
| RESEARCH ARTICLE

How Generative AI Tools Support the Learning of American Idioms: Insights from Moroccan Postgraduate Students

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| ABSTRACT

The present study seeks to explore the use of AI tools, attitudes, and perceived idiomatic knowledge among Moroccan students enrolled in EMI programs in higher education institutions. 178 participants, who were Moroccan Master's students from the department of English studies from Faculties of Arts and Human Sciences, Meknes and Kenitra, participated in the present study. It should be noted that the employed research design involved a convergence approach. In order to accomplish the aim of the research, a well-structured questionnaire consisting of close-ended questions and reflective open-ended questions was applied. According to the results, 86.5% of participants make use of AI tools quite often. In accordance with that, ChatGPT, Claude, and Gemini were mentioned as the most used platforms. As for the attitudinal aspects, all 7 dimensions obtained more than scale average ($M > 3.0$). Ease of Use ($M = 3.72$) and Usefulness ($M = 3.65$) were rated the highest, followed by Retention ($M = 3.16$) as the lowest dimension. Average knowledge of idiom score was 2.64/5.0, with a sharp reduction in familiarity between idioms with transparent cultural backgrounds ('Under the weather', $M = 3.97$) and those with obscure cultural backgrounds ('Nailing Jell-O to the wall', $M = 1.82$). Frequency of use by AI was associated with positive attitude towards AI ($r_s = 0.372$, $p < .001$), but not with idiomatic knowledge; neither was frequency of use by the participants. CEFR level had a trend but insignificant effect on idioms ($F(2,175) = 2.889$, $p = .058$). However, there was a significant effect comparing the Intermediate and C2 levels ($p = .023$). It is noteworthy that even combined, independent variables only accounted for 4.9% variance in idioms scores. Our findings highlight the importance of AI incorporation into EMI education using culturally sensitive approaches such as generating examples and voice interactions.

| KEYWORDS

AI-mediated learning, idiom acquisition, EFL, CALL, Moroccan university students, American English idioms, ChatGPT, attitudinal perceptions, CEFR

| ARTICLE INFORMATION

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1. Introduction

Undeniably, idiomatic expressions understanding and mastery are often cited as one of the most persistent obstacles in second and foreign language learning. Despite the fact that idioms, in nature, are holistic and conventionalized chunks, their figurative meanings cannot be derived from constituent words only. Thus, the interpretation is semantically opaque and above all culturally embedded (Bobrow & Bell, 1973; Swinney & Cutler, 1979). Things get worse when it comes to idioms used by Americans. American English idioms add a further layer of difficulty for EFL learners in that they are required to acquire not only linguistic form but familiarity with socio-cultural contexts drawn from everyday life, history, popular media, and sports at large (Cooper, 1999; Boers, 2001).

Left alone, Master's-level EMI learners in Moroccan higher education confront this this linguistic and cultural quandary with very limited structural support. The students are supposed to showcase near-native competency. In contrast, very limited exposure to colloquial American English is afforded by the currant syllabi, which are delineated as being rigid in linguistic and cultural terms. Along the same lines, the absence of contact hours coupled with the lack of immersive cultural input (Laufer, 1997; Nation, 2001) make the existing linguistic and cultural situation worse. Building on this, AI-powered tools, including Claude (Anthropic), ChatGPT (OpenAI), and DeepSeek, Gemini (Google) have introduced new options to address the status-quo. On-demand, personalized target-language interaction relevant to lexical and idiomatic acquisition, are believed to help postgraduate university understand and internalize American idioms.

2. Literature review

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2.2 Statement of the problem

Granting that AI adoption among EMI postgraduate university students has been widely studied, the affordances of AI-mediated interaction with respect to idiomatic knowledge acquisition has received less consideration. Such gains remain empirically unresolved so far. Three intersecting research gaps frame the rationale of the present study. First, it can be confidently stated that nearly all CALL and AI-in-education research has been conducted in East Asian, European, or North American contexts (Li & Lan, 2022; Koltovskaia, 2020). Its bears mentioning that Morocco which boasts a rich multilingual and post-colonial linguistic heritage has received little attention. Second, vocabulary-focused CALL research has largely addressed decontextualized word-form learning, not culturally encoded multiword expressions.. Third, most existing methodology relies on Likert-scale surveys without concurrent knowledge assessments, which prevents examination of whether positive attitudes covary with demonstrated lexical performance.

2.3 Research objectives

The current study pursues 5 objectives: (1) to describe AI tool usage patterns and preferences among Moroccan MA English students; (2) to measure self-assessed knowledge of 10 American idioms across a transparency gradient; (3) to assess attitudinal perceptions of AI-mediated idiom learning across 7 constructs; (4) to investigate inferential relationships between AI usage, attitudes, learner variables, and idiom knowledge; and (5) to derive pedagogical recommendations for AI integration in Moroccan EFL programs.

2.4 Theoretical framework

The study draws on Krashen's (1982) Input Hypothesis and Schmidt's (1990) Noticing Hypothesis in order to test whether AI interactions provide a facilitative input that possibly support incidental idiomatic knowledge acquisition. Building on this, Dual-coding theory is used to inform the analysis of multimodality of AI features such as voice chat and example generation. Viewed as parallel encoding pathways, the latter are supposed to remarkably improve idiomatic understanding and retention.

3. Methodology

3.1 Research design

To achieve the study objectives, a convergent research design was used. Interestingly, an online self-administered questionnaire was utilized to answer the research questions. On the one hand, the quantitative component ventured to capture demographic data, AI usage patterns, and Likert-scale attitude ratings. On the other hand, the qualitative component aimed at collecting open-ended reflections on perceived advantages, limitations, and retention strategies.

3.2 Participants

It is important to note that the study focused on EMI postgraduate students from two MA semesters (2025-2026) at the Faculties of Arts and Human Sciences in Meknes (UMI) and Kenitra (Ibn Tofail). A purposive sample of 178 participants was selected. 97 students enrolled in Semester 4 (S10, 54.5%) and 81 students in Semester 2 (S8, 45.5%). Gender balance was nearly achieved, with 94 female participants (52.8%) and 84 male participants (47.2%). The age of participants ranged from 19 to 50 years, with an average of 26.7 years. Proficiency levels were diverse, with 3 CEFR bands represented: 112 students at Advanced C1 (62.9%), 33 at Near-Native C2 (18.5%), and 33 at Intermediate B1/B2 (18.5%).

3.3 Instrument

The survey comprised 5 parts. In the first part, Section A, participants provided demographic details through 4 closed-ended questions. Section B investigated the use and frequency of AI tools with 2 multiple-choice questions. Section C gauged opinions by presenting 7 Likert scale statements, ranging from Strongly Disagree to Strongly Agree, covering aspects like Usefulness, Context, Retention, Cultural Explanation, Feedback, Ease of Use, and Efficiency. Section D involved ranking 10 American English idioms using a self-assessment scale from Level 1 (never seen) to Level 5 (can use in a sentence), including both clear (e.g., 'Under the weather') and culturally complex (e.g., 'Nailing Jell-O to the wall') phrases. Finally, Section E featured 3 open-ended questions prompting reflective responses.

4. Results/Finding

178 valid responses were collected. The sample shows gender balance (Female: 52.8%; Male: 47.2%), was slightly weighted towards Advanced level learners (C1: 62.9%) and also the older cohort shows up as a slight majority (S10: 54.5%).

4.1. AI tool usage patterns

Using AI tools frequently was 55.1% while only 1.7% of users never used any AI tool. Out of all participants, 86.5% used AI at least frequently to study English. Around 35% of respondents used ChatGPT as a primary tool, followed by Claude at 28%.

4.2. Attitudinal perceptions toward AI

All seven Likert dimensions were rated higher than the midpoint of the scale 3.0. There is a positive perception of AI for learning idioms. Ease of use and usefulness received the highest mean value and standard deviation of 3.72 and 1.15 respectively. Retention was the most disputed dimension (M = 3.16, SD = 1.29).

5. Discussion

5.1 Positive attitudes and normalized AI use

The presence of uniformly positive attitudes (where all Likert scale items score $M > 3.0$) coupled with very high adoption rates (86.5% frequent or daily use) proves that artificial intelligence is integrated into the learning of the English language in this particular context. Of the top-performing dimension (Ease of Use; $M = 3.72$), we infer that it was the affective and motivational factors behind the use of AI tools for learning.

5.2 Contextual learning as a key affordance

Usefulness ($M = 3.65$) and Context ($M = 3.54$) were among the top-rated dimensions, implying that learners perceive AI to be quite efficient in helping to explain figurative meanings as well as to situate idioms in practical contexts. The theoretical significance lies in the fact that idioms are considered to have non-compositional meaning. Generation of examples prevailed as the primary method of retention (51.1%). The capacity for generating contextually embedded example sentences is indeed the strength of AI over static resources.

5.3 Retention: the most contested dimension

Retention had the lowest mean score of $M = 3.16$ with $SD = 1.29$, indicating a wider variation of opinion. Learners who were auditory or interpersonal and used voice chat had higher results in retention, whereas learners with visual and mnemonic preferences preferred the conventional approach. In addition, open-ended questions revealed that many participants use more than one feature of AI in their learning process instead of focusing on just one.

5.4 Cultural competence gap

The Culture dimension ($M = 3.45$) got moderately positive feedback, yet it is important to discuss some limitations mentioned in qualitative answers. There were three least scoring idioms — 'Carrying coals to Newcastle' ($M = 2.02$), 'To be in a sticky wicket' ($M = 2.06$), and 'Nailing Jell-O to the wall' ($M = 1.82$) which have a cultural or even historical meaning (British colonization and trade, cricket tradition, and American wit, respectively). The wide-ranging understanding of idioms by AI cannot imply the ability to provide an explanation for the culturally specific ones. A couple of interviewees stated that AI programs have a tendency towards mainstream American culture.

5.5 Attitude–performance decoupling

The fact that there is no significant correlation between the attitude towards AI scale and idioms knowledge ($r = -0.038$, $p = .616$) has theoretical significance. Since attitude and achievement are different constructs, they need to be tested using different instruments. This poses questions on the reliability of attitude-based tests alone for CALL. Given the R^2 value of 4.9% in the complete regression model, it becomes apparent that more indicators, such as objective achievement measure and variables like number of hours spent reading, cultural experiences, and duration of immersion, would be necessary.

5.6 Gender and proficiency effects

Male participants perceived higher values for all attitude dimensions compared to the females, though the difference did not prove statistically significant, while the magnitude of the effect size ($d = 0.235$) qualifies as small-to-moderate, possibly attributable to differences in AI familiarity/technology confidence. A near-zero effect of academic year on idiom knowledge ($d = -0.043$) indicates that MA level advancement without idiom-specific training provides no gain in American idiom knowledge.

6. Conclusion

In this study, 178 Moroccan MA-level students of English as a foreign language (EFL) were surveyed concerning their usage, attitudes towards and idiomatic knowledge of AI. There are three important conclusions from this research. First of all, AI is widely used (86.5% of respondents reported themselves either frequent or daily users) and perceived to be useful, with example generation being named as the leading approach for remembering idioms. The second finding is the correlation between attitude towards AI and its usage ($r_s = +0.372$; $p < .001$) despite the lack of prediction power when it comes to idiomatic knowledge of participants. Finally, cultural transparency and proficiency level influence familiarity with idioms considerably, as shown by the statistically significant differences between C2 (higher) and B1/B2 (lower) groups. Such evidence suggests an alternative model of teaching that combines the use of artificial intelligence with a culture-informed approach to second language learning, without replacing either one. The teacher needs to integrate examples generated using AI and voice chat with the goal of teaching idioms while developing critical awareness of AI and cultural context and teaching verification techniques. Such studies require pre- and post-testing using objective measures of idiom knowledge and retention.

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