease of use significantly and positively impacts perceived usefulness ( $\beta = 0.901$ ,  $p < 0.05$ ,  $t = 15.97$ ). Thereby supporting hypothesis 1. The high  $R^2$  value of 0.628 represents the overall model fit, indicating that 62.8% of the variance in perceived usefulness is explained by perceived ease of use. This emphasizes the substantial impact of perceived ease of use in shaping users' perceived usefulness, this indicates that when users perceive TikTok as easy to use, it significantly contributes to enhancing their perception of its usefulness as a microlearning tool. Perceived usefulness on the other hand significantly and positively influences Attitudes ( $\beta = 0.652$ ,  $p < 0.05$ ,  $t = 11.26$ ). The  $R^2$  value of 0.457, indicates that 45.7% of the variance in the Attitude variable is explained by perceived usefulness, reinforcing the idea that when individuals perceive technology as easy, they are more likely to hold positive attitudes toward its adoption and utilization. Thereby hypothesis 2 is accepted. Perceived ease of use also has a significant impact on attitudes ( $\beta = 0.648$ ,  $p < 0.05$ ,  $t = 8.995$ ), therefore hypothesis 3 is also supported. The  $R^2$  value of 0.349 indicates that 34.9% of the variability in attitudes is accounted for by perceived ease of use. The result strongly supports Hypothesis 4, demonstrating that perceived usefulness significantly and positively impacts behavioral intentions ( $\beta = 0.933$ ,  $p < 0.05$ ,  $t = 13.41$ ). The substantial  $R^2$  value of 0.544 indicates that 54.4% of the variability in behavioral intentions is explained by perceived usefulness. The findings emphasize that when users perceive technology as useful, they are more inclined to exhibit positive behavioral intentions

**Table 4.** The results of hypothesis testing.

Hypothesis	Path	R <sup>2</sup>	Coefficient	T-test	p-value	Status
H1	PEU-> PU	0.628	0.901	15.97	0	supported
H2	PU -> ATT	0.457	0.652	11.26	0	supported
H3	PEU -> ATT	0.349	0.648	8.995	0	supported
H4	PU -> BIU	0.544	0.933	13.41	0	supported
H5	PEU -> BIU	0.36	0.864	9.224	0	supported
H6	ATT -> BIU	0.355	0.781	9.114	0	supported
H7	CR ->PU	0.635	0.884	16.21	0	supported
H8	CR -> ATT	0.359	0.641	9.195	0	supported
H9	CR -> BIU	0.41	0.898	10.24	0	supported

PEOU: Perceived Ease of Use; PU: Perceived Usefulness; ATT: Attitudes; BIU: Behavioral Intentions to Use; CR: Content Richness.

toward its usage. In the same vein, Perceived Ease of Use ( $\beta = 0.864$ ,  $p < 0.05$ ,  $t = 9.224$ ) was found to significantly influence behavioral intentions. Consequently, hypothesis 5 is also supported. Hypothesis 6, asserting the impact of attitudes on behavioral intentions, is strongly supported ( $\beta = 0.781$ ,  $p < 0.05$ ,  $t = 9.114$ ). This entails that when users maintain positive attitudes towards the use of TikTok, it significantly and positively impacts their behavioral intentions. The R<sup>2</sup> value of 0.355 suggests that 35.5% of the variance in BI is accounted for by attitudes.

The results provide robust support for the positive influence of content richness on perceived usefulness ( $\beta = 0.884$ ,  $p < 0.05$ ,  $t = 16.21$ ). The substantial R<sup>2</sup> value of 0.635 explains that 63.5% of the variance in Perceived Usefulness is explained by content richness. This posits that the presence of rich content also positively fosters Perceived Usefulness. Similarly, content richness was found to significantly influence Attitudes ( $\beta = 0.641$ ,  $p < 0.05$ ,  $t = 9.1949$ ), R<sup>2</sup> value in the results for the Attitude model is 0.359 indicating that approximately 35.9% of the variance in the Attitude variable is explained by the independent variable Content Richness. hence hypotheses 7 and 8 find strong empirical support in the data. Finally, the impact of Content Richness ( $\beta = 0.898$ ,  $p < 0.05$ ,  $t = 10.24$ ) on behavioral intentions was observed to be statistically significant. Content richness accounts for 41% of the variance in behavioral intentions, which supported hypothesis 9.

**Table 5** presents the results of all indirect effects. As shown in **Table 5**, the study aimed to investigate the mediating role of attitudes in the associations between Perceived Usefulness, Perceived Ease of Use, Content Richness, and behavioral intentions

The results indicated a noteworthy indirect effect of Perceived Usefulness on Behavioral Intentions ( $\beta = 0.153$ ,  $t = 1.88$ ). Consequently, Attitudes were identified as a partial mediator in the relationship between perceived usefulness and behavioral intentions. Students who perceive TikTok as a useful app for learning

**Table 5.** Significant mediating effects of the research model.

Hypothesis	Path	Coefficient	95% Confidence interval		T-statistics	Status
			BootLLCI	BootULCI		
H10	PU -> ATT -> BIU	0.153	0.0056	0.3297	1.857	Supported
H10	PEU -> ATT -> BIU	0.314	0.1432	0.5287	3.141	Supported
H10	CR -> ATT -> BIU	0.278	0.1178	0.4882	3.004	Supported
H11	PEOU -> PU -> ATT -> BIU	M <sub>1</sub> : 0.689	M <sub>1</sub> : 0.4562	0.8992	6.189	Supported
		M <sub>2</sub> : 0.151	M <sub>2</sub> : 0.0138	0.3263		
H11	CR -> PU -> ATT -> BIU	M <sub>1</sub> : 0.595	M <sub>1</sub> : 0.3482	0.8391	4.919	Supported
		M <sub>2</sub> : 0.139	M <sub>2</sub> : 0.0059	0.3370		

PEOU: Perceived Ease of Use; PU: Perceived Usefulness; ATT: Attitudes; BIU: Behavioral Intentions to Use; CR: Content Richness. M1: Mediator 1; M2: Mediator 2.

are more likely to have positive attitudes which in turn foster the development of positive behavioral intentions. Similarly, for Perceived Ease of Use, the indirect effect ( $\beta = 0.314$ ,  $t = 3.101$ ) was observed, illustrating that Attitudes partially mediate perceived ease of use and behavioral intentions. This indicates that the influence of Perceived Ease of Use on Behavioral Intentions is operating partially through Attitudes. In other words, Attitudes mediate the relationship between Perceived Ease of Use and Behavioral Intentions. Content richness demonstrated an indirect effect ( $\beta = 0.278$ ,  $t = 2.931$ ), also supporting partial mediation. In all instances, Attitudes significantly contributed to the connection between the independent variables and Behavioral Intentions to Use. The mediation status is further affirmed by the robust T-statistics and the fact that none of the confidence intervals included zero. These findings underscore the significance of positive attitudes in users who perceive TikTok as an educational tool, indicating that positive attitudes positively influence behavioral intentions to use TikTok for educational purposes. This emphasizes the pivotal role of attitudes as a mediator, providing insights into the underlying psychological processes influencing users' intentions. These results supported hypothesis 10.

The findings of H11 show that all the indirect effects of perceived ease of use and content richness on behavioral intentions are sequentially mediated by PU and ATT. For example, the indirect effect of PEOU influence on BI through both PU and ATT was found significant with a coefficient value of (0.689) regarding PU and (0.151) for ATT. The 95% confidence interval of both mediators did not include zero. Similarly, for content richness, the coefficients (0.595, 0.139) also exhibit a notable impact, and the confidence intervals exclude zero, reinforcing the presence of a significant mediating effect through perceived usefulness and attitudes. Hence hypothesis 11 is supported. These findings highlight the impor-

tance of not only the perceived usefulness but also the attitudes towards it in shaping users' behavioral intentions toward TikTok as a microlearning tool.

## 5. Discussion

The main aim of the study is to create an acceptance model for the TikTok system by applying the TAM model. Additionally, the research sought to investigate the behavioral intentions of students in utilizing the app, particularly for delivering short, educational content. The TAM model highlights perceived usefulness (PU), perceived ease of use (PEOU), and content richness (CR) as crucial factors influencing attitudes (ATT) and behavioral intentions (BIU) in technology adoption.

The findings underscore the perceived effectiveness of TikTok's educational content in fulfilling learning objectives and facilitating learning experiences. This aligns with the broader findings of the study, where (PU) emerges as a pivotal factor influencing positive (BIU). [Al-Marroof et al. \(2021\)](#) point out the importance of (PU) in influencing (BIU) to accept TikTok as a learning tool. This is consistent with several previous studies which have investigated the effects of short-form video features on users' psychological and acceptance of TikTok ([Zuo & Wang, 2019](#); [Khlaif & Salha, 2021](#)). Moreover, the results shed light on how TikTok contributes to higher information retention compared to learning extensive amounts in a single session. These findings align with the perspectives of [Mayer \(2002\)](#) and [Hattie and Yates \(2013\)](#), who advocate for instructional segmentation to reduce cognitive load and improve information internalization. The design of TikTok, with its emphasis on microlearning content and the miniaturization of learning, positions it as a potentially effective educational tool. In a similar vein, [Yélamos-Guerra et al. \(2022\)](#) highlighted in her study that 80% of students agreed that using TikTok for educational purposes increases the internalization of content and enhances the retention of learned material. This reinforces the potential of TikTok as a valuable platform for educational engagement.

The findings of the hypotheses analysis provide valuable insights into the factors influencing users' perceptions and intentions regarding TikTok as a learning tool. Perceived usefulness (PU) is found to be the highest determinant that influences attitudes (ATT) followed by perceived ease of use (PEOU) indicating that users who perceive TikTok as useful and easy to use are more likely to have positive attitudes toward it as a learning tool. Moreover, both (PU) and (PEOU) demonstrated significant positive influences on (BIU), suggesting that users' perceptions of TikTok's usefulness and ease of use contribute to their intentions to utilize the platform for learning purposes. This conforms to the study of [Al-Khasawneh et al. \(2022\)](#), [Abdullah et al. \(2023\)](#), and [Al-Azawei \(2018\)](#) who observed that (PU) and (PEOU) exert a significant positive impact on users' intentions to utilize TikTok. In the same vein, the indirect effect of (PU) on (BIU) through (ATT) suggests that (PU) is one of the most significant variables that lead to the intention to use the TikTok app as a micro-learning tool. Therefore, this suggests that users who

perceive TikTok as useful for delivering short educational content, are more likely to have positive attitudes and express favorable behavioral intentions to use it. In other words, the mediating effects indicated that (PU) and (PEOU) use are likely to promote (BIU) through (ATT). These findings indicate that students who perceive TikTok as a useful microlearning tool and find it easy to use are more likely to develop positive attitudes. Consequently, these positive attitudes have been demonstrated to positively influence students' behavioral intentions. Furthermore, the strong association between attitudes and behavioral intentions, implies that as attitudes become more positive, the likelihood of positive behavioral intentions increases. As suggested by TAM, users' true behavioral intentions may be influenced by their prior attitudes about the technology (Davis, 1989). Because (PU) is anticipated to impact (ATT) toward technology use, these are recognized as separate variables influencing users' intentions to utilize the technology. Consequently, when users maintain a positive attitude towards using TikTok as a micro-learning tool, it positively influences their behavioral intention to use it.

(PEOU) was a significant antecedent of (PU), indicating that the ease of use of TikTok increased learners' (PU) (Balog, 2015). If TikTok proved challenging to navigate, students would expend considerable time and effort to acquaint themselves with the system, facing difficulties in managing their interactions. Learning from TikTok's educational videos is effortless as they incorporate visuals, animations, voiceovers, music, and sound effects, making the content more engaging and entertaining than conventional text. Consequently, students can effortlessly grasp information without expending significant mental energy (Deng, & Yu, 2023).

Additionally, the study revealed that the effect of Content Richness (CR) on Behavioral Intentions to Use (BIU) is mediated by Perceived Usefulness (PU), and Attitudes (ATT), highlighting the importance of rich content experiences in shaping how TikTok is perceived to be useful for educational use leading to more positive attitudes and behavioral intentions. As stated by Al-Marouf et al. (2021), the presence of diverse and valuable content encourages users to engage consistently with social media. This richness in content serves as a motivating factor for both governments and companies, compelling them to enhance their social media content to attract a larger user base (p. 207). This aligns with the findings of Lim's study (2017) which confirms the positive significant relationship between (CR) and (PU). The degree of (PU) depends on the high perceptions of the rich content of the e-learning system. Overall, the study revealed that TikTok has the potential to be used for education. This is consistent with the many previous studies that posit the platform's popularity, coupled with its application for learning objectives (Niyomsuk & Polyiem, 2022; Conde-Caballero, et al., 2023; Deng & Yu, 2023; Azman et al., 2021).

## 6. Conclusion, Limitations, and Future Research Directions

The main goal of our research is to explore how TikTok can contribute to edu-

cation, especially in the context of microlearning, and evaluate its effectiveness as a teaching tool. We aim to address the gaps in current literature by examining how master's students in various fields within the English department perceive TikTok as an educational platform. Drawing upon the Technology Acceptance Model (TAM), our findings show that factors like perceived usefulness, ease of use, attitudes, and content richness play a significant role in influencing the intention of students to use TikTok for educational potential.

Given that TikTok goes beyond being solely an entertainment platform and has the potential to serve as a learning tool, enabling students to gain knowledge across various domains, its ability to capture students' interest through a user-friendly interface is noteworthy. This suggests that TikTok could be employed as an educational tool, providing students with current information and offering educational content to enhance their academic performance. However, it is important to note that this study specifically focuses on students' perceptions of TikTok as a microlearning tool, exploring its positive impact on intentional usage for learning among students enrolled in linguistic studies, translation, and cross-cultural communication. To further enhance the study's scope, it is recommended to extend the investigation to examine potential differences among students who use TikTok for learning within their specific fields of study and to gauge their academic performance compared to a control group. Also, this study only examines the Behavioral intentions to use Tiktok as a learning tool using a convenience sample from a Moroccan university focusing on master students. The results may not be generalized to other educational levels or other cultures. It is recommended to replicate this study across a more diverse range of educational settings and cultural contexts.

There are limitations inherent in utilizing TikTok for promoting microlearning that merits consideration in this study. Some authors have raised concerns, highlighting that learning through TikTok might confuse knowledge processes due to the potentially low reliability of content that lacks peer review (Ovaere et al., 2018). To mitigate these limitations, future research in this domain could concentrate on content created by educators or specialists in specific fields. This approach aims to reduce errors, and the inaccuracies of shared online content; thus, enhancing the credibility of the content used for microlearning on TikTok. Another limitation identified in the study is the potential for shifts in students' perceptions and emotions over time, influenced by the ongoing advancements in technology.

### **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

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