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Assessing learners' attitudes toward meme-based learning through the technology acceptance model

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Introduction: In an era when learners are immersed in a fast-evolving digital culture, education should adopt practices that resonate with learners' characteristics. There is a growing need to examine how emerging tools can support the current generation's learning styles. In this context, internet memes offer a potentially engaging resource for language learning. This study investigates learners' acceptance of meme-based learning in English language education by applying an extended Technology Acceptance Model (TAM).
Methods: A quantitative research design was employed, with data collected from 238 undergraduate ESL learners through a structured questionnaire. The instrument assessed five constructs: perceived ease of use, perceived usefulness, attitude towards use, behavioural intention, and positive learning experience. Reliability and regression analyses were performed using SPSS version 25 to examine the proposed relationships among these constructs.
Results: The findings indicate that all hypothesised relationships are statistically significant. Perceived ease of use and perceived usefulness emerge as significant predictors of learners' attitudes towards meme-based learning. Attitude is significantly associated with behavioural intention, which, in turn, significantly predicts positive learning experience. The findings further indicate that learners perceive memes as meaningful learning resources that facilitate engagement and interaction while requiring relatively less mental effort.
Discussion: The findings highlight the potential of memes as engaging resources in English language education and support the application of an extended TAM in informal, socially driven learning contexts. By extending the model beyond behavioural intention to incorporate positive learning experience, the study offers a broader perspective on technology acceptance and provides pedagogical implications for integrating meme-based practices into language classrooms.

KEYWORDS
digital tools, edu-memes, EFL, ESL, higher education, language learning, social media, TAM

1 Introduction

Technology-mediated learning has transformed English language teaching (ELT) by creating opportunities for more interactive, learner-centred, and digitally supported instructional practices (Wang and Kabilan, 2024). Considering these developments, digital technologies have emerged as valuable pedagogical tools that extend learning beyond traditional classroom settings (Al-Ansi et al., 2023; Albarracin-Acero et al.,

2024). The increased use of social media in education, particularly following the COVID-19 pandemic, has encouraged educators to explore familiar digital environments as learning spaces. Social media platforms have been shown to enhance learner participation, communication, and collaboration, creating opportunities to integrate culturally relevant digital content into language instruction (Ivanova et al., 2022; Subbiramaniyan et al., 2022; Tidy et al., 2024).

Internet memes represent one such form of multimodal social media content that combines images, text, humour, and cultural references to communicate meaning. Their widespread use among Generation Z learners makes them particularly relevant for contemporary English language classrooms (Rogers and Giorgi, 2023). As digital natives, today's students routinely engage with memes through social media, using them to express ideas, emotions, and social commentary (Pulley, 2020). Consequently, memes have attracted growing attention as instructional resources capable of supporting visual literacy, learner engagement, and language learning.

Although previous research has explored the educational potential of memes and the broader use of social media in learning, much of this work remains descriptive, with limited empirical evidence on how learners perceive and accept memes as tools for English language learning. Moreover, while the Technology Acceptance Model (TAM) has been widely applied to investigate the adoption of educational technologies, its application to culturally embedded digital artifacts such as memes remains largely unexplored. Understanding whether learners accept memes as serious learning tools is crucial for integrating students' digital cultures into ELT. Accordingly, this study aims to examine learners' acceptance of memes for English language learning using the Technology Acceptance Model and extends the framework by incorporating Positive Learning Experience (PLE) as an outcome variable. The study addresses the following research questions:

1. What factors determine learners' acceptance of memes for English language learning within the TAM framework?
2. How does behavioral intention to use memes relate to learners' Positive Learning Experience?
3. To answer these questions, the study employed a cross-sectional survey and analysed the data using regression analyses to examine the proposed relationships among the study variables.

2 Literature review

2.1 Memes in education

Memes function as imitations and representations of real-life situations (Ismail, 2025). Beyond their humorous appeal, they have increasingly been recognized as cultural artifacts that reflect social identity, collective meaning-making, and evolving patterns of online communication. Their production and consumption can serve as markers of cultural identity; the ways memes are (re)produced reveal that they may either reinforce established narratives and stereotypes or spark novel ideas and discussions on specific or broader topics (El Maarouf, 2024). Similarly, Mitman and Denham (2024) explored and found that, as memes circulate, cultural producers continually work on the interpretations by mixing earlier meanings with new comments and values. Although this process contributes to the widespread acceptance of memes, it may also reduce their originality and subcultural identity over time.

The educational potential of memes has also attracted increasing scholarly attention. A comparative study by Wu et al. (2025) demonstrated that memes generated solely by artificial intelligence outperformed both human-generated and human-AI collaborative memes in overall performance. However, in the analysis of top-rated memes, human-created content was noted for its superior humor, whereas memes resulting from human-AI partnerships excelled in creativity and shareability. In contrast to its often-associated entertainment value, meme creation turned out to be an activity that supported inclusivity across age group variations and different educational contexts (Tidy et al., 2024). Focusing specifically on second language education, Sedliarova et al. (2020) conceptualized memes as cultural tools that share characteristics with both lexis and text. This similarity allows educators to apply traditional teaching methods used for lexis and text to memes, notably with the combined technology of meme generator platforms. This integration creates a set of classroom activities that effectively use internet memes as educational tools in L2 teaching.

Collectively, these studies position memes as culturally embedded, multimodal artifacts that function both as authentic texts and as pedagogical tools capable of promoting creativity, participation, and language learning. However, much of the existing literature remains descriptive or qualitative in nature, and no attempts are made to quantify learners' acceptance of meme-based learning.

2.2 Technology acceptance model

Fred Davis' Technology Acceptance Model (TAM) is one of the standard models popularly adapted for explaining users' acceptance of technology (Davis, 1989). Grounded in the Theory of Reasoned Action, his framework posits that "users' beliefs about a technology, specifically perceived usefulness and perceived ease of use, influence their attitudes and behavioral intentions toward its adoption". Although user responses to technology are complex and multidimensional, TAM provides a robust model for predicting technology acceptance across various domains, including education and digital learning environments.

In educational contexts, TAM has been extensively applied to examine learners' adoption of e-learning platforms, digital tools like AI chatbots, and the role of psychological factors in influencing behavioral intentions (Chun and Yunus, 2023; Lan et al., 2025; Zou and Huang, 2023). These studies consistently demonstrate that when learners perceive a tool to be useful and easy to use, they are more likely to develop positive attitudes and intentions toward its continued use. Although TAM has been predominantly applied to formal educational technologies, its core constructs are equally applicable to meme-based learning, where learners' perceptions of usefulness and ease of

use are expected to shape their attitudes, behavioural intentions, and ultimately their positive learning experiences.

Collectively, previous applications demonstrate the robustness of TAM in explaining learners' acceptance of educational technologies. Nevertheless, most studies have focused on structured digital platforms, such as e-learning systems, virtual reality, AI chatbots, and videoconferencing tools, rather than culturally embedded, learner-generated digital artifacts such as internet memes.

2.2.1 Perceived usefulness and perceived ease of use

Perceived usefulness (PU) refers to the extent to which learners believe that using a particular technology enhances their learning experience, while perceived ease of use (PEU) reflects the degree to which the technology is perceived as effortless to use. Prior research in technology-enhanced learning environments has consistently shown that both PU and PEU play a significant role in shaping learners' attitudes toward technology use, such as in the adoption of virtual reality (Man et al., 2024), the Zoom application (Alfadda and Mahdi, 2021), and generative AI (Chai et al., 2021). When learners perceive a tool as beneficial and easy to use, they are more likely to develop favourable attitudes toward its adoption. Perceived ease of use has also been found to influence perceived usefulness, as users are more likely to perceive a system as beneficial when it requires less effort to operate. Empirical studies on students' acceptance of YouTube (Harper et al., 2023), ChatGPT (Liu et al., 2024), and E-books (Smeda et al., 2018) in language learning support this, showing a strong positive path from PEU to PU. Although these relationships have been established across various educational technologies, they are equally relevant in the context of meme-based language learning. Because memes present language content in a familiar, visually engaging, and easy-to-understand format, learners are likely to perceive them as both useful and easy to use.

H1—Perceived usefulness will have a significant influence on attitude towards using language memes.

H2—Perceived ease of use will have a significant influence on attitude towards using language memes.

H3—Perceived ease of use will have a significant influence on perceived usefulness of language memes.

2.2.2 Attitude towards using and behavioral intention

Attitude toward using (ATU) reflects learners' overall evaluation of using a technology, while behavioral intention (BI) represents their willingness to continue using it in the future. Research has shown that behavioral intention and perceived usefulness are fundamental drivers of learners' behavioral intention to engage with learning technologies such as mobile dictionaries (Zhang et al., 2023), social media (Alhumaid et al., 2022), and digital books (Hsiao and Tang, 2014). In the context of meme-based language learning, learners who develop positive attitudes toward using memes and perceive them as beneficial for learning are more likely to continue using them as part of their learning practices. *H4—Attitude towards using will have a significant influence on behavioral intention to use memes for language learning.*

H5—Perceived usefulness will have a significant influence on behavioral intention to use memes for language learning.

2.2.3 Positive learning experience

The present study extends TAM by introducing Positive Learning Experience (PLE), a perception-based variable reflecting learners' engagement and classroom involvement during meme-based learning. Learners' behavioral intention to engage with a learning tool, in turn, shapes their learning experience. Studies in digital learning contexts suggest that student engagement levels and intention are positively associated with their learning experiences. Notable attempts in educational settings have extended the model successfully beyond mere usage intention by including outcome-related constructs that capture learners' experiences. For instance, Khoso et al. (2025) employed TAM while introducing artificial intelligence, and the findings revealed that acceptance of the tool acts as a gateway to improved students' creativity. Another investigation by Chen and Chen (2022) extended the model by adding teaching quality. In their study, they examined the acceptance of mobile-assisted language learning in teaching and found that behavioral intentions towards MALL directly influence teaching quality. Mondi et al.'s (2008) study included perceived E-learning experience and further strengthened the influence of students' behavioral intention on learning experience. As memes encourage interaction, creativity, and learner engagement, students who demonstrate a stronger behavioural intention to use memes are expected to experience more positive classroom outcomes.

H6—Behavioral intention to use language memes will have a significant influence on a positive learning experience.

In summary, the proposed conceptual model posits that perceived usefulness and perceived ease of use influence learners' attitudes toward using memes, while perceived ease of use also enhances perceived usefulness. Attitude toward using and perceived usefulness are expected to strengthen learners' behavioural intention to use memes, which in turn is proposed to positively influence their overall Positive Learning Experience. Figure 1 displays the conceptual model of the study based on the hypotheses proposed.

2.2.4 Operational definitions

Perceived Usefulness (PU)—The extent to which ESL learners believe that using memes would improve their language learning experience.

Perceived Ease of Use (PEU)—The degree to which the learner finds the process of creating and learning through language memes to be free of effort.

Attitude Towards Using (ATU)—The measure of how learners feel about language learning through memes.

Behavioral Intention to Use (BI)—Strength of one's intention to continue using memes in the process of language learning.

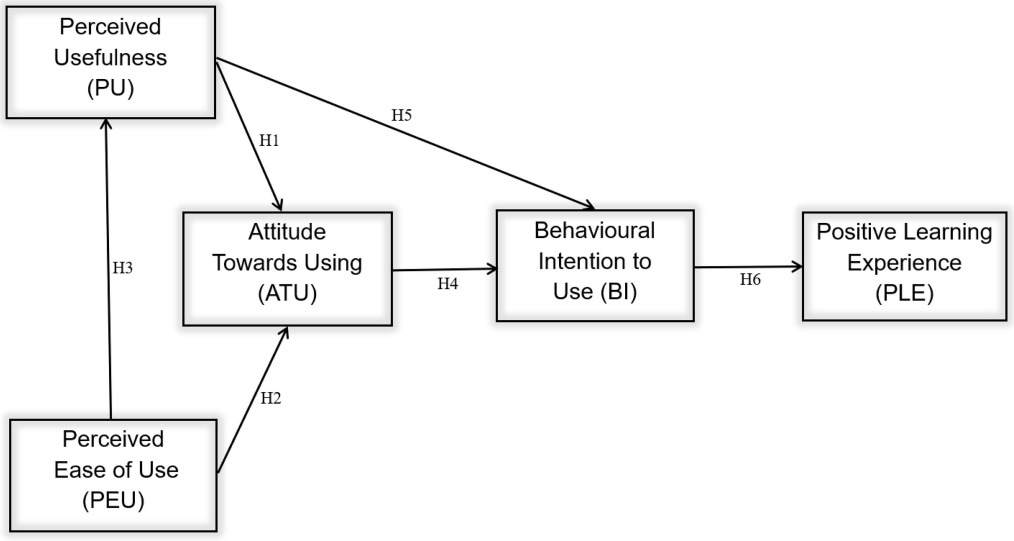

FIGURE 1
Conceptual model.

Positive Learning Experience (PLE)—The extent to which learners perceive that meme-based learning would enhance their overall learning experience in terms of engagement and classroom involvement.

2.3 Research gap

Although memes and social media have been widely discussed in educational contexts, most studies remain largely descriptive and lack strong empirical grounding. There is a scarcity of research that systematically examines how learners perceive and accept memes as part of the language learning process. In particular, the factors influencing their acceptance have not been sufficiently explored. Meanwhile, TAM has been widely used to study technology adoption in education; its application to meme-based learning contexts remains unexplored. Most TAM-based research has focused on formal technologies rather than culturally embedded digital artifacts like memes. Additionally, traditional TAM frameworks primarily focus on predicting usage intention, with limited attention to experiential dimensions. This leaves a gap in understanding how acceptance translates into meaningful learning experiences. The present study seeks to bridge this gap by empirically examining learners' acceptance of memes using TAM and expands the model by introducing Positive Learning Experience (PLE) to better reflect learners' perceptions.

3 Methods and materials

3.1 Participants

This study employed a cross-sectional survey design to examine learners' acceptance of meme-based English language learning. The study took place at a government-aided women's college in a metropolitan city in India, after obtaining institutional permission. Participants were recruited from intact undergraduate classes using convenience sampling. To be eligible for participation, students were required to be in the second year of their undergraduate programme and possess an active social media account, as familiarity with social media platforms was considered essential for responding to the questionnaire. Students who did not meet these criteria were excluded from the study. A pilot study was first conducted with a separate cohort of 61 undergraduate students from the B.Sc. Clinical Nutrition programme, and the main study was done with 238 students. Table 1 displays the distribution of samples based on their age and educational background. As the study took place in a women's college, all 238 participants were female.

3.2 Data collection & analysis

Data for the study were collected using a structured questionnaire administered to undergraduate ESL learners. As content-based memes are a relatively new concept, a two-week instructional activity was conducted to familiarize students with edu-memes. During this phase, students were introduced to edu-memes and available online meme-creation platforms, explored examples of language-focused edu-memes, participated in meme creation, and interpreted memes in the context of English language learning. This engagement was intended to provide participants with experience of edu-memes as a learning tool before they evaluated their acceptance. Following the completion of the two-week engagement the questionnaire was administered through their classroom groups on WhatsApp to capture learners' perceptions regarding meme-based learning. Data collection was conducted over two weeks. All 238 consenting participants completed the questionnaire, resulting in a response rate of 100%. The data were analysed using SPSS version 25. Prior to the regression analyses, the data were

TABLE 1 Distribution of demographic variables.

Demographic	Category	Frequency	Percentage
Gender	Female	238	100%
Age	17	17	7.14%
	18	194	81.51%
	19	24	10.08%
	20	2	0.84%
	21	1	0.42%
Course	BBA	45	18.9%
	BCom	193	81.1%

TABLE 2 Research instrument.

Construct	Source	Measure
Perceived Usefulness (PU)	(Davis, 1989)	Using memes for the purpose of English language learning improves the quality of my learning.
		Using memes for the purpose of English language learning enhances the effectiveness of my learning
		Using memes for the purpose of English language learning reduces the time/cost/effort I spend on my learning
		Overall, memes are a useful resource for the purpose of English language learning
Perceived Ease of Use (PEU)	(Davis, 1989)	Learning to use memes during English language learning is easy
		Using memes while English language learning is clear and easy to understand
		Interacting with English language-related memes does not require a lot of mental effort
		English language learning through memes is convenient for me
Attitude Towards Using (ATU)	(Davis et al., 1989)	I would recommend others to use memes for English language learning in the future
		I will continue to use memes as an English language learning tool
		I will try to explore more memes related to the English language in the future
		I intend to be a frequent user of memes as an English language learning tool
Behavioral Intention (BI)	(Venkatesh et al., 2003)	I like the idea of using memes for English language learning
		I like creating memes related to the English language
		I like to use a meme in an English language class and interact with others
		I am positive towards memes related to the English language
Positive Learning Experience (PLE)	(Chen and Chen, 2022)	The liveliness of English language learning is improved
		My interaction with classmates during an English language class has improved
		The richness of the learning material is improved
		My concentration in the English language class has improved

screened for missing values and examined for the assumptions of normality, linearity, homoscedasticity, and multicollinearity. Subsequently, simple and multiple linear regression analyses were conducted to examine the relationships among the variables and to test the proposed hypotheses.

3.3 Instrument

The research instrument consisted of two sections: the first about their demographic profiles (gender, course, and age) and the second section pertaining to constructs of TAM. Table 2 presents the 20 items adapted from Davis (1989), Davis et al. (1989), Venkatesh et al. (2003), and Chen and Chen (2022). Participants' acceptance was recorded on a 5-point Likert scale, as 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), and 5 (Strongly Agree), to measure 20 items across five constructs. The questionnaire items were adapted from previously validated Technology Acceptance Model (TAM) instruments and modified to suit the context of meme-based English language learning. To establish content validity, the adapted instrument was reviewed by two experts in English Language Teaching (ELT) and one statistical expert, who evaluated the relevance, clarity, and appropriateness of the items. Their feedback, together with the findings of the pilot study, minor revisions to the questionnaire were made, including simplifying item wording, ensuring

consistency in terminology, and refining the items to explicitly refer to English language learning. The descriptive statistics, including the mean and standard deviation for each of the main constructs, are summarized in Table 3. The instrument's reliability was measured using Cronbach's Alpha test. As presented in Table 4, all variables exhibit Cronbach's alpha values above 0.7, confirming the internal consistency and reliability of the instrument used.

4 Results

4.1 Demographic variables

Table 5 displays the output of one-way ANOVA examining differences in positive learning experience across the participants' age groups. The results indicate a p-value of $0.784 > 0.05$; there is no significant relationship between the age of the participants and their positive learning experience. However, the age groups were unequal, particularly for participants aged 20 ($n = 2$) and 21 ($n = 1$); therefore, the non-significant finding should be interpreted cautiously. The other demographic variable, educational background, was also observed to check its influence on the outcome variable through an independent sample t-test. Table 6 displays the result of an independent sample t-test. The p-value $0.402 > 0.05$ indicates that there is no impact of educational background on positive learning experience. Thus, the demographic comparisons did not indicate statistically significant differences in PLE within the present sample.

TABLE 3 Descriptive statistics of the study constructs.

Construct	*N*	Mean	SD
Perceived Usefulness (PU)	238	16.71	2.26
Perceived Ease of Use (PEU)	238	16.70	2.23
Attitude Towards Using (ATU)	238	16.88	2.15
Behavioral Intention (BI)	238	16.41	2.36
Positive Learning Experience (PLE)	238	16.41	2.25

TABLE 4 Research instrument reliability.

Construct	Items	Cronbach Alpha
Perceived Usefulness (PU)	1–4	0.719
Perceived Ease of Use (PEU)	5–8	0.770
Attitude Towards Using (ATU)	9–12	0.838
Behavioral Intention (BI)	13–16	0.830
Positive Learning Experience (PLE)	17–20	0.831

TABLE 5 One-way ANOVA.

Age	Number of participants	Mean	Std. deviation	Sig.
17	17	16.64	1.93	0.784
18	194	16.34	2.27	
19	24	16.66	2.37	
20	2	18.00	2.82	
21	1	17	-	

4.2 Hypothesis testing

H1—Perceived usefulness will have a significant influence on attitude towards using language memes.

H2—Perceived ease of use will have a significant influence on attitude towards using language memes.

Multiple linear regression (Table 7) was conducted to examine the effect of PU(H1) and PEU(H2) on ATU. The model explained 51.2% of the variance in ATU ($R^2 = 0.512$). Both PU ($\beta = 0.273$, $p < 0.001$) and PEU ($\beta = 0.474$, $p < 0.001$) were significant positive predictors of ATU. PEU exhibited a stronger influence on ATU than PU, as indicated by its larger regression coefficient. The overall regression model was statistically significant ($p < 0.001$); therefore, H1 and H2 were supported.

H3—Perceived ease of use will have a significant influence on perceived usefulness of language memes.

A simple linear regression was conducted to test hypothesis 3. The analysis showed that the model was statistically significant, $F(1,236) = 186.430$, $p < 0.001$. The predictor (perceived ease of use) explained 44.1% of the variance in perceived usefulness ($R2 = 0.441$). Based on the results (Table 8), H3 is supported.

H4—Attitude towards using will have a significant influence on behavioral intention to use memes for language learning.

H5—Perceived usefulness will have a significant influence on behavioral intention to use memes for language learning.

Multiple linear regression (Table 9) was conducted to examine the effects of attitude toward use (ATU; H4) and perceived usefulness (PU; H5) on behavioral intention (BI). The model explained 61.2% of the variance in BI ($R^2 = 0.612$). Both ATU ($B = 0.634$, $p < 0.001$) and PU ($B = 0.292$, $p < 0.001$) were significant positive predictors of BI. ATU exerted a stronger influence on BI than PU, as indicated by its larger regression coefficient. The overall regression model was statistically significant ($p < 0.001$); therefore, H4 and H5 were supported.

H6—Behavioral intention to use language memes will have a significant influence on positive learning experience.

A simple linear regression was conducted to test hypothesis 6. The results of the analysis (Table 10) showed that the model

TABLE 6 Independent sample t-test.

Course	Number of participants	Mean	Std. deviation	t	df	*p*
BBA	45	16.13	2.51	−0.843	60.394	0.402
BCom	193	16.47	2.18			

TABLE 7 Multiple linear regression.

Hypothesis	Regression weights	Beta coefficient	R	R^2	F	t-value	*p*-value
PU & PEU on ATU	PU	0.273	0.716	0.512	123.295	4.701	0.00
	PEU	0.474				8.076	

PU, perceived usefulness; PEU, perceived ease of use; ATU, attitude towards using.

TABLE 8 Simple linear regression.

Hypothesis	Regression weights	Beta coefficient	R	R^2	F	t-value	*p*-value
PEU on PU	PEU	0.672	0.664	0.441	186.430	13.654	0.00

PEU, perceived ease of use; PU, perceived usefulness.

TABLE 9 Multiple linear regression.

Hypothesis	Regression weights	Beta coefficient	R	R^2	F	t-value	*p*-value
ATU & PU on BI	ATU	0.634	0.782	0.612	185.021	11.242	0.00
	PU	0.292				5.424	

ATU, attitude towards using; PU, perceived usefulness; BI, behavioral intention.

TABLE 10 Simple linear regression.

Hypothesis	Regression weights	Beta coefficient	R	R^2	F	t-value	*p*-value
BI on PLE	BI	0.691	0.724	0.525	260.477	16.139	0.00

BI, behavioral intention; PLE, positive learning experience.

was statistically significant, $F(1,236) = 60.477$, $p < 0.001$. The predictor (behavioral intention) explained 52.5% of the variance in positive learning experience ($R^2 = 0.525$). Hypothesis 6 is supported.

5 Discussion

The findings of this study provide meaningful insights into how learners perceive and engage with memes in language learning contexts. All proposed hypotheses were supported, indicating that the Technology Acceptance Model effectively explains learners' acceptance of memes as an educational tool. More importantly, the results highlight that memes are not merely perceived as entertaining elements but as functional learning resources that contribute positively to learners' overall experience (Sastre-Hernández et al., 2025).

Within the present sample, no statistically significant difference in positive learning experience was observed between the BBA and BCom groups. The age-based comparison was also non-significant; however, this finding should be interpreted cautiously conclusive evidence because of the highly unequal age-group sizes. This is consistent with the findings of Jiang et al. (2026), who studied determinants of AI usage, and Micallef and Müller (2026), who observed that the effectiveness of integrating memes remained consistent across diverse student populations, with no significant differences by gender or cultural backgrounds.

The strong association between perceived usefulness and learners' attitudes suggests that students recognize the practical value of memes in supporting their learning. The perception of reduced effort (PEU) appears particularly significant, as it reflects learners' preference for tools that simplify complex language concepts. This aligns with the findings of Sidekerskienė and Damaševičius (2024), who note that memes can make learning less intimidating for students who prefer visual or tactile communication, thereby encouraging sustained engagement.

Perceived ease of use also emerged as an important factor shaping learners' attitudes. The findings indicate that when meme-based learning is experienced as clear, convenient, and requiring minimal mental effort, learners are more likely to develop positive feelings toward its use. The emphasis on low mental effort suggests that memes create a less demanding learning environment compared to traditional methods. This reduced complexity may help learners engage more comfortably with language content, particularly in classroom settings where attention and motivation can fluctuate.

As noted by Cordova et al. (2025), the humor embedded in memes serves to lower the learners' affective filter and contribute to an emotionally supportive environment that sustains a positive attitude and motivates active participation. The relationship between perceived ease of use and perceived usefulness further highlights the interconnected nature of these constructs. When learners find memes easy to use, they are more inclined to perceive them as beneficial.

Learners' attitudes toward meme-based learning were found to significantly predict their behavioral intentions. Students who

expressed enjoyment in using and creating memes, as well as interacting with peers through meme-based activities, showed a clear willingness to continue using them in the future. This indicates a shift from passive acceptance to active preference, where learners not only appreciate the tool but also seek to integrate it into their learning practices. This is further strengthened by Gilpin's (2023) study, which argues that digital tools like memes allow students to act as creators rather than just consumers, thereby building a 'portable community' that enhances classroom culture and peer-to-peer connection.

In addition to attitude, perceived usefulness directly influenced behavioral intention, suggesting that learners' decisions to continue using memes are strongly driven by their perceived learning benefits. When learners believe that memes contribute meaningfully to their learning outcomes, they also report stringer intentions to use them. This highlights that meme-based activities are not only engaging but also pedagogically purposeful. In fact, recent research (Sastre-Hernández et al., 2025) indicates that memes allow students to connect academic concepts with reality by acting as a modern method for outlining and synthesizing complex information. One of the most significant findings of this study is the relationship between behavioral intention and positive learning experience. Learners who demonstrated a strong intention to use memes also reported more positive perceptions of their classroom experience, including greater liveliness, improved interaction with peers, enhanced richness of learning materials, and better concentration. This suggests that learners' willingness to engage with a tool directly shapes how they experience the learning environment. Memes' ability to encourage participation and peer interaction may contribute to a more engaging and collaborative learning atmosphere. These results are corroborated by Micallef and Müller (2026), who demonstrated that integrating memes into the curriculum can bridge the gap between students' digital lives and formal education.

From a theoretical perspective, the present study extends the Technology Acceptance Model by incorporating Positive Learning Experience (PLE) as a learning-related outcome. While TAM traditionally explains learners' acceptance of technology through perceptions of usefulness, ease of use, attitudes, and behavioural intentions, the present findings demonstrate that behavioral intention also contributes significantly to learners' overall learning experience. This suggests that technology acceptance in educational settings should not be viewed solely in terms of adoption or continued use, but also in terms of its potential to enhance learners' engagement and classroom experiences. Future research may further examine whether other TAM constructs, such as perceived usefulness and perceived ease of use, influence positive learning experiences through indirect pathways using more advanced analytical techniques such as Structural Equation Modeling (SEM).

6 Practical and theoretical implications

While the findings align with established principles of technology acceptance, the present study extends these insights into a relatively underexplored context. By demonstrating that memes can be effectively integrated into language learning through a structured framework, this study highlights their potential as a pedagogical tool that combines familiarity, creativity, and learning value. The overall findings have the potential to offer an effective path for encouraging learners' openness to innovative tools and also for providing supportive environments.

Integration into ELT methods. Language memes are not an isolated teaching method; they operate as a flexible teaching aid and instructional tool that can be integrated across multiple English Language Teaching (ELT) frameworks. Memes in general possess a "bottom-up" learning source that can be tailored to the cultural and linguistic contexts of learners, which indeed makes them suitable for the contemporary post-methods era. Memes also fit into established methods like Communicative Language Teaching and Task-Based Language Teaching (TBLT) as they can support meaning-making activities. Because learners report high BI and PLE, designing meme-creation tasks like meme creation, humor interpretation, thematic discussions, caption generation, and translation may leverage their willingness to use memes and enhance engagement.

Alignment with MALL and CALL. Memes also align closely with Mobile-Assisted Language Learning (MALL) and Computer-Assisted Language Learning (CALL). Their multimodal format supports learning through creation and collaboration across online platforms that can be accessed through smartphones and computers. As learners perceived memes as both useful(PU) and easy to use (PEU), and these factors significantly influenced their attitudes(ATU), implementing meme-based practices through MALL and CALL may facilitate a user-friendly, technology-enhanced learning experience while promoting positive learner attitudes. Language education in universities can include practical activities like content-based meme-creation that can foster learners' critical thinking and creative abilities.

Implications for classroom practice. The observed link between behavioral intention (BI) and positive learning experience (PLE) further indicates that when learners are willing to engage with such tools, it can lead to a more lively, interactive, and focused classroom environment. Consequently, language teachers may leverage this willingness by including the learners in activities that connect language concepts through memes and further boost positive learning experiences. Thus, memes can be effectively used not only as supplementary materials but also as interactive learning resources.

7 Conclusion

The study examined learners' acceptance of memes in English language learning through the Technology Acceptance Model framework. The findings revealed that memes are perceived as useful, easy to use, and capable of fostering positive attitudes and behavioral intentions toward their continued use in English language learning. All hypothesized relationships were significant. Importantly, the results confirm that learners do not view memes as just another humor-loaded informal content, but recognize them as meaningful tools that can support structured language learning. The study extends the application of the Technology Acceptance Model by integrating the construct of

Positive Learning Experience, thereby providing additional evidence of the pedagogical value of memes in ESL contexts. These findings offer practical implications for educators by highlighting the potential of meme-based learning to create more engaging, interactive, and learner-centred language classrooms. While the findings provide valuable insights into learners' acceptance of meme-based learning, they should be interpreted in light of the study's limitations. As discussed in the Limitations and Future Research Directions section, future studies should employ more diverse samples and advanced analytical approaches, such as Structural Equation Modeling (SEM), as well as qualitative or mixed-methods designs, to further validate and extend the proposed framework across different educational and cultural contexts.

7.1 Limitations and future research directions

The study, like most empirical attempts, is subject to certain limitations. (1) Limitation of research design. The study opted for a quantitative design based on survey data analyzed through regression analysis. While this attempt effectively examined hypothesized relationships, it did not capture the nuanced, day-to-day experiences of learners in a meme-based learning setting. Future research could employ mixed-methods designs incorporating qualitative methods like interviews and focus group discussions to discover richer insights into learners' experiences and complement the quantitative findings. (2) Limitation of the sample. Participants in this study were exclusively 238 females from a single institution in India. The results should be interpreted within this specific context, as gender and cultural factors may influence how students perceive meme-based learning. To overcome this limitation, future studies are recommended to include a more varied sample base from co-educational institutions, rural/urban contexts, and diverse geographical regions to enhance the generalizability and external validity of the findings. (3) Limitation of the analytical framework. The current model integrated the construct of Positive Learning Experience and traced strong, transparent relationships among a limited set of variables using multiple & linear regressions. To improve the analytical rigor of the model, future research could employ Structural Equation Modeling (SEM) to examine the proposed relationships simultaneously and to assess the measurement model through confirmatory factor analysis (CFA), including convergent and discriminant validity using measures such as average variance extracted (AVE). Future studies could also extend the model by including additional constructs such as digital literacy, enjoyment, humor, and motivation.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by Institutional Ethical Committee for studies on Human Subjects (ICEH). The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

AN: Conceptualization, Investigation, Methodology, Software, Writing – original draft. BS: Funding acquisition, Supervision, Validation, Writing – review & editing.

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Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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