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Exploring Factors Influencing Moroccan EFL Students' Behavioral Intention to Use AI-Powered Tools in Academic Research Literature Review

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Abstract
This quantitative study aimed to explore the factors affecting the behavioral intention of Moroccan master's and doctoral students to use AI-Powered tools in literature review. It contributes to the growing discussion on AI adoption in higher education by providing empirical evidence on the factors influencing students' intentions to use AI-Powered tools in research. Using convenience sampling method, the study collected quantitative data through a validated online 5-point Likert scale questionnaire from 106 Master's and doctoral students from various Moroccan universities. Multiple Linear Regression was conducted to examine the influence of the key constructs of the modified version of Unified Theory of Acceptance and Use of Technology, including effort expectancy, performance expectancy, social influence, facilitating conditions, hedonic motivation, and price value, in addition to AI tools self-efficacy and perceived ethics on students' behavioral intention to use these AI-Powered tools. The results revealed that performance expectancy, effort expectancy, hedonic motivation, and perceived ethics have a significant positive influence on behavioral intention. Conversely, social influence, facilitating conditions, AI tools self-efficacy, and price value had no significant influence on behavioral intention. These findings inform higher education stakeholders and policymakers about the factors influencing AI-Powered tools adoption in research.
Keywords: AI-Powered tools, behavioral intention, literature review, Moroccan EFL students, Unified Theory of Acceptance and Use of Technology

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Introduction

Academic research is a fundamental part of higher education programmes. In English as a Foreign Language (EFL) departments, Master's and doctoral students are required to undertake academic research for graduation. However, their eagerness to achieve their goals is often hindered by language barriers as non-native English speakers. On the other hand, research has proved the potential of Artificial Intelligence (AI) to improve the research process. The rapid development of AI technology in recent years has revolutionised research methodologies, thereby leading to different views of the integration of such tools in research writing among scholars. Some countries, such as ER and the USA, have recommended regulations for the use of AI in their institutions to preserve data privacy and security (Fedele et al., 2024; Jhajj et al., 2024; Qadhi et al., 2024). Meanwhile, Several universities have initiated official guidelines for the appropriate and ethical use of AI technologies (Alzubaidi, 2025).

Regardless of the availability and the demonstrated benefits of AI-Powered tools in improving the research literature review, their adoption remains uncertain among Moroccan doctoral students. Although existing research have focused on the advantages and challenges of AI-Powered tools' integration in education and research, the factors influencing students' adoption of these tools in conducting literature review remain under explored, particularly in EFL context like Morocco. In such contexts, students usually face linguistic challenges, which increase their reliance on AI-Powered tools to improve their research writing. Therefore, empirical evidence of the factors influencing Moroccan postgraduate students' adoption of these tools is required to inform higher educational policies and guidelines for effective and ethical integration of AI-Powered tools in conducting literature review.

The main aim of the current study is to explore Moroccan students' perceptions of AI-Powered tools in conducting research literature review, and the factors that influence their intention to integrate such AI-Powered tools in their academic research endeavour.

The significance of this study lies in its contribution to the growing discussion on AI adoption in higher education by providing empirical evidence on the factors influencing students' intentions to use AI-Powered tools in research.

Building on the extended version of UTAUT2 framework, the objectives of this study are:

1. To investigate the influence of performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, AI-Powered tools self-efficacy, and perceived ethics on Moroccan Master's and doctoral students' behavioral intention to use AI-Powered tools for conducting research literature review.
2. To provide empirical evidence supporting the integration of AI-Powered tools for research purposes in Moroccan higher education.

To achieve these objectives, the current study seeks to answer the following research question:

Is there a significant influence of performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, AI-Powered tools self-efficacy, and perceived ethics on Moroccan Master's and doctoral students' behavioral intention to use AI-Powered tools for conducting research literature review?

1. Does performance expectancy (PE) significantly influence Moroccan Master's and doctoral students' behavioral intention (BI) to use AI-powered tools for literature review?
2. Does effort expectancy (EE) significantly influence Moroccan Master's and doctoral students' behavioral intention (BI) to use AI-powered tools for literature review?
3. Does facilitating conditions (FC) significantly influence Moroccan Master's and doctoral students' behavioral intention (BI) to use AI-powered tools for literature review?
4. Does social influence (SI) significantly influence Moroccan Master's and doctoral students' behavioral intention (BI) to use AI-powered tools for literature review?
5. Does hedonic motivation (HM) significantly influence Moroccan Master's and doctoral students' behavioral intention (BI) to use AI-powered tools for literature review?
6. Does AI-Powered tools self-efficacy (AISEF) significantly influence Moroccan Master's and doctoral students' behavioral intention (BI) to use AI-powered tools for literature review?
7. Does perceived ethics (PETH) significantly influence Moroccan Master's and doctoral students' behavioral intention (BI) to use AI-powered tools for literature review?
8. Does effort expectancy (EE) significantly influence Moroccan Master's and doctoral students' behavioral intention (BI) to use AI-powered tools for literature review.

To answer the research question, the researcher developed the following hypotheses:

- **HP1.** The Moroccan students' perceived performance expectancy (PE) of AI-powered tools for literature review positively influences their behavioral intention (BI) to use them.
- **HP2.**The Moroccan students' perceived effort expectancy (EE) of AI-powered tools for literature review positively influences their behavioral intention to use them.
- **HP3.**The Moroccan students' perceived facilitating conditions of AI-powered tools for literature review positively influences their behavioral intention to use them.
- **HP4.**The Moroccan students' motivation to implement AI-powered tools for literature review positively influences their behavioral intention to use them.
- **HP5.**The Moroccan students' perceived social influence of AI-powered tools for literature review influences their behavioral intention to use them.
- **HP6.** The Moroccan students' technological self-efficacy of AI-powered tools for literature review positively influences their behavioral intention to use them.
- **HP7.** The Moroccan students' perceived ethics and academic integrity of AI-powered tools for literature review negatively influence their behavioral intention to use them.
- **HP8.** AI tools' perceived price value negatively influences their behavioral intention to use these technologies in the literature review.

Literature Review

Reviewing the existing literature on a research topic is a fundamental stage in conducting academic research, as it helps the researcher understand what is known and what is not known about the research topic and identify gaps in the existing literature. Nevertheless, the vast amount of existing articles, books, blogs, and other sources of information, as well as the limitations of the researchers' search skills, especially in EFL contexts, pose challenges for the researcher to perform this daunting task. Consequently, AI-Powered tools could play a supportive role in facilitating the process of literature view.

Efficiency and Automation

Research has highlighted the potential of AI-powered tools in enhancing and automating the literature review process. These tools have improved the literature search, synthesis, analysis and screening of a vast amount of scholarly work (Bolanos et al., 2024; Fasola, 2023; Torre-López et al., 2023; Wagner et al., 2022). Srivastava and Agarwal (2024) argue that generative AI tools' capabilities to automatically identify, synthesize and analyze patterns, trends and gaps across a vast volume of scholarly work significantly improve the literature review's efficiency, depth and comprehensiveness. Similarly, Wagner et al. (2022) found that AI technologies can streamline the process, improve productivity, and accelerate the research process compared to conventional methods. However, Bolanos et al. (2024) stress that regardless of the significant usefulness of the current AI systematic literature review tools, they are not highly utilized by researchers. Although post graduate students show positive attitudes toward the use of AI tools for research purposes, such as generating ideas, identifying relevant references, managing references, they are reluctant to use such tools due to reliability and ethical concerns (Mamoune et al., 2025). Mohammed and Mudawy (2024) found that most of EFL teachers at Majmaah University have positive attitudes towards AI tools' integration in academic research and stress their transformative role in improving the research process' efficiency and quality, and streamlining literature reviews.

Ethical Concerns

Despite their promising role in improving the literature search, AI-Powered tools integration in the research process raises several ethical concerns. These concerns include academic integrity, algorithmic bias, reliability, transparency, trust, hallucination, intellectual property, and copyright ownership (Bjelobaba et al., 2025; Daoudi, 2025; Srivastava & Agarwal, 2024). According to experts and publishers, the use of AI in scientific research is acceptable if it adheres to ethical guidelines on transparency, plagiarism, and disclosure (Ugwu, 2024). Researchers must acknowledge the use of AI, rewrite the output in their own words, and cite the references to avoid algorithmic bias.

Adoption Behavior

Building on the previously discussed benefits and concerns of AI-Powered tools integration in research, students' adoption of such tools remains uncertain. Students tend to adopt AI tools when they perceive them as useful and effective, supported institutional, but resist them when perceive them as threatening their privacy, security, and trust (Feng et al., 2025). Previous research employed several technology acceptance theoretical frameworks and models to understand the factors influencing postgraduate students' intention to use AI in research and academic writing worldwide (Feng et al., 2025; Qiu & Zhu, 2026; Garcia, 2025; Qadhi et al., 2025).

Overall, previous research has emphasized the transformative role of AI-Powered tools to streamline literature searches, improve productivity, efficiency, quality, and comprehensiveness of research. However, these tools have raised concerns, such as algorithmic bias, reliability, transparency, and ethical concerns, which may influence the researchers' intention to use these technologies. While previous research has focused on the benefits, challenges, concerns, and determinants of AI-Powered tools' integration in research, studies that specifically explore the factors influencing AI-Powered tools adoption for conducting literature reviews are limited, particularly in EFL contexts such as Morocco. This study addresses this gap by exploring the

factors influencing Moroccan EFL students' behavioral intention to use these tools in the research literature review process. It, therefore, provides empirical and context-specific findings regarding AI-Powered tools adoption in academic research in Moroccan higher education.

Theoretical Framework

Research on technology integration in various fields is guided by several theories and models (Dwivedi et al., 2023). This diversity of theories and models stems from the Theory of Reasoned Action (Yadegari et al., 2022). In the literature, Davis' Technology Acceptance Model is considered the most relevant theoretical background for research on technology acceptance and use (Venkatesh et al., 2007; Lai, 2017; Granić, 2022; Ni & Cheung, 2023). This model posits that the acceptance and adoption of technological devices are generally affected by two determining variables: the perceived usefulness and perceived ease of use. Perceived Usefulness (PU) refers to an individual's intention to use a product if they know it will improve their work, and Perceived Ease of Use (PEU) refers to the amount of effort the application requires and whether or not it is easy to use (Davis, 1989). Although TAM is widely adopted in research on technology acceptance and adoption, it is criticized for its limitations to explain the role of external variables in determining users' intention to adopt such technologies in their workflow (Bagozzi, 2007).

Due the limitations of TAM, this research adopts a modified Theory of Acceptance and Use of Technology2 (UTAUT2) as a theoretical framework. The UTAUT2 has been adopted in several studies on AI-Powered tools' adoption (Sergeeva et al., 2025; Biloš & Budimir, 2024). This Model hypothesizes that behavioral intention is influenced by several constructs, including performance expectancy, effort expectancy, social influence, and facilitating conditions, which are adopted from the original version of UTAUT (Venkatesh et al., 2012). Other constructs were added to the modified version, such as hedonic motivation, price value, and habit. Performance expectancy and effort expectancy have the same meaning as perceived usefulness and perceived ease of use in TAM. Social influence refers to the role of other individuals, such as peers, instructors, and academic scholars, in shaping users' intention to use technological devices. Facilitating conditions refer to how individuals perceive the "support and resources" available for carrying out a task (Venkatesh et al., 2012, p. 6). In this research, facilitating conditions refer to peers, supervisors, and institutional support of Moroccan students to integrate AI-Powered tools in their research. Hedonic motivation refers to "the fun or pleasure derived from using a technology" (Venkatesh et al., 2012, p. 8). Hedonic motivation expresses students' enthusiasm and engagement in implementing AI-Powered tools. Price value can be defined as the monetary cost of the technology in relation to its benefits.

The UAUT framework was extended in this research through the integration of two constructs: Self-efficacy and perceived ethics. Self-efficacy, as defined in Halim et al. (2023), "refers to individuals' perceptions of their capacity to achieve desired outcomes by their efforts" (par. 18). Self-efficacy is integrated in this study as an important construct because of its well-established role in determining individuals' confidence in using new technologies. Students' concerns about the ethical and academic implications of using AI in research have the potential to determine their decision on the use of AI-Powered tools. Therefore, perceived ethics is expected to have a direct influence on the students' behavioral intention to use these technologies. Research also highlights the direct relationship between behavioral intention and actual use of technology (Ni & Cheung, 2023). This means that behavioral intention is a mediator factor of the relationship between the previously mentioned variables and users' actual use of new technologies, such as AI-

Powered tools in their performance. However, this relationship is beyond the scope of this research study because its primary focus is to identify the direct relationships between the participants' behavioral intention as a dependent variable and the other variables as independent variables.

The following visual diagram depicts the proposed conceptual model in this study:

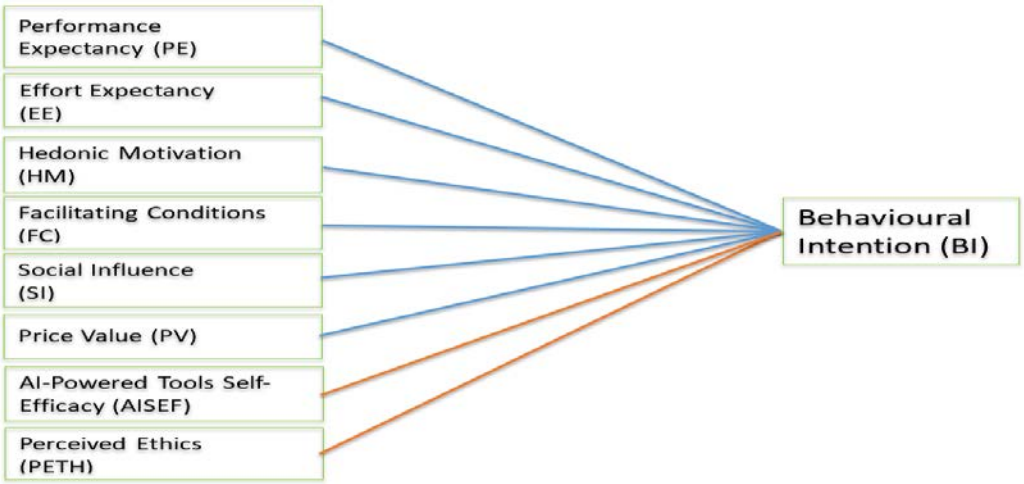


Figure 1. Research model adapted from (Venkatesh et al., 2012) and extended with AI-Powered self-efficacy and perceived ethics.

In summary, the current study extended the original UTAUT2 model by including AI-Powered tools self-efficacy and perceived ethics to provide the theoretical framework guiding the research.

Methodology

Research Design

The present study adopts a quantitative approach to collect data to provide comprehensive insights into the factors influencing Moroccan EFL students' behavioral intention to use AI-Powered tools in the process of academic research literature review. This comprehensive approach builds on the Unified Theory of Acceptance and Use of Technology2 (UTAUT2) constructs such as "performance expectancy", "effort expectancy", "social influence", "facilitating conditions", "hedonic motivation", "price value", and "habit" to provide in-depth analysis of the role of these factors in determining the participants' "behavioral intention" to integrate these tools in their research endeavour.

This approach is relevant to fulfil a comprehensive understanding of how Moroccan students perceive and use AI-Powered tools in conducting literature review in academic research.

Participants

This study employed a convenient sampling method to capture a representative sample of EFL students in various universities in Morocco. Inclusion and exclusion criteria were employed to ensure diversity across educational institutions, regions, demographics, experience levels and gender. 106 EFL students participated in the quantitative survey. Informed consent was obtained and data privacy was guaranteed through anonymity to ensure ethical use of the collected data.

Data Collection Instruments

The study used a structured questionnaire with 5-point Likert-scale items, ranging from strongly disagree to strongly agree, to collect data. The research instrument was adapted from other studies (Acosta-Enriquez et al., 2024; Chao, 2019; Venkatesh et al., 2012; C. Wang et al., 2024), modified to fit the research purpose and piloted with a small sample (10 participants) similar to the research participants. The data collection ranged from March 2025 to the end of May 2025. To ensure the validity, the Cronbach's Alpha test of validity was run and the results showed an acceptable level of consistency (0.8) after a few modifications. It was also validated by 3 experts in the field of research.

Data Analysis

The quantitative data from the questionnaire were cleansed, anonymized and saved in a form for statistical analysis using SPSS software. Descriptive statistics were employed to analyze demographic data, such as means, medians, modes and standard deviations. Multiple Linear Regression Analysis was used to examine the role of the research independent variables in predicting the variability of the dependent variable. This approach is relevant to factor analysis as it is adopted in several studies on AI in educational contexts (Davis, 1989; Almogren et al., 2024).

Results

This section describes the results obtained from descriptive statistics analysis to provide comprehensive insights into the participants and inferential statistics to identify the relationships between the research dependent variable and the independent variables.

Descriptive Statistics

Demographic data

The descriptive statistics analysis revealed that 106 students from 11 different Moroccan Universities participated in this research. 34.9% of the participants were from Moulay Smail University, 13.2% were from Sidi Mohammed Ben Abdellah, 10.4% belonged to Mohammed 1st University and 9.4% were from Sultan Moulay Slimane. The rest were from other universities in various regions. 45.3% were females and 54.7% were males. 83.0% were PhD students and 17.0% were Master's students. The participants represented 4 age groups. 43.4% belonged to the age group 35-44, constituting the majority of the participants, followed by the 25-34 age group (32.1%), the 18-24 age group (17.9%) and the 45-54 age group (6.6%). The sample of the study represents different regions, ages and genders.

Familiarity with AI tools

Table 1 summarizes the participants' level of familiarity with AI-Powered tools. 41.5% of the participants were somewhat familiar with AI-Powered tools, 40.6% of them were familiar with these tools, 13.2% were very familiar, 2.8% stated that they were unfamiliar with these tools and only 1.9% of the participants said that they were very unfamiliar with these tools. Based on these results, it can be assumed that the majority of the participants are aware of AI-Powered tools.

Table 1. *Familiarity with AI-Powered tools*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Familiar	43	40.6	40.6	40.6
	Somewhat familiar	44	41.5	41.5	82.1
	Unfamiliar	3	2.8	2.8	84.9
	very unfamiliar	2	1.9	1.9	86.8
	very familiar	14	13.2	13.2	100.0
	Total	106	100.0	100.0	

Frequency of AI-Powered Tools Usage

The frequency of utilizing AI-Powered tools by the participants in conducting literature review is depicted in Table 2. Most of the participants (59.0%) stated that they frequently use these tools every week, 19.8% mentioned that they use them occasionally, 17.9% implement them very frequently, only 6.6% reported rarely using them and no participants stated that they never use such AI-Powered tools. Based on these findings, it is evident that AI-Powered tools are frequently being used by Master's and doctoral students in their research endeavors. However, the level of frequency of applying these technologies varies from one individual to another.

Table 2. *Frequency of AI tools usage*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Frequently (weekly)	59	55.7	55.7	55.7
	Occasionally (2-3 times a month)	21	19.8	19.8	75.5
	Rarely (once a month or less)	7	6.6	6.6	82.1
	Very frequently (daily)	19	17.9	17.9	100.0
	Total	106	100.0	100.0	

AI-Powered tools used by Moroccan MA and Phd students

Figure 2 depicts the AI-Powered tools used by Moroccan Master's and doctoral students in conducting research literature review. The most recognized AI-Powered tool is ChatGPT. 34.9% of the participants use ChatGPT in doing research literature review. 8.5% use ChatGPT and Semantic Scholar. 6.6% said use ChatGPT and Litmaps. 5.7% use a combination of tools such as Consensus, ChatGPT, Research Rabbit, and Semantic Scholar. Other participants stated that they use other combinations of AI-Powered tools such as Research Rabbit, Consensus, Deepseek, Aithor, Geni ai, Scite, Incitful, Gemini and System Pro. The findings suggest that ChatGPT is considered the most useful AI-Powered tool by Moroccan Master's and doctoral students in conducting research literature review. Although students use other tools, they most of the time use them as complementary tools to ChatGPT.

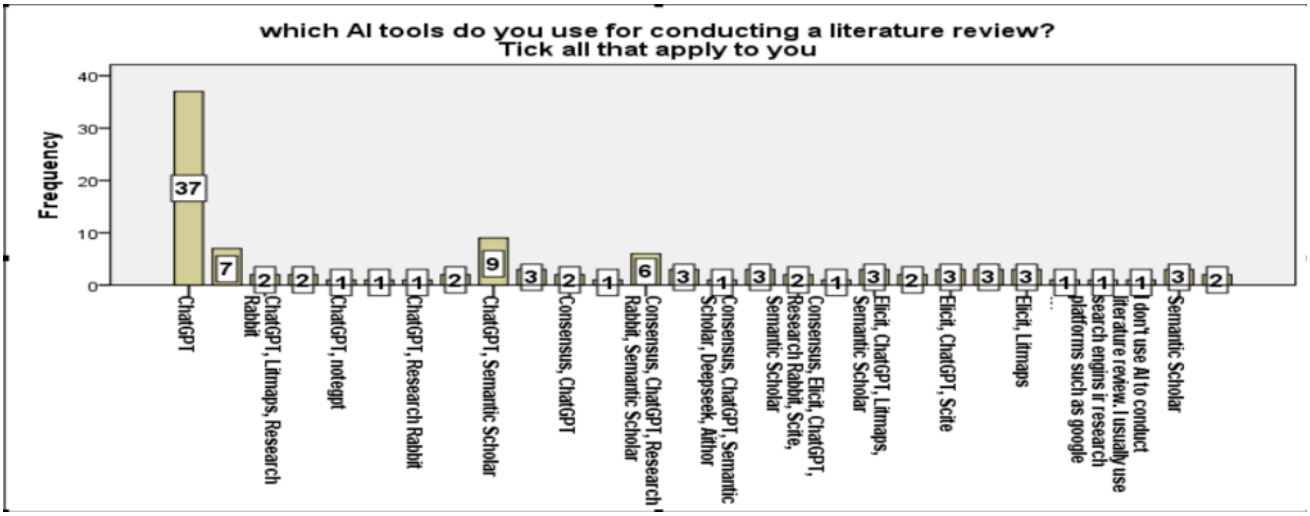


Figure 2. AI-Powered tools used for literature review

Multiple Linear Regression Analysis

Summary Model

Before running multiple regression analysis, a set of assumptions was checked to ensure the reliability of the obtained results. Assumption checks indicated no major violations of linearity, normality and homoscedasticity. However, moderate multicollinearity issues were noticed, especially among EE, FC and AITSE. This may affect the coefficient values of each variable. Nevertheless, the model as a whole showed a high level of significance in predicting the variability of the dependent variable.

Table 3 below shows a high level of correlation between behavioral intention and the predictors (R=.861). And 74.1% of variance in the dependent variable (Behavioral Intention BI) is explained by the independent variables (R^2 =.741), Adjusted R^2 =.719. The research model is statistically significant in predicting variance in the participants' behavioral intention to apply AI-Powered tools in conducting a literature review as part of their research (F = 34.665, p < 0.001).

Table 3. *Summary model*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,861[a]	,741	,719	,494	,741	34,665	8	97	,000

Predictors: (Constant), PV, HM, FC, SI, PE, AITSEF, PETH, EE

Predictors of behavioral intention

Table 4 depicts the standardized coefficients of the contribution of eight predictors to the variance of the dependent variable.

The multiple linear regression analysis showed the significance of four predictors among the eight examined predictors in the research model. Table 4 shows that Performance Expectancy (PE) had a significant influence (β=.369, p =.001) on Behavioral Intention (BI). Effort Expectancy (EE) also had a significant impact on Behavioral Intention (β=.273, p =.008). Hedonic Motivation (HM) had a very significant influence in predicting Behavioral Intention (BI) (β=.374, p =.000). And Perceived Ethics (PETH) had a moderately significant contribution to the variability of

Behavioral Intention (BI) (β=.228, p =.006). However, no significant influence was found of Social Influence (SI) (β=.127, p =.073), Facilitating Condition (FC) (β=-.117, p =.112), AI tools Self Efficacy (AITSEF) (β=-.136, p =.146) and Price Value (PV) (β=-.043, p =,661). Overall, HM had the greatest influence on BI, followed by PE, PETH and EE.

Table 4. *Coefficient*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	-.697	.373		-1.869	.065	-1.437	.043		
PE	.437	.086	.369	5.112	.000	.267	.607	.513	1.948
EE	.301	.111	.273	2.713	.008	.081	.520	.264	3.791
SI	.161	.089	.127	1.810	.073	-.015	.337	.540	1.851
HM	.388	.079	.374	4.889	.000	.231	.546	.457	2.189
PETH	.323	.115	.228	2.808	.006	.095	.552	.405	2.470
FC	-.161	.101	-.117	-1.602	.112	-.361	.039	.504	1.984
AISEF	-.164	.117	-.136	-1.401	.164	-.397	.068	.285	3.503
PV	-.038	.086	-.034	-.440	.661	-.208	.133	.450	2.222

Discussion

This research aimed to explore the factors influencing the behavioral intention of Moroccan Master's and doctoral students to use AI-Powered tools in conducting literature review. Drawing on the ATAUT2 framework and the existing literature, eight hypotheses were tested through multiple linear regression to identify the predictors' contribution to the variance of the students' behavioral intention to use these tools. The findings showed a significant influence of four predictors out of the eight. Performance expectancy (PE), effort expectancy (EE), hedonic motivation (HM) and perceived ethics (PETH). While social influence (SI), facilitating conditions (FC), AI tool self-efficacy (AITSEF) and price value (PV) showed no significant influence on the behavioral intention of the students to implement these tools in their research literature review.

These findings suggest that there is a significant positive influence of performance expectancy, effort expectancy, hedonic motivation, and perceived ethics on Moroccan Master's and doctoral students' behavioral intention to use AI-Powered tools for conducting research literature reviews. Conversely, there is no significant influence of social influence, facilitating conditions, AI tool self-efficacy, and price value on their intentions to leverage AI-Powered tools in reviewing the literature.

HP1. The Moroccan students' performance expectancy (PE) of AI-Powered tools for literature review positively influences their behavioral intention (BI) to use them.

HP1 was supported. Performance Expectancy (PE) had a significant influence (β=.369, p = .001) on Moroccan Master's and doctoral students' Behavioral Intention to use these tools in reviewing the literature while conducting their research. This implies that the students who think that using such tools would improve their research efficacy and quality are more likely to employ them, while students who think otherwise would not have the intention to implement these technologies in their research. This finding aligns with previous studies that emphasized the performance expectancy as a key predictor in shaping technology users' behavioral intention to adopt them (Cortez et al., 2024; Foroughi et al., 2023; Intiser et al., 2023; Sergeeva et al., 2025).

HP2.The Moroccan students' perceived effort expectancy (EE) of AI-Powered tools for literature review positively influences their behavioral intention to use them.

HP2 was supported. The finding showed that Effort expectancy (EE) is a significant predictor of behavioral intention (β=,273, p =,008). This means that the students who believe that AI-Powered tools are easy to implement tend to actually use them in their research literature review. This aligns with the findings of previous studies that showed the significant positive impact of effort expectancy on behavioral intention to use AI or digital tools (Foroughi et al., 2023; Intiser et al., 2023; Chao, 2019). However, this finding contradicts the findings of (Acosta-Enriquez et al., 2025), in which effort expectancy was negatively associated with AI model use and effort expectancy did not have any significant effect on behavioral intention (Biloš & Budimir, 2024).

HP4.The Moroccan students' motivation to implement AI-Powered tools for literature review positively influences their behavioral intention to use them.

HP4 was supported. Hedonic motivation was considered a very significant predictor of behavioral intention (β=.374, p =.000) in this research. This suggests that the students with strong intrinsic motivation and enjoyment of using AI-Powered tools are more likely to employ them in their research. This finding aligns with (Venkatesh et al., 2012) where hedonic motivation was considered a key predictor of behavioral intention to use technology in consumers acceptance and use contexts. Hedonic motivation also was confirmed to play an important role in shaping technology and AI users in other studies (Foroughi et al., 2023; Intiser et al., 2023; Ni & Cheung, 2023; Biloš & Budimir, 2024).

HP7. The Moroccan students' perceived ethics and academic integrity of AI-Powered tools for literature review negatively influence their behavioral intention to use them.

The results showed a significant positive influence of perceived ethics on behavioral intention (β=.228, p =.006). This result contradicts hypothesis 7, stating that Moroccan students' perceived ethics and academic integrity of AI-Powered tools for literature review negatively influence their behavioral intention to use them. Instead, the findings suggest that the students' awareness of AI-Powered tools' ethical use aligns with research integrity and encourages them to adopt such tools in their research. This aligns with , where academic integrity was considered a key predictor of AI use in academic contexts, stressing the role of ethical awareness in encouraging responsible adoption of AI rather than inhibiting it (Acosta-Enriquez et al., 2025).

The remaining predictors, social influence (SI), facilitating condition (FC), AI tools self-efficacy (AITSEF) and price value (PV) were not significant predictors of behavioral intention in this study. Facilitating condition, which was hypothesized to have a positive influence on students' behavioral intention to use AI-Powered tools for literature review, was not supported in this research. Facilitating conditions was not a significant predictor of behavioral intention (β=-.117, p =.112). This finding aligns with previous research that has also demonstrated that facilitating conditions is not a key predictor of behavioral intention in the field of technology and AI acceptance and use (Foroughi et al., 2023; Biloš & Budimir, 2024; Ni & Cheung, 2023). However, it contradicts the findings of several studies, which found that facilitating conditions are important predictors of behavioral intention (Cortez et al., 2024; Intiser et al., 2023) .

Surprisingly, the findings of this study confirmed that social influence (SI) was nearly significant but did not meet the threshold (β=.127, p =.073), thus rejecting hypothesis 5's expectation that social influence significantly influences Moroccan students' behavioral intention to use AI-Powered tools in reviewing the literature. This may be explained by students' reliance on their perceptions rather than their peers and supervisors' recommendations while making decisions about AI use. This result aligns with (Foroughi et al., 2023), where social influence had

no significant influence on behavioral intention to use ChatGPT for educational purposes. Other studies also emphasized that social influence had a limited or no significant effect on behavioral intention to use AI in their workflow (Intiser et al., 2023). However, this contradicts the findings of other studies, where social influence was considered a significant predictor of behavioral intention (Acosta-Enriquez et al., 2025; Biloš & Budimir, 2024; Chuyen & Vinh, 2023). The discrepancy between these findings may indicate that the role of peers and supervisors in the different contexts of the studies is perceived in different ways. In some contexts, the peers and supervisors may support the use of AI-Powered tools and encourage students to use them for academic purposes, while in other contexts, they oppose the use of these technologies and discourage students from using them.

AI tools' self-efficacy was insignificant in this research (β=-.136, p =.146). The sixth hypothesis, expecting that Moroccan students' self-efficacy of using AI-Powered tools for literature review positively influences their behavioral intention to use them, was rejected. This finding contradicts Wang et al. (2021), where self-efficacy was considered a key predictor of behavioral intention to use AI-based tools for educational purposes, among other factors. However, it aligns with Acosta-Enriquez et al. (2025), where technology self-efficacy was positively associated with AI models use in research practices. This may be explained by the absence of training and sufficient knowledge of AI-Powered tools in the Moroccan context. This absence pushes students to believe in their own capacities and to develop self-confidence in dealing with such innovative AI-Powered tools.

The price value was an insignificant predictor of behavioral intention in this research (β=-.043, p =.661), rejecting the hypothesis 8 that the price value of AI-Powered tools significantly influences students' behavioral intention to use them in the literature review process. This suggests that students may prefer using free AI-Powered tools such as ChatGPT and other tools. This finding is in line with Biloš & Budimir (2024), which found no significant impact of the price value of ChatGPT on behavioral intention to use it among Croatian Generation Z users. However, it contradicts Ni & Cheung (2023), where the price value was a significant factor in shaping Chinese students' behavioral intention to use intelligent tutoring systems in English language learning. This finding also refutes the findings of Sergeeva et al. (2025), where the price value of generative artificial intelligence had a significant positive impact on Pyatigorsk State University students' behavioral intention to use it. It also opposes Intiser et al. (2023) where the price value of digital writing assistant tools had a significant influence on Bangladeshi students' behavioral intention to use such technologies.

Conclusion

The findings of this research revealed a significant positive influence of performance expectancy, effort expectancy, hedonic motivation and perceived ethics on Moroccan Master's and doctoral students' behavioral intention to use AI-Powered tools in conducting academic research literature review. On the other hand, Social influence, facilitating condition, AI tools self-efficacy and price value were not significant predictors of Moroccan Master's and doctoral students' behavioral intention to apply these technologies in their research endeavors. The discrepancy between the findings of this study and other studies may be related to other context-related variables of the participants. The originality of this study lies in the extension of the UTAUT2 framework by including AI tools self-efficacy and perceived ethics as determiners of intention in educational contexts. Additionally, it the first empirical investigation of the factors

influencing Moroccan doctoral students' intention to integrate AI-Powered tools in their research literature review, thereby contributing context-specific findings on AI adoption in higher education. Future research may employ other qualitative methods, longitudinal research, recruit a larger sample, and consider the correlation of moderating variables to give more insights into this research topic.

Implications and Recommendations

In line with the Moroccan Ministry of Higher Education's planning to integrate artificial intelligence in education, this study offers several meaningful implications to the stakeholders in the field. First, the findings of this study suggest that the students are inclined to use AI-Powered tools in their research when they perceive these tools to be useful (PE), easy to implement (EE), and engaging (HM). This suggests that institutions should encourage students to appropriately integrate these technologies to improve the research quality and efficiency, and provide clear guidelines to orient them. Second, the insignificant influence of AI tools' self-efficacy (SEF) may be attributed to a lack of training on the use of AI tools, which can be addressed by the provision of training programs, including practical workshops and tutorials on the effective use of AI in research. Third, given the insignificant impact of social influence (SI) and facilitating conditions (FC), this may reflect authorities' overemphasis on the disadvantages of AI integration in research, such as over-reliance and breaching academic integrity, which overlook its potential in improving academic research. Instead, institutions should promote a supportive culture and develop national strategies to encourage AI integration in the academic sphere. Fourth, AI perceived ethics (PETH) that positively influenced the students' intention to use AI-Powered tools in reviewing the research literature, rather than impeding their integration, could imply that ethical awareness empowers the use of such tools. Therefore, institutions and policymakers should look at AI ethics as an enabler of the responsible use of these tools instead of banning their use.

Limitations

The findings of this research study should be interpreted with caution due to some limitations. First, the data collection instrument relied on a self-reported questionnaire, which may introduce biased information that restricts the generalization of its findings. Second, the study used a relatively small sample (N 106 participants), which may affect the generalizability of the findings. Third, the research only explores the direct influence of the extended UTAUT2 predictors on behavioral intention.

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