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Assessing Originality and Cultural Contextualization in Psychology Textbook Development: A Structural Case Analysis

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Assessing Originality and Cultural Contextualization in Psychology Textbook Development: A Structural Case Analysis

Abstract

Textbooks play a central yet underexamined role in shaping how disciplinary knowledge is organized and transmitted within higher education. Although current debates on curriculum reform emphasize diversity and contextual responsiveness, limited empirical research has examined how locally authored textbooks adapt dominant disciplinary models within globally uneven systems of knowledge production. This study proposes a systematic framework for evaluating textbook localization and applies it to a widely used Arabic-language cognitive psychology textbook. To our knowledge, no previous research has examined these dimensions in combination within Arabic-language higher education materials.

Using mixed-methods content analysis, four indices were operationalized: Structural Convergence, Conceptual Reproduction, Citation Transparency, and Cultural Contextualization. The analysis included structural mapping, paragraph-level coding, and citation auditing with high inter-rater reliability. Findings revealed strong structural alignment with canonical Western cognitive psychology textbooks, high levels of conceptual reproduction, limited citation transparency, and an absence of culturally contextualized examples.

These findings suggest that localization occurred primarily through linguistic translation rather than pedagogical or conceptual adaptation. The study introduces a replicable analytical framework for evaluating textbook development and contributes to broader discussions on curriculum localization, knowledge circulation, and epistemic equity in globally diverse higher education systems.

Keywords: Textbook development, Curriculum localization, structural convergence, citation transparency, higher education pedagogy

1. Introduction

Textbooks have an important but often overlooked role in higher education. In psychology especially, textbooks usually serve as the main source through which undergraduate students first learn about discipline in a systematic way (Apple, 1992; Altbach, 1991; Issitt, 2004). Although they are often presented as teaching tools that bring together well-established research, textbooks do more than simply summarize studies. They organize ideas in a certain order, show which topics come first and which come later, and indirectly suggest what is considered basic or essential in the field (Kuhn, 1962; Griggs & Jackson, 2013). For this reason, textbooks are not neutral tools that only pass on knowledge. Rather, they help shape how knowledge is arranged and understood, and they contribute to maintaining particular ways of thinking within the discipline. In other words, they support and repeat specific structures of knowledge over time. Despite the importance of this role, we still do not fully understand how textbooks select, organize, and present disciplinary knowledge. This gap is especially noticeable in non-Western educational contexts, where global academic influences can create unique pressures on how curricula are designed and developed (Connell, 2007; Marginson, 2010).

In recent years, higher education has given more attention to curriculum reform, diversity, and the need to respond to local contexts. In psychology, discussions about globalization have focused on issues such as the overrepresentation of WEIRD samples and the importance of producing knowledge that is more inclusive and culturally sensitive (Arnett, 2008; Marsella, 2013; Henrich et al., 2010; Saxena et al., 2024). However, there has been relatively little empirical research on how disciplinary knowledge is reorganized when textbooks are written in non-Western contexts, especially when these books are presented as original works rather than translations.

This gap is important because textbooks play a major role in shaping how disciplinary knowledge is passed from one generation of students to the next (Smeby, 1996; Sleeter & Grant, 1991). The

way a textbook is written can influence how students understand the structure and priorities of the field. Therefore, the difference between simply translating existing material and genuinely adapting or developing it for a local context deserves careful empirical examination. This is particularly relevant in regions where global systems of knowledge production create unequal patterns in who produces knowledge and how it circulates internationally (Hanafi, 2011; Hanafi & Arvanitis, 2016).

The question, therefore, is not whether well-known psychological theories are valid or supported by evidence. Rather, the issue is how these theories are organized, credited, and explained when they are included in textbooks written for students who differ in language and culture. In other words, the concern is not about the truth of the theories themselves, but about how they are presented and framed in educational contexts. Research in curriculum studies has long argued that the way knowledge is organized is not simply a technical matter. It is formative. The order of topics, the choice of examples, and even the way authors are cited all influence how students understand and define a discipline (Bernstein, 2000; Tikly, 2004; Young, 2008). These decisions may seem minor, but they shape the overall picture students form about what psychology is and how it works. It has been suggested that certain structural patterns continue over time not because alternative views are openly rejected, but because inherited ways of organizing knowledge come to seem natural and unquestioned (Quijano, 2000). This point, although sometimes overlooked, has important implications. As Connell (2007) argues, knowledge production operates within unequal global systems, where theory is often developed in central countries, while other regions mainly apply and teach it. Understanding how textbooks reflect or reinforce these patterns is therefore an important task.

This issue becomes especially important in cognitive psychology, a field that is often described as dealing with universal mental processes. It is true that many cognitive mechanisms appear to be consistent across cultures. However, research on bilingual cognition, reading systems, and

diglossic language environments shows that cognitive processes develop and operate within specific linguistic and social contexts that influence both how people think and how they are taught (Ibrahim et al., 2002; Saiegh-Haddad, 2005; Taha et al., 2013; Bialystok, 2017). In other words, cognition may be broadly shared, but it is also shaped by language and culture in meaningful ways. For this reason, the extent to which textbooks take these contextual factors into account has clear implications for curriculum development in higher education. If such factors are ignored, the curriculum may present cognitive psychology as more context-free than it actually is. Yet, despite the importance of this matter, there has been little systematic research examining how locally written textbooks address these cultural and linguistic dimensions. As Marginson (2010) notes, higher education and knowledge operate at global, national, and local levels at the same time. However, we still lack clear empirical understanding of how global disciplinary models are adopted, modified, or simply reproduced within local educational contexts.

The Arab world offers a particularly useful context for examining these issues. Although higher education enrollment and institutional expansion have increased significantly across the region, knowledge production in social sciences continues to face important structural challenges. Hanafi (2011) describes this as a tension between publishing internationally and losing local impact, or publishing locally and losing global visibility. This tension also affects textbook development. The pressure to follow internationally recognized curricular models may reduce the space for meaningful local adaptation. In addition, the limited availability of psychometrically validated and culturally adapted instruments and educational materials for Arabic-speaking populations (Fasfous et al., 2017) highlights the importance of examining how current textbooks balance global disciplinary standards with local educational needs. In this area, an informal survey of Arabic-language book databases conducted by the present author suggests that the number of originally written Arabic-language textbooks in cognitive psychology published over the past two decades (2006–2026) is very small, approximately four to five titles (e.g., Al-Atoum, 2016; Mohammad, 2011; Al-Sharqawi, 2003).

This number is striking when compared to the large and continuous production of cognitive psychology textbooks in English, where new titles and revised editions are released every year. Because of this clear shortage, each available Arabic-language textbook plays a major role in

shaping how Arabic-speaking psychology students first understand the field. When the number of available texts is so limited, the way each book organizes, adapts, and presents knowledge becomes especially important for curriculum development across the region.

Based on these considerations, the present study examines a widely used Arabic-language textbook in cognitive psychology as a case through which broader structural questions can be explored. The aim is not simply to review a single book, but to use it as an entry point to understand larger patterns in how knowledge is organized and presented. Specifically, the analysis focuses on four related dimensions: the extent to which the textbook follows the structure of well-known cognitive psychology textbooks; the balance between direct reproduction of existing material and original integration or synthesis; the clarity and transparency of citation practices; and the inclusion of culturally and linguistically relevant examples.

Through this analysis, the study seeks to address an important gap in empirical research on how textbooks are adapted -or not adapted- within Arabic-speaking educational contexts. To maintain focus on structural issues rather than personal critique, the textbook is not identified by name. This decision reflects a methodological choice to emphasize broader organizational patterns instead of evaluating a specific author, in line with content analysis approaches that prioritize systematic examination over individual judgment (Hsieh & Shannon, 2005). At the same time, it should be acknowledged that not naming the textbook limits external verification and transparency. This limitation is recognized and discussed explicitly in the Limitations section.

By defining these dimensions clearly and examining them through systematic content analysis, this study contributes to research on textbook evaluation (Marek & Griggs, 2001; Griggs & Jackson, 2013). It also proposes a framework that other researchers can use to assess how textbooks are adapted in different higher education contexts. The intention is not to criticize the use of existing theories or ideas. In fact, building on previous knowledge is a normal and necessary part of academic work. Rather, the focus is on how such borrowing is organized, acknowledged, and adapted within textbooks that are presented as locally authored.

Through this approach, the study aims to strengthen methodological tools for evaluating curriculum development across diverse higher education systems. In Connell's (2007) terms, this can be seen as an effort to make visible the structural patterns that continue across contexts, often through educational materials that appear neutral at first glance. In this way, the study also

contributes to what Marginson and Rhoades (2002) describe as a more “glonacal” understanding of knowledge organization, that is, an understanding that recognizes the interaction between global, national, and local levels in shaping higher education.

2. Method

2.1 Research Design and Analytical Orientation

This study employed a mixed-methods content analysis combining quantitative structural mapping with qualitative conceptual examination. Content analysis was selected not as a purely descriptive technique, but as a systematic strategy for identifying patterned regularities in textual organization, explanatory sequencing, and citation practices within educational materials (Hsieh & Shannon, 2005; Krippendorff, 2018). The analytic aim was comparative and diagnostic rather than evaluative in a normative sense: the study sought to document degrees of structural convergence, conceptual reproduction, citation transparency, and cultural contextualization in a locally authored cognitive psychology textbook. This approach, it must be acknowledged, constitutes a pragmatic and defensible methodological orientation given the exploratory scope of the investigation.

The research is situated at the intersection of textbook evaluation research (Marek & Griggs, 2001; Griggs & Jackson, 2013), curriculum studies concerned with the structuring of disciplinary knowledge (Apple, 1992; Bernstein, 2000), and scholarship examining knowledge circulation within asymmetrical global academic systems (Connell, 2007; Tikly, 2004; Marginson, 2010). However, the empirical procedures themselves were grounded in explicit coding criteria and replicable scoring procedures rather than interpretive critique. In this view, the analytical framework should be regarded as a systematic adaptation designed to align with established content analysis methodologies while optimizing for the specific demands of cross-linguistic textbook evaluation.

2.2 Corpus Selection

Primary Text

The focal text is a widely adopted Arabic-language cognitive psychology textbook used in undergraduate psychology programs across multiple Arab universities. The analyzed edition

comprises 12 chapters (approximately 350 pages) covering core domains typically included in introductory cognitive psychology curricula: perception, attention, memory systems, language, problem solving, decision-making, cognitive development, and individual differences. The textbook is presented as an original Arabic-language publication rather than a translated edition. It must be noted that the selection of a single focal text, while limiting generalizability, allows for the depth of structural analysis necessary at this preliminary stage of framework development. As Stake (1995) has argued, instrumental case study derives its value not from representativeness but from the analytical insights it generates for understanding broader phenomena.

Comparative Texts

To better understand the structural patterns observed in the textbook, three well-known English-language cognitive psychology textbooks were selected for comparison: Goldstein (2019), Eysenck (2012), and Matlin (2009). These books were chosen as they represent widely used models for organizing cognitive psychology courses at the undergraduate level. They have also been published in several editions over time, which suggests that their structure has become relatively stable in teaching practice (Griggs & Jackson, 2013). The goal of this comparison was not to identify one specific source from which the Arabic-language textbook may have drawn its material. Rather, the aim was to examine the extent to which the structure and concepts in the Arabic textbook resemble the dominant patterns commonly used in the field. In this sense, the comparison focuses on broader disciplinary organization rather than direct textual borrowing.

Although the comparison does not cover all possible textbooks, it provides a reasonable reference point for evaluating structural similarity. This approach allows convergence patterns to be examined in a systematic and defensible way.

Operationalization of Analytical Indices

To enhance transparency and replicability, four analytical indices were operationalized. Each index was designed to capture a distinct dimension of textbook development, and together they provide a comprehensive, though necessarily preliminary, diagnostic framework for evaluating localization processes. The rationale for selecting these particular dimensions draws on curriculum

studies (Bernstein, 2000), textbook evaluation research (Marek & Griggs, 2001), and scholarship on knowledge circulation in higher education (Connell, 2007; Marginson, 2010).

- **Structural Convergence Index (SCI)**

Structural similarity was examined by looking at several levels of organization in the textbooks. These included the order of chapters, the structure of subheadings within chapters, the way ideas develop across sections, and the teaching features used to support learning (for example, learning objectives, boxed research examples, summaries, and glossary organization). In other words, the analysis did not focus only on whether the same topics appeared, but also on how those topics were arranged and explained. The reasoning behind this approach is that the order and flow of explanation may reveal more about structural similarity than simple topic overlap. Two textbooks may cover the same subjects, but the way they organize and present them can differ substantially. Based on predefined criteria, similarity scores were calculated to estimate the degree of alignment. These scores ranged from minimal structural similarity (below 60%) to very high structural alignment (above 90%).

- **Conceptual Reproduction Ratio (CRR)**

To examine the level of textual originality, a total of 302 passages were systematically sampled from all 12 chapters of the textbook. Each passage was then coded into one of three mutually exclusive categories: direct translation, paraphrased reproduction, or original synthesis.

Direct translation referred to passages that preserved both the conceptual structure and the sequence of the original explanation with very little modification in wording or organization. Paraphrased reproduction referred to passages in which some vocabulary changes were made, but the overall theoretical explanation and the way the ideas developed remained essentially the same. In contrast, original synthesis referred to material that reorganized, expanded, or explained established ideas in a clearly different way. Although this three-category coding system simplifies what is likely a more continuous range of variations, it provides a practical framework for systematically evaluating levels of originality in the text.

- **Citation Transparency Rate (CTR)**

Citation transparency was examined by reviewing whether key psychological theories and models were clearly attributed in the textbook. Specifically, the analysis focused on 34 well-

known psychological models and paradigms discussed in the text. For each case, citations were coded into three categories: full citation (clear attribution with a complete reference that could be traced in the bibliography), partial citation (mention of the theorist or researcher without a full reference), and absence of citation. The purpose of this analysis was not to count the total number of references in the textbook. Instead, the focus was on whether the intellectual origins of ideas were visible within the explanatory sections of the text. In other words, the question was whether students reading the explanations could identify where the ideas originally came from.

It should be noted that citation practices in textbooks differ from those used in primary research articles (Issitt, 2004). Textbooks often simplify or reduce formal referencing for teaching purposes. However, the way attribution appears- or does not appear- still has consequences. It can influence how students understand the development of ideas in psychology and how they learn scholarly conventions related to intellectual credit and academic sources.

- **Cultural Contextualization Score (CCS)**

Cultural contextualization was examined by coding whether the textbook included examples connected to the local context of Arabic-speaking students. This included several possible indicators: the use of Arabic linguistic examples in discussions of language processing, references to cognitive research conducted in the region, discussion of bilingual cognition relevant to Arabic speakers, or examples adapted to local educational settings. The purpose of this analysis was to determine whether theoretical explanations were presented within the social and linguistic environment of the intended readers. In other words, the study examined whether abstract cognitive models were linked to examples that reflect the everyday linguistic and cultural experiences of Arabic-speaking students. This dimension is especially important as research has shown that features of the Arabic writing system influence cognitive processes such as visual word recognition and attention (Ibrahim et al., 2002; Taha et al., 2013). In addition, the diglossic nature of Arabic, where formal written Arabic and spoken dialects coexist, has been shown to affect reading fluency and syntactic processing (Saiegh-Haddad, 2005). These findings suggest that incorporating locally relevant examples could meaningfully support the teaching of cognitive psychology in Arabic-speaking contexts.

2.4 Coding Procedures and Reliability

two bilingual coders independently analyzed all structural and textual units in the textbook. Before beginning the full analysis, the coders completed training that included pilot coding of three chapters. This step allowed the researcher to refine the coding categories and clarify how each category should be applied. The initial level of agreement between coders reached 89.3%. When disagreements appeared, they were resolved through structured discussion procedures. After this process, the final inter-rater reliability reached $\kappa = .91$, which indicates a high level of coding consistency (Landis & Koch, 1977). Following widely accepted methodological standards (Krippendorff, 2018), the researcher also examined whether the coding framework itself showed sufficient internal consistency to support the conclusions drawn from the data.

Because the analysis involved two languages, an additional step was required to ensure accuracy in conceptual comparison. A back-translation procedure was therefore applied to all excerpts used in the analysis. In this process, Arabic passages were translated into English and then translated back into Arabic to confirm that the meaning remained consistent. This step was intended to reduce the risk of interpretation errors when comparing ideas across languages. Such precautions are important in cross-linguistic research, although they are not always applied systematically. The procedure followed established guidelines for cross-cultural research methodology (Brislin, 1970), helping ensure that the meaning of key concepts remained equivalent across both languages.

3. Results

3.1 Structural Convergence

The structural analysis showed a very high level of organizational similarity between the Arabic-language textbook and the three widely used English-language cognitive psychology textbooks selected for comparison. When several aspects of organization were examined together including chapter order, subheading structure, development of concepts, and teaching features, the overall Structural Convergence Index reached 94.2%. More specifically, the alignment of subheadings within the Attention chapter reached 96%, while alignment within the Long-term Memory chapter

reached 94%. Teaching features were also highly similar. These included elements such as learning objectives, boxed research examples, highlighted glossary terms, and end-of-chapter review questions, which together showed a similarity level of 98%. Perhaps most striking, the conceptual sequence in the Working Memory chapter followed the comparative model exactly, showing complete sequential alignment (100%)

Importantly, the similarity observed was not limited to the inclusion of the same general topics. The overlap extended beyond the presence of major domains such as perception, attention, and memory, which is expected in most cognitive psychology textbooks. What was also observed was a strong similarity in the exact order in which theories were introduced within chapters, the hierarchical development of subtopics, and even the placement of specific experimental paradigms. For example, the Working Memory chapter followed the same conceptual sequence found in the comparison texts. The chapter began with an introduction to the modal model, then discussed its limitations, followed by the presentation of Baddeley's multi-component model. This was then expanded through explanations of its subcomponents, discussion of capacity limits, and finally consideration of individual differences. No changes in this sequence or shifts in explanatory emphasis were identified. Given this level of detailed similarity, it becomes difficult to attribute the convergence simply to coincidence (see: Supplementary Materials: Structural Mapping Matrices).

Taken together, this consistent alignment across several structural levels suggests that the textbook may reproduce an established organizational pattern rather than developing a fully independent pedagogical structure. At the same time, structural similarity alone does not necessarily mean that a text lacks originality, since cognitive psychology textbooks often follow relatively stable curricular patterns. Nevertheless, similarity at this detailed level calls for careful interpretation. It may be more accurate to view these patterns as reflecting a continuation of existing organizational models rather than independent parallel design.

3.2 Conceptual Reproduction

A total of 302 textual passages were coded to examine the level of conceptual originality in the textbook. Among these passages, 34.4% were classified as direct translation, 58.0% as paraphrased reproduction, and 7.6% as original synthesis. In other words, 92.4% of the analyzed passages

reflected either direct translation or close preservation of existing conceptual explanations. Taken together, these results suggest that most of the content relied on transmitting established explanations rather than developing substantially new interpretations.

The distinction between direct translation and paraphrased reproduction proved useful for the analysis. In cases of direct translation, both the meaning and sentence structure of the explanation were largely preserved, with only very minor modifications. In passages coded as paraphrased reproduction, some changes in wording were visible. However, the overall theoretical explanation, the sequence of ideas, and the examples used remained essentially the same. Representative translated excerpts illustrating patterns of paraphrased reproduction and structural similarity are presented in the Supplementary Materials (Translated Excerpts and Comparative Analysis).

Across several core areas of cognitive psychology, including working memory, attentional control, and heuristic decision-making, theoretical explanations followed a similar pattern. The structure and logic of the explanations remained largely consistent across chapters, suggesting a fairly uniform approach to presenting these topics.

For example, the explanation of Baddeley's working memory model followed the same three-part structure commonly found in standard cognitive psychology textbooks. The description of the phonological loop, the visuospatial sketchpad, and the central executive appeared in the same order and with similar explanations of their functions. In a similar way, the discussion of the Stroop effect presented the task structure, the color-word interference example, and the interpretation of automatic reading in a very similar format.

The same pattern was observed in other topics. The serial position effect was explained using the familiar distinction between primacy and recency effects, along with the typical explanation involving rehearsal and short-term memory. Likewise, the availability heuristic was introduced through comparable examples and reasoning about how easily remembered events influence judgments of probability. Although some wording differences appeared across passages, the underlying explanation and organization of ideas remained largely the same. When viewed together, this repeated similarity across several well-known paradigms suggests a consistent pattern rather than isolated similarities. It seems reasonable to interpret this as a systematic

tendency to preserve established explanations. Passages that could be considered original synthesis were relatively rare. Only 7.6% of the coded passages fell into this category. In most of these cases, the originality appeared mainly in short transitional comments or brief explanatory links between ideas, rather than in a clear reorganization of theoretical arguments or a deeper reinterpretation of the concepts being discussed.

3.3 Citation Transparency

The review of citations across 34 well-known psychological models and paradigms showed a low level of clear attribution. Only 8.8% of the major theories were fully cited with complete references. Another 17.6% included partial citation, such as mentioning the researcher's name without providing a full bibliographic source. The majority (73.5%) were presented without any explicit reference to the original empirical work. Well-known figures such as Broadbent, Stroop, and Tversky and Kahneman were often mentioned in the text, but without sufficient detail to allow readers to trace the original publications (see Supplementary Materials Package C).

Overall, these results suggest that citation practices in the analyzed textbook differ considerably from common academic standards. Importantly, the lack of citation did not mean that theoretical content was missing. On the contrary, well-established models were consistently explained and discussed. However, they were presented as general disciplinary knowledge rather than as ideas developed through specific empirical contributions. This reduced level of citation transparency makes the intellectual origins of these theories less visible and may limit students' understanding of how psychological knowledge develops through research.

Although textbooks typically simplify citation practices compared to research articles (Issitt, 2004), the pattern observed here appears systematic rather than occasional. It reflects not just selective omission for readability, but a broader tendency toward limited attribution.

3.4 Cultural Contextualization

Across all analyzed chapters, no examples of cultural contextualization were identified. The coding process showed no use of Arabic linguistic structures in discussions of language processing, no references to cognitive research conducted in the region, no culturally grounded case studies, and no discussion of bilingual executive function, even though bilingualism and diglossia are common features of Arabic-speaking educational contexts. As a result, the Cultural Contextualization Score remained at 0% (Supplementary Materials Package C). This result may initially appear surprising. However, it should be interpreted within the broader traditions of cognitive psychology, where many experimental paradigms are often presented as universally applicable across cultures (Arnett, 2008; Henrich et al., 2010).

At the same time, the absence of contextual examples becomes analytically meaningful when considered alongside existing empirical research. Studies have shown that characteristics of the Arabic writing system can influence processes such as visual word recognition and attentional allocation (Ibrahim et al., 2002; Taha et al., 2013). In addition, the diglossic nature of Arabic, where formal written Arabic coexists with spoken dialects, has been shown to affect reading fluency and syntactic processing (Saiegh-Haddad, 2005). Despite these findings, the textbook's explanations of paradigms such as the Stroop task, garden-path sentences, and working memory experiments did not incorporate features specific to Arabic morphology or right-to-left reading patterns.

One possible interpretation is that the adaptation of the material occurred mainly at the level of language translation rather than at the level of conceptual or pedagogical contextualization. In this sense, the theoretical explanations were transferred into Arabic without substantial modification of their original framing. Such a pattern is consistent with what Connell (2007) describes as a broader tendency in global knowledge systems, where some contexts primarily receive and apply theoretical frameworks developed elsewhere.

Taken together, the findings reveal a consistent pattern across the four indices examined: high structural similarity (94.2%), high conceptual reproduction (92.4%), limited citation transparency (73.5% without clear attribution), and no evidence of cultural contextualization (0%). When viewed collectively, these results suggest that the process of localization occurred mainly through translation of language, with relatively little change in the overall structure or theoretical framing of the material.

4. Discussion

The present study aimed to examine how a locally authored cognitive psychology textbook organizes, attributes, and contextualizes disciplinary knowledge. The findings revealed a consistent pattern across the different dimensions analyzed. There was a high level of structural similarity with widely used Western textbooks, a strong tendency toward conceptual reproduction, limited transparency in citation practices, and no clear evidence of cultural contextualization. Although these dimensions represent different aspects of textbook construction, taken together they suggest a particular pattern of localization, one that occurs mainly through translation of language rather than through deeper structural or pedagogical adaptation.

It is important to emphasize that structural similarity is not necessarily problematic. Cognitive psychology is a well-established discipline, and its curriculum tends to follow relatively stable patterns across institutions and textbooks (Griggs & Jackson, 2013). Core areas such as perception, attention, memory, language, and reasoning are commonly introduced in similar sequences in many teaching materials. In this sense, some level of overlap is expected and may simply reflect the shared structure of the discipline.

However, the similarity observed in this study extended beyond the presence of common topics. It also appeared in the order of chapters, the hierarchical organization of subheadings, the progression of explanations within chapters, and even the placement of particular experimental paradigms. When alignment occurs across several levels of textbook organization at the same time, it becomes less likely that the structure was developed independently. Instead, what appears is not only shared content, but also a very similar pedagogical structure. This observation raises broader questions about how knowledge structures circulate and are reproduced within global higher education systems (Marginson, 2010; Connell, 2007).

This raises a more subtle, yet very important, question: at what point does standardization begin to limit intellectual independence? The findings suggest that, in this case, localization did not substantially reorganize theoretical emphasis, introduce alternative ways of sequencing topics, or highlight context-specific entry points for teaching. Instead, well-known theoretical models were

presented largely in their established form, with very little structural change. This pattern may reflect practical considerations, such as efficiency, alignment with internationally recognized curricula, or the perceived authority of established models. At the same time, it may reduce opportunities for contextual reinterpretation, which many scholars consider an important aspect of curriculum development in higher education (Bernstein, 2000; Young, 2008). It seems possible that this approach reflects broader patterns in global knowledge circulation, where, as Connell (2007) suggests, theoretical ideas are often developed in central academic contexts while other regions mainly receive and apply them.

The analysis of conceptual reproduction provides further insight into this pattern. With 92.4% of the coded passages classified as either direct translation or paraphrased reproduction, the textbook appears to function largely as a channel for transmitting established explanations. This does not necessarily mean that textbook writing must involve the creation of new theories. Originality in educational texts can also appear in other ways, for example, through integrative commentary, alternative ways of organizing explanations, the use of culturally relevant examples, or the positioning of theories within local intellectual traditions (Sleeter & Grant, 1991).

The relatively small proportion of passages identified as original synthesis suggests that the textbook emphasizes transmission rather than reinterpretation. In educational contexts that aim to encourage a diversity of perspectives in knowledge production, such a transmissive approach may unintentionally reinforce what Hanafi (2011) describes as structural dependency in knowledge production within the Arab world.

Citation transparency represents another important dimension in understanding how disciplinary knowledge is presented. The relatively low number of fully cited foundational theories does not necessarily mean that references were intentionally omitted, since textbooks often simplify citation practices to improve readability (Griggs & Jackson, 2013). Nevertheless, citations serve an important teaching role. They help show students that scientific knowledge develops over time through the work of specific researchers and empirical studies, rather than appearing as abstract or self-generated ideas (Kuhn, 1962). When major theories are presented without clear attribution, students may encounter them as established facts without seeing the research history behind them. In this sense, citation transparency supports not only academic integrity but also students'

understanding of how knowledge is produced and developed. This issue may be especially important in contexts where students have limited access to primary research articles (Hanafi & Arvanitis, 2016).

Another key finding of the study concerns cultural contextualization. The absence of Arabic linguistic examples regionally conducted cognitive research, or culturally grounded case studies suggests that adaptation occurred mainly at the level of language rather than conceptual framing. Cognitive psychology often presents its models as universal, and many cognitive mechanisms do show cross-cultural consistency. However, cognitive processes are also shaped by linguistic systems, writing structures, and sociocultural practices. Research has shown, for example, that features of Arabic orthography, the diglossic nature of Arabic language use, and right-to-left reading patterns influence reading fluency, attention, and language comprehension (Ibrahim et al., 2002; Saiegh-Haddad, 2005; Bialystok, 2017). Including such features in teaching materials does not challenge the universality of cognitive mechanisms; rather, it helps connect theoretical explanations to the everyday linguistic experiences of students. The absence of such integration may therefore represent a missed opportunity in teaching. At the same time, it should be acknowledged that the coding criteria used in this study may not capture every possible form of contextual adaptation, and alternative definitions might lead to somewhat different results.

Taken together, the findings suggest that textbook localization may exist along a continuum. At one end of this continuum lies simple translation of language with very little change to structure or explanation. At the other end lies deeper contextual synthesis, where established theoretical models are reorganized, reframed, and connected to local intellectual and linguistic contexts. The textbook examined in this study appears closer to the first end of this continuum. This pattern may reflect broader dynamics in global knowledge circulation, where academic legitimacy is often associated with alignment to established Western curricular structures (Connell, 2007; Marginson, 2010; Hanafi, 2011). In Bernstein's (2000) terms, the underlying rules that organize disciplinary knowledge appear to be reproduced rather than significantly reinterpreted in the process of localization.

The main contribution of this study goes beyond the specific textbook analyzed. By defining and measuring four indices: structural convergence, conceptual reproduction, citation transparency, and cultural contextualization, the study offers a framework that can be applied to evaluate

textbook development in other disciplines and educational contexts. Such an approach may support more detailed discussions about curriculum reform, textbook localization, and academic transparency in higher education.

The implications of these findings also extend to several groups within higher education, and they become especially important when considered considering the empirical context described earlier. An informal review of Arabic-language book databases suggests that only about four to five originally authored cognitive psychology textbooks have been published in Arabic during the past two decades. This limited number means that each available textbook has a large influence on how cognitive psychology is introduced to Arabic-speaking students. For textbook authors, the framework proposed in this study may serve as a tool for evaluating their own work and encouraging more deliberate engagement with issues of localization. For curriculum committees and quality assurance bodies, the indices may provide practical criteria for assessing whether educational materials adequately address contextual adaptation and citation practices. For accreditation agencies working across national systems, the framework offers measurable indicators for evaluating the depth of curriculum localization. Finally, for policymakers interested in strengthening local knowledge production - an issue frequently discussed in relation to higher education in the Arab world (Hanafi & Arvanitis, 2016)- the findings highlight the potential value of supporting the development of new Arabic-language textbooks that integrate both disciplinary knowledge and local intellectual contexts.

4.1 Limitations

Several methodological limitations must be transparently acknowledged. First, the analysis is based on a single Arabic-language textbook, which constrains generalizability. While instrumental case study design provides analytical depth (Stake, 1995), the findings cannot be assumed to represent textbook localization practices across the discipline or region without further comparative research. Second, the anonymization of the focal text, while methodologically

motivated by the aim of foregrounding structural patterns over individual critique, introduces a limitation regarding external verifiability. Third, the Cultural Contextualization Score of 0%, though empirically documented, may partly reflect the specificity of the coding operationalization; alternative definitions of cultural adaptation might yield different results. Fourth, the study did not examine student reception or pedagogical outcomes, which would be necessary to establish whether the patterns identified here have measurable effects on learning. Finally, the absence of convergent and discriminant validity analysis for the framework itself represents an area for future methodological development.

4.2 Future Directions

Future research should expand this framework across multiple disciplines and educational contexts to determine whether similar patterns of convergence and limited contextualization emerge elsewhere. Examining how students interpret and engage with localized versus contextually synthesized textbooks would provide insight into the pedagogical implications of structural inheritance. Additionally, comparative analyses across different national contexts within the Arab world and beyond would help determine whether the pattern observed here is context-specific or reflective of broader global dynamics in knowledge circulation.

5. Conclusion

In summary, the present study proposes a systematic and empirically grounded framework for examining how textbooks localize disciplinary knowledge in higher education. When this framework was applied to a widely used Arabic-language cognitive psychology textbook, the analysis revealed a consistent pattern: high structural similarity with established Western textbooks (94.2%), substantial conceptual reproduction (92.4%), limited citation transparency (73.5% of theoretical models presented without clear attribution), and a complete absence of culturally contextualized examples (0%). Taken together, these results suggest that localization in this case occurred mainly through translation of language, with relatively little change in pedagogical structure or theoretical framing.

At the same time, these findings should be interpreted with appropriate caution. The study is exploratory in nature and focuses on a single case, which naturally limits the extent to which

broader conclusions can be drawn. In addition, the analysis did not examine student learning outcomes, which means that the pedagogical impact of these structural patterns remains uncertain. Despite these limitations, the broader implications are difficult to ignore. The development of culturally responsive educational materials -particularly in linguistic contexts that remain underrepresented in global academic publishing, such as the Arab world- should not be viewed merely as a methodological improvement. Rather, as Connell (2007) has argued, it represents an important step toward more inclusive and balanced forms of knowledge production in global higher education.

Looking ahead, the aim should not be to reject established cognitive psychology theories or to treat disciplinary alignment as inherently problematic. Instead, the challenge is to consider how well-established theoretical frameworks can be thoughtfully integrated into pedagogical environments that reflect the linguistic and cultural realities of their students. Structural similarity may signal participation in a global academic discipline, but meaningful contextual adaptation may signal its development and maturity within diverse educational systems. Future research should therefore extend this type of analysis across other disciplines, regions, and levels of education, and should also examine how the structural patterns identified in this study relate to measurable outcomes in teaching and learning.

Declaration statement

Data availability

The datasets generated and analyzed during the current study are included in the supplementary materials accompanying this article. Additional materials are available from the corresponding author upon reasonable request. Due to copyright restrictions, the original textbook content cannot be publicly shared.

Conflict of Interest

The author declares no conflicts of interest.

Funding

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Ethics and Permissions

This study analyzes a commercially available textbook using standard scholarly and educational fair-use practices. No human subjects were involved. All quoted or translated excerpts are used exclusively for academic critique and commentary and fully respect the intellectual property of the original authors and publisher

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Author's Note on AI Use

The author used AI-assisted language support (ChatGPT, OpenAI) for clarity and grammar only. All conceptualization, analysis, and interpretation are solely the authors.

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Supplementary Materials Package C: (Coding matrices, Citation audit, and methodological appendices detailing analytical procedures) and appendices

Coding Matrices and Citation Audit Tables

Table 1: Content Analysis Coding Matrix

Chapter	Total Passages	Direct Translation	Paraphrased Reproduction	Original Synthesis	Cultural Examples	No Citation
1: Introduction	24	6 (25%)	15 (63%)	3 (12%)	0 (0%)	18 (75%)
2: Neuroscience	18	8 (44%)	9 (50%)	1 (6%)	0 (0%)	14 (78%)
3: Perception	32	12 (38%)	18 (56%)	2 (6%)	0 (0%)	25 (78%)
4: Attention	28	11 (39%)	15 (54%)	2 (7%)	0 (0%)	22 (79%)
5: Short-term Memory	26	9 (35%)	16 (62%)	1 (4%)	0 (0%)	20 (77%)
6: Long-term Memory	30	10 (33%)	18 (60%)	2 (7%)	0 (0%)	23 (77%)
7: Knowledge	22	7 (32%)	13 (59%)	2 (9%)	0 (0%)	17 (77%)
8: Language	35	14 (40%)	19 (54%)	2 (6%)	0 (0%)	28 (80%)
9: Problem Solving	25	8 (32%)	15 (60%)	2 (8%)	0 (0%)	19 (76%)
10: Decision Making	27	9 (33%)	16 (59%)	2 (7%)	0 (0%)	21 (78%)
11: Development	20	6 (30%)	12 (60%)	2 (10%)	0 (0%)	15 (75%)
12: Individual Diff.	15	4 (27%)	9 (60%)	2 (13%)	0 (0%)	11 (73%)

Chapter	Total Passages	Direct Translation	Paraphrased Reproduction	Original Synthesis	Cultural Examples	No Citation
TOTALS	302	104 (34.4%)	175 (58.0%)	23 (7.6%)	0 (0%)	233 (77.2%)

Table 2: Citation Audit Matrix (Major Theories)

Theory/Model	Chapter	Present	Cited	Missing Attribution
Broadbent's Filter Model	4	✓		Broadbent (1958)
Treisman's Attenuation	4	✓		Treisman (1960)
Kahneman's Capacity Theory	4	✓		Kahneman (1973)
Atkinson-Shiffrin Model	5	✓	Partial	Complete citation missing
Baddeley's Working Memory	5	✓		Baddeley & Hitch (1974)
Levels of Processing	6	✓		Craik & Lockhart (1972)
Stroop Effect	4	✓		Stroop (1935)
Serial Position Effect	5	✓		Murdock (1962)
Availability Heuristic	10	✓		Tversky & Kahneman (1973)
Representativeness	10	✓		Tversky & Kahneman (1974)

Citation Summary: 3/34 properly cited (8.8%), 6/34 partially cited (17.6%), 25/34 not cited (73.5%)

Table 3: Cultural Adaptation Assessment

Dimension	Frequency	Examples Found
Arabic Language Examples	0	None

Dimension	Frequency	Examples Found
Middle Eastern Scenarios	0	None
Regional Research Citations	0	None
Educational Context Adaptation	0	None
Historical Context References	0	None
Bilingual Considerations	0	None
Cultural Values Integration	0	None
Local Applications	0	None

Cultural Adaptation Score: 0%

Methodological Appendices

Appendix A: Coding Procedures

Content Categorization Protocol

- 1. Direct Translation (DT):** Passages showing semantic and syntactic match with minimal modification
- 2. Paraphrased Reproduction (PR):** Altered wording but preserved theoretical structure
- 3. Original Synthesis (OS):** Author-generated content not traceable to specific sources
- 4. Cultural Example (CE):** Content adapted for Arabic/Middle Eastern context
- 5. Cultural Reference (CR):** Citation of Arab research or scholars
- 6. No Citation (NC):** Missing attribution for established theories/findings

Inter-rater Reliability Procedures

- Two independent coders analyzed all materials
- Initial agreement: 89.3%
- Disagreements resolved through discussion
- Final inter-rater reliability: $\kappa = 0.91$

Appendix B: Translation Procedures

Translation Protocol

1. Initial translation by bilingual cognitive psychology expert
2. Back-translation verification
3. Review by second bilingual expert
4. Consensus resolution of discrepancies
5. Final verification of technical terminology

Quality Assurance

- All translators held advanced degrees in psychology
- Native speakers of Arabic and fluent in English
- Have knowledge of cognitive psychology terminology
- Regular calibration meetings to ensure consistency

Appendix C: Similarity Analysis Methods

Textual Similarity Assessment

- Semantic similarity analysis using expert judgment
- Structural comparison of argument organization
- Lexical overlap analysis for key concepts
- Pedagogical feature comparison

Scoring Criteria

- **90-100%:** Near-identical content with minimal variation
 - **80-89%:** High similarity with some paraphrasing
 - **70-79%:** Moderate similarity with substantial rewording
 - **60-69%:** Low similarity with different presentation
 - **Below 60%:** Minimal similarity or original content
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Supplementary Materials: Structural Mapping Matrices

Table 1: Chapter Organization Comparison Matrix

Chapter #	Focal book (Arabic)	Goldstein (2019)	Eysenck (2012)	Matlin (2009)	Similarity Score
1	Introduction to Cognitive Psychology	Cognitive Psychology: History, Methods, and Paradigms	Introduction to Cognitive Psychology	Introduction to Cognitive Psychology	95%
2	Cognitive Neuroscience	Cognitive Neuroscience	The Biological Basis of Cognition	Perceptual Processes	85%
3	Perception	Perception	Visual Perception and Recognition	Perceptual Processes	98%
4	Attention	Attention	Attention and Performance	Attention	100%
5	Memory: Sensory and Short-term	Memory: Processes	Working Memory	Working Memory	92%
6	Memory: Long-term	Memory: Representations	Long-term Memory	Long-term Memory	95%
7	Knowledge Representation	Knowledge	Concepts and Categories	Knowledge Representation	88%
8	Language	Language	Language Comprehension	Language	100%

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9					98%
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For Peer Review

Chapter #	Focal book (Arabic)	Goldstein (2019)	Eysenck (2012)	Matlin (2009)	Similarity Score
	Problem Solving	Problem Solving	Thinking and Reasoning	Problem Solving	
10	Decision Making	Judgment and Decision Making	Judgment and Decision Making	Reasoning and Decision Making	95%
11	Cognitive Development	Cognitive Development	-	Cognitive Development	90%
12	Individual Differences	-	Individual Differences	-	N/A

Overall Structural Similarity: 94.2%

Table 2: Subheading Analysis Matrix
Chapter 4: Attention (Detailed Subheading Comparison)

Section	Focal book Subheading (Translated)	Goldstein Equivalent	Match Type
4.1	Introduction to Attention	Introduction to Attention	Exact
4.2	Selective Attention	Selective Attention	Exact
4.3	Broadbent's Filter Model	Broadbent's Filter Model of Attention	Near-exact
4.4	Treisman's Attenuation Theory	Treisman's Attenuation Model	Near-exact
4.5	Late Selection Models	Late Selection Models	Exact
4.6	Divided Attention	Divided Attention	Exact
4.7	Automatic vs. Controlled Processing	Automatic vs. Controlled Processing	Exact
4.8	Attention and Consciousness	Attention and Consciousness	Exact

Subheading Similarity Score: 96%

Chapter 6: Long-term Memory (Detailed Subheading Comparison)

Section	Focal book Subheading (Translated)	Goldstein Equivalent	Match Type
6.1	Introduction to Long-term Memory	Long-term Memory: Basic Principles	Near-exact
6.2	Episodic Memory	Episodic Memory	Exact
6.3	Semantic Memory	Semantic Memory	Exact
6.4	Procedural Memory	Procedural Memory	Exact
6.5	Memory Consolidation	Consolidation	Near-exact
6.6	Forgetting and Memory Errors	Forgetting	Near-exact
6.7	False Memories	False Memories	Exact
6.8	Memory Improvement Techniques	Improving Memory	Near-exact

Subheading Similarity Score: 94%

Table 3: Pedagogical Structure Mapping

Element	Focal book Format	Western Textbook Standard	Similarity
Chapter Opening	Learning objectives + key terms	Learning objectives + key terms	Identical
Content Organization	Theory → Research → Applications	Theory → Research → Applications	Identical
Box Features	"Research Spotlight"	"Research Focus" (Goldstein)	Near-identical
Chapter Ending			Identical

Element	Focal book Format	Western Textbook Standard	Similarity
	Summary + Review Questions	Summary + Review Questions	
Glossary Terms	Bold in text, defined in margins	Bold in text, defined in margins	Identical
Figure Numbering	Sequential by chapter	Sequential by chapter	Identical
Reference Style	Author-date in text	Author-date in text	Identical

Pedagogical Structure Similarity: 98%

Table 4: Conceptual Flow Analysis

Working Memory Chapter Flow Comparison

Step	Focal book Sequence	Goldstein Sequence	Deviation
1	Historical background	Historical background	None
2	Atkinson-Shiffrin model	Atkinson-Shiffrin model	None
3	Limitations of modal model	Limitations of modal model	None
4	Baddeley's working memory	Baddeley's working memory	None
5	Phonological loop	Phonological loop	None
6	Visuospatial sketchpad	Visuospatial sketchpad	None
7	Central executive	Central executive	None
8	Episodic buffer	Episodic buffer	None
9	Working memory capacity	Working memory capacity	None
10	Individual differences	Individual differences	None

Conceptual Flow Similarity: 100%

Table 5: Example and Illustration Mapping

Topic	Focal book Example	Likely Western Source	Adaptation Level
Stroop Effect	Color-word interference (Arabic translation)	Standard Stroop task	Direct translation
Serial Position Curve	Word list recall	Standard word list paradigm	Direct translation
Levels of Processing	Word vs. meaning encoding	Craik & Lockhart example	Direct translation
Dual-task Interference	Driving while talking	Standard dual-task example	Direct translation
Garden Path Sentences	Syntactic ambiguity (Arabic)	English garden path sentences	Translated structure
Availability Heuristic	Frequency estimation	Standard availability examples	Direct translation
Confirmation Bias	Hypothesis testing	Wason selection task	Direct translation

Example Adaptation Score: 5% (95% direct translation)

Summary Statistics

- **Overall Structural Similarity:** 94.2%
- **Subheading Similarity:** 95%
- **Pedagogical Structure Similarity:** 98%
- **Conceptual Flow Similarity:** 98%
- **Example Adaptation:** 5%

Interpretation: The structural analysis reveals near-identical organization patterns between focal textbook and Western cognitive psychology textbooks, particularly Goldstein (2019). The high similarity scores across all dimensions suggest systematic structural mimicry rather than independent organizational decisions.

Supplementary Materials: Translated Excerpts and Comparative Analysis

Excerpt 1: Working Memory - Baddeley's Model

focal Text (Translated from Arabic)

"Working memory is a system responsible for temporarily holding and manipulating information during cognitive tasks. Baddeley proposed a multi-component model consisting of three main parts: the phonological loop, which processes verbal and acoustic information; the visuospatial sketchpad, which handles visual and spatial information; and the central executive, which controls and coordinates the activities of the other components. The phonological loop can be further divided into two subcomponents: the phonological store, which holds speech-based information for 1-2 seconds, and the articulatory control process, which rehearses information to prevent decay."

Goldstein (2019) - Chapter 5, p. 128

"Working memory is the system involved in temporarily holding and manipulating information as we perform cognitive tasks. Baddeley proposed that working memory consists of three components: (1) the phonological loop, which processes verbal and auditory information; (2) the visuospatial sketchpad, which processes visual and spatial information; and (3) the central executive, which is an attention controller that coordinates the activities of the phonological loop and visuospatial sketchpad. The phonological loop consists of two subcomponents: the phonological store, which has a limited capacity and holds information for only a few seconds, and the articulatory rehearsal process, which is responsible for rehearsal that can keep items in the phonological store from decaying."

Analysis

- **Similarity Score:** 92%
- **Match Type:** Paraphrased reproduction
- **Key Observations:**
 - Nearly identical definition and structure

- Same three-component breakdown
 - Identical subcomponent description
 - Minor word substitutions ("acoustic" vs "auditory", "1-2 seconds" vs "few seconds")
 - No citation to Baddeley's original work
 - No cultural adaptation or Arabic-specific examples
-

Excerpt 2: Attention - Stroop Effect

focal Text (Translated from Arabic)

"The Stroop effect demonstrates the automatic nature of reading. In this task, participants are shown color words (like 'red', 'blue', 'green') printed in different colors. When the word and color match (the word 'red' printed in red ink), responses are fast. However, when there is a mismatch (the word 'red' printed in blue ink), participants take longer to name the color and make more errors. This occurs because reading is so automatic that it interferes with the color-naming task, even when participants try to ignore the word meaning."

Goldstein (2019) - Chapter 4, p. 98

"The Stroop effect illustrates the automatic nature of reading. In the Stroop task, participants are presented with color words such as red, blue, and green, printed in different colored inks. The participant's task is to name the color of the ink as quickly as possible. When the meaning of the word matches the color of the ink (the word red printed in red ink), participants respond rapidly. But when the word and ink color don't match (the word red printed in green ink), participants respond more slowly and make more errors. This occurs because reading the word is so automatic that it can't be 'turned off,' so the word meaning interferes with the task of naming the ink color."

Analysis

- **Similarity Score:** 95%
- **Match Type:** Near-verbatim translation
- **Key Observations:**
 - Virtually identical explanation structure
 - Same examples (red, blue, green)
 - Identical experimental description
 - Same theoretical interpretation

- No adaptation for Arabic script characteristics
 - No citation to Stroop's original research
 - Missed opportunity to discuss Arabic reading patterns
-

Excerpt 3: Memory - Serial Position Effect

focal Text (Translated from Arabic)

"When people are asked to recall a list of words immediately after hearing them, they show a characteristic pattern called the serial position effect. Words at the beginning of the list are remembered well (primacy effect) because they have been rehearsed more and transferred to long-term memory. Words at the end of the list are also remembered well (recency effect) because they are still in short-term memory. However, words in the middle of the list are remembered poorly because they receive less rehearsal than early items and are displaced from short-term memory by later items."

Goldstein (2019) - Chapter 5, p. 142

"When participants in Murdock's experiment were asked to recall the words immediately after hearing the list, the result was a U-shaped curve called the serial position curve. Participants were more likely to remember words presented at the beginning of the list (called the primacy effect) and at the end of the list (called the recency effect), and were less likely to remember words in the middle. The primacy effect occurs because participants have time to rehearse words that come early in the list, so these words get transferred into long-term memory. The recency effect occurs because the most recently presented words are still in short-term memory."

Analysis

- **Similarity Score:** 88%
- **Match Type:** Paraphrased reproduction
- **Key Observations:**
 - Same conceptual structure and explanation
 - Identical terminology (primacy, recency, serial position)
 - Same theoretical mechanisms described
 - Reference to "Murdock's experiment" removed without citation
 - No mention of Arabic language memory characteristics
 - Generic explanation without cultural context

Excerpt 4: Language Processing - Garden Path Sentences

Focal Text (Translated from Arabic)

"Garden path sentences demonstrate how syntactic parsing can lead us astray. These are sentences that seem to be going in one direction but then require reanalysis. For example, 'The man the woman saw was tall' initially seems ungrammatical, but careful analysis reveals it means 'The man [whom] the woman saw was tall.' The parser initially tries to make 'the woman' the object of 'saw,' but this leads to a dead end, requiring backtracking and reanalysis."

Goldstein (2019) - Chapter 11, p. 318

"Garden path sentences are sentences in which the meaning that seems to be developing as we read turns out to be incorrect, so we need to backtrack and reinterpret the sentence. For example, consider the sentence 'The horse raced past the barn fell.' This sentence doesn't seem to make sense until we realize that it means 'The horse [that was] raced past the barn fell.' The reason we initially have trouble understanding this sentence is that when we reach 'raced,' we interpret it as the main verb of the sentence, but this interpretation doesn't work when we encounter 'fell' at the end."

Analysis

- **Similarity Score:** 85%
 - **Match Type:** Paraphrased reproduction with different example
 - **Key Observations:**
 - Identical conceptual explanation
 - Same parsing mechanism described
 - Different example sentence used
 - No adaptation for Arabic syntax patterns
 - No discussion of Arabic relative clause structures
 - Missed opportunity for Arabic-specific linguistic examples
-

Excerpt 5: Decision Making - Availability Heuristic

focal Text (Translated from Arabic)

"The availability heuristic is a mental shortcut where people judge the probability of events based on how easily examples come to mind. Events that are more memorable or recent seem more likely to occur. For instance, people often overestimate the likelihood of dramatic events like airplane crashes because these receive extensive media coverage and are easily recalled, while they underestimate more common but less memorable risks like heart disease."

Goldstein (2019) - Chapter 13, p. 378

"The availability heuristic states that events that are more easily remembered are judged to be more probable than events that are less easily remembered. For example, people judge the probability of dying in a terrorist attack as being higher than the probability of dying from falling airplane parts, even though statistics indicate that falling airplane parts actually cause more deaths. The reason for this error in reasoning is that terrorist attacks receive much more publicity than deaths from falling airplane parts, so they are more easily remembered."

Analysis

- **Similarity Score:** 90%
 - **Match Type:** Paraphrased reproduction
 - **Key Observations:**
 - Identical definition and mechanism
 - Similar examples (airplane-related risks)
 - Same theoretical explanation
 - No cultural adaptation of examples
 - No reference to Tversky & Kahneman's original work
 - Could have used Middle Eastern cultural examples
-

Summary Analysis of Translated Excerpts

Overall Patterns Identified

Aspect	Frequency	Percentage
Paraphrased reproduction	4/5	80%
Near-verbatim translation	1/5	20%
Original synthesis	0/5	0%
Cultural adaptation	0/5	0%
Proper citations	0/5	0%

Linguistic Analysis

Sentence Structure Patterns:

- Maintains Western textbook sentence complexity
- Preserves original logical flow and organization
- Uses direct translation of technical terminology
- No adaptation for Arabic rhetorical patterns

Content Adaptation:

- Zero cultural contextualization
- No Arabic-specific examples
- Missed opportunities for linguistic relevance
- Generic examples without local context

Citation Analysis

Missing Citations in Excerpts:

1. Baddeley & Hitch (1974) - Working memory model
2. Stroop (1935) - Stroop effect
3. Murdock (1962) - Serial position curve
4. Tversky & Kahneman (1973) - Availability heuristic
5. Various garden path sentence researchers

Pattern: Systematic removal of original research citations while preserving content structure.

Cultural Adaptation Opportunities Missed

Working Memory Example:

- Could have used Arabic poetry memorization techniques
- Could have discussed bilingual working memory in Arabic speakers

Stroop Effect Example:

- Could have adapted for Arabic script characteristics
- Could have discussed right-to-left reading patterns

Serial Position Example:

- Could have used Quranic verse memorization patterns
- Could have referenced traditional Arabic oral traditions

Language Processing Example:

- Could have used Arabic relative clause structures
- Could have discussed Arabic morphological complexity

Decision Making Example:

- Could have used Middle Eastern cultural scenarios
- Could have referenced regional risk perceptions

Implications

The translated excerpts reveal a systematic pattern of content reproduction without attribution or cultural adaptation. The high similarity scores (85-95%) combined with zero cultural contextualization suggest epistemic mimicry rather than original scholarly contribution. The absence of citations for foundational research undermines academic integrity while the lack of cultural adaptation reduces pedagogical effectiveness for Arabic-speaking students.

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