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English language as a cognitive tool for learning philosophy: A comparative analysis from Moroccan higher education

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Abstract

This study explores the intricate relationship between language and cognition, concentrating on how linguistic competence affects philosophical knowledge acquisition. The study, which was carried out at Cadi Ayyad University, examines the learning results of two different groups of college students who are all fluent in English as a second language: final-year English Studies students and Philosophy Studies students. Determining if a linguistic foundation facilitates a quicker and more profound comprehension of philosophical notions in comparison to a philosophical background devoid of advanced language instruction is the main goal. The results show that students who had a strong background in English Studies were more accurate and efficient at understanding abstract philosophical concepts than their Philosophy Studies counterparts. This result emphasizes how important language is as a tool for communication as well as a possible container of thinking that shapes and facilitates cognitive processes. The work also tackles the age-old philosophical query of whether knowledge can be conceptualized and comprehended apart from language structures. These observations have important ramifications for multidisciplinary education, especially in higher education in Morocco. The research promotes creative instructional approaches that cross disciplines, foster critical thinking, and aid in students' holistic development by highlighting the advantages of combining language and philosophical training.

Keywords: Language and Thought; Philosophy Education; English as a Second Language (ESL); Interdisciplinary Learning; Moroccan Higher Education

1 Introduction

The intricate relationship between language and thought has long fascinated scholars across disciplines, from linguistics and philosophy to cognitive science and education. This interplay holds profound implications for understanding how individuals perceive, process, and articulate knowledge. In the context of Moroccan higher education, where multilingualism is a central feature, the study of this relationship acquires special significance. Cadi Ayyad University, one of Morocco's leading institutions, provides an ideal setting to explore this dynamic due to its diverse student body and emphasis on interdisciplinary education. Among its students, proficiency in English as a second language has become increasingly vital, not only as a means of global communication but also as a tool for engaging with complex intellectual disciplines, such as philosophy.

The current research investigates whether a linguistic background -specifically in English- enables students to learn philosophical concepts more efficiently than their peers with a stronger foundation in philosophy but less formal training in language. This focus arises from an enduring debate in philosophical and cognitive fields: does language function as a mere medium for communication, or does it serve as a container of thought, shaping and even constraining

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cognitive processes? This question is particularly pertinent in educational settings, where linguistic and cognitive skills intersect and influence learning outcomes.

The importance of this inquiry extends beyond theoretical discussions, as it has practical implications for interdisciplinary pedagogy. If language does indeed play a central role in structuring thought, then integrating linguistic and philosophical education could yield innovative approaches to teaching and learning. For instance, philosophy instruction conducted in English could foster critical thinking and problem-solving skills while simultaneously enhancing language proficiency. Conversely, a lack of linguistic grounding might hinder students' ability to fully engage with abstract concepts, potentially limiting their intellectual development.

The primary objective of this study is to empirically examine the relationship between language and thought through a comparative analysis of two groups of higher education students at Cadi Ayyad University: 30 English Studies students and 30 Philosophy Studies students. By assessing their respective abilities to comprehend and engage with philosophical concepts, this research aims to illuminate how linguistic competence influences cognitive performance. The findings of this study are expected to contribute to the broader discourse on interdisciplinary education, particularly in multilingual contexts like Morocco, where educational practices must navigate and capitalize on the diversity of linguistic and cultural backgrounds.

Ultimately, this research seeks to provide actionable insights for educators and policymakers, advocating for curriculum designs that harness the synergies between language and thought. By highlighting the mutual benefits of interdisciplinary approaches, this study emphasizes the transformative potential of combining linguistic and philosophical training to prepare students for complex intellectual and professional challenges.

2 Theoretical Framework

2.1. The Relationship Between Language and Thought

The relationship between language and thought has been a central question in philosophy, linguistics, and cognitive science for centuries [15] and Carruthers, [4]. It touches upon fundamental inquiries about how humans conceptualize the world and whether linguistic structures influence the way we think. This section provides an overview of key debates, particularly the [17] hypothesis, and examines contrasting perspectives on whether language shapes thought or merely serves as a tool for communication as [10] emphasized.

2.1.1. *The Sapir-Whorf Hypothesis*

One of the most influential theories in this domain is the Sapir-Whorf hypothesis, also known as linguistic relativity. Edward Sapir and his student [22] proposed that the structure of a language influences its speakers' worldview and cognitive processes. According to this view, language acts as a framework that shapes how individuals perceive, categorize, and interpret reality. For example, linguistic differences in the vocabulary of color terms across cultures suggest that speakers of different languages may experience color perception differently as [19] stated.

According to [15] and [20], the Sapir-Whorf hypothesis is often divided into two levels:

- **Linguistic Determinism:** The strong version of the hypothesis suggests that language entirely determines thought, implying that without a specific linguistic framework, certain thoughts or concepts would be impossible to conceive.
- **Linguistic Relativity:** The weaker version posits that language influences, but does not wholly dictate, cognitive processes, allowing for some degree of flexibility and universality in human thought.

Critics of linguistic determinism argue that it underestimates the universality of human cognition. For instance, Noam Chomsky's theory of universal grammar challenges the idea that language strictly determines thought by emphasizing innate cognitive structures shared across all languages, [5].

2.1.2. *Language as a Container of Thought*

The view of language as a container of thought suggests that linguistic expressions encapsulate ideas, enabling individuals to convey complex abstract concepts and knowledge. Philosophers like Ludwig Wittgenstein have argued that "the limits of my language mean the limits of my world," emphasizing the idea that linguistic structures both enable

and constrain thought. This perspective aligns with linguistic relativity, proposing that language provides the scaffolding for cognitive development, [2].

In educational settings, this view has significant implications. If language shapes thought, then developing linguistic proficiency -particularly in a second language like English- can expand cognitive capacities and facilitate engagement with abstract disciplines such as philosophy. Carruthers explains how language serves not only as a medium of communication but also as a cognitive tool that structures reasoning, interpretation and critical analysis, [4].

2.1.3. Language as a Mere Tool for Communication

In contrast, some scholars argue that language functions primarily as a communicative tool, independent of cognitive processes. This perspective suggests that thought exists prior to and independently of language similar to Vygotsky's theory, [21]. For example, concepts and knowledge can be represented through visual imagery, mathematical symbols, or other non-linguistic means. Proponents of this view highlight that individuals can think and reason about abstract ideas without necessarily articulating them in linguistic terms.

Philosophers like Jerry Fodor, who proposed the "language of thought" hypothesis, argue that cognition operates in an internal, non-linguistic symbolic system, sometimes referred to as "mentalese." From this perspective, language merely externalizes pre-existing thoughts rather than shaping or generating them, [6].

2.2. Implications for the Current Study

The theoretical foundation for the current research has opened a similar Johnson's debate which investigates whether linguistic proficiency in English enables faster and more effective learning of philosophical concepts among students, [13]. By exploring the cognitive advantages associated with a strong linguistic background, this study contributes to the broader discourse on whether language functions as a container of thought or merely facilitates its expression. The findings are expected to shed light on how language and thought interact in educational contexts, particularly in multilingual environments like Morocco.

This theoretical exploration underscores the importance of examining language as both a cognitive and communicative phenomenon, with profound implications for interdisciplinary education and curriculum design.

2.3. Knowledge Without Language

The question of whether knowledge can be conceptualized without linguistic representation is one of the central concerns in the philosophy of mind, cognitive science, and epistemology as Fodor has clarified, [7]. This question challenges the assumption that language is necessary for all forms of knowledge and raises important implications for understanding human cognition and learning, especially in the context of education. By examining philosophical arguments and cognitive science perspectives, this section explores whether knowledge can exist independently of language or whether language is indispensable for conceptualizing and processing knowledge.

2.3.1. Can Knowledge Be Conceptualized Without Linguistic Representation

Many academics such as Johnson-Laird, Carruthers, and Vygotsky have debated over whether thought can occur in the absence of language [15],[4],[21]. The majority of human knowledge, particularly in modern education, is communicated and structured through language. From this standpoint, language is seen as a fundamental vehicle for storing, processing, and transmitting knowledge. However, some philosophers and cognitive scientists argue that knowledge does not rely entirely on linguistic representation and that individuals can conceptualize and understand ideas even without the use of words.

One approach to this question comes from examining non-verbal forms of knowledge. For instance, sensory perception, motor skills, and tacit knowledge (such as understanding how to ride a bicycle or recognize a face) often do not involve linguistic expression. Forceville confirmed that types of knowledge seem to be processed in ways that are independent of language, [9]. In such cases, individuals possess understanding without explicitly articulating it in words, challenging the notion that language is always necessary for cognition.

2.3.2. Philosophical Perspectives

According to Alanen, the idea that knowledge can exist without language finds support in certain philosophical traditions as René Descartes, in his work on the nature of thought, famously distinguished between "thinking" and "speaking." Descartes argued that even in the absence of words, humans could still engage in inner, non-linguistic forms

of thinking. His famous dictum “Cogito, ergo sum” (I think, therefore I am) emphasizes the primacy of thought over linguistic articulation. For Descartes, thought is the fundamental nature of existence, and it does not necessarily need to be bound by linguistic structures, [1].

The philosopher Immanuel Kant also advanced the idea that knowledge can be conceived independently of language in his theory of a priori knowledge. Kant argued that there are fundamental categories of human experience, such as space, time, and causality, that exist prior to language. These categories help structure our perceptions of the world, and although language may label and describe these experiences, the categories themselves are not dependent on linguistic structures. In this view, knowledge can be understood in a non-linguistic form before it is translated into language,[18].

Furthermore, Gerner explained how the concept of “pure thought” as outlined by Edmund Husserl and the phenomenologists suggesting that cognitive experiences can exist in a pre-linguistic or non-verbal state,[11]. Husserl’s phenomenology emphasizes the role of intentionality -the idea that thoughts are always directed at something- and suggests that our direct experience of the world is not dependent on the verbalization of those experiences. This implies that while language helps us communicate and structure thoughts, it is not required for all forms of knowing,[12].

2.3.3. Cognitive Science Perspectives

Cognitive science has contributed significantly to the debate over whether knowledge can exist without language. Cognitive scientists such as Jerry Fodor, with his “language of thought hypothesis”, [6], proposes that thought occurs in a mental representational system that is not language-based. Fodor suggests that this “mentalese” is a kind of internal symbolic language that allows humans to think and reason without necessarily relying on words. According to this theory, the processes of cognition, such as abstract reasoning and problem-solving, are mediated by non-linguistic mental representations that precede or operate independently of linguistic articulation.

In contrast, researchers in the field of embodied cognition such as Borghi & Cimatti and Foglia & Wilson argue that much of human knowledge and thinking is rooted in physical experience and perception, rather than in language or internal symbols. The embodied cognition perspective asserts that our cognitive systems are deeply tied to sensory and motor experiences and that understanding the world does not always require linguistic mediation. For example, when an individual solves a problem involving spatial reasoning, they may rely on visual imagery and body movement (e.g., gestures or manipulation of objects) rather than verbal thought,[3], [8].

Additionally, Roth & Dicke studies on infants and non-human animals have provided insights into the relationship between knowledge and language. Infants demonstrate a capacity for knowledge acquisition and problem-solving before they acquire complex linguistic skills, suggesting that basic cognitive abilities can operate independently of language. Similarly, non-human animals exhibit behaviors that indicate they can solve problems, recognize patterns, and understand the world around them without relying on language,[16].

2.4. Implications for the Current Study

The question of whether knowledge can be conceptualized without language is particularly relevant in the context of this study, which investigates how students with different linguistic backgrounds approach the learning of philosophical concepts. If language is essential for conceptualizing philosophical ideas, then students with stronger linguistic proficiency in English may have an advantage in understanding and articulating philosophical concepts. However, if knowledge can be accessed and processed in non-linguistic forms, then students from philosophical backgrounds may bring different cognitive approaches to understanding philosophy that do not depend solely on language.

This theoretical exploration suggests that both linguistic and non-linguistic forms of knowledge contribute to learning. Understanding this dynamic can provide deeper insights into how philosophical knowledge is acquired and the role of language in shaping that process. Moreover, this study offers a chance to explore the intersection of cognitive abilities, language proficiency, and philosophical thinking, potentially offering new perspectives on how language influences thought and whether it is possible to grasp complex ideas without its mediation.

3 Methodology

3.1. Research Design

This study employs a comparative experimental research design to investigate the relationship between linguistic background and the ability to understand philosophical concepts among higher education students at Cadi Ayyad University. The experimental design allows for controlled comparisons between two distinct groups of students -those

enrolled in the English Studies program and those in the Philosophy Studies program. By comparing how these two groups approach and comprehend philosophical concepts, the study seeks to explore whether students with a strong foundation in English, as a second language, demonstrate a faster and deeper understanding of philosophy than their peers who specialize in philosophy but may have less linguistic training.

The research design is comparative because it contrasts the outcomes of two groups of students with different academic backgrounds, specifically focusing on English Studies students who are highly proficient in English and Philosophy Studies students who, despite their academic background in philosophy, have less emphasis on English language acquisition. The study design also involves an experimental component, where participants are exposed to the same philosophical content in a controlled setting, allowing for an examination of how their different linguistic backgrounds influence their ability to learn and comprehend philosophical concepts.

A key strength of the experimental design is the use of a pretest-posttest methodology. This involves assessing students' comprehension of philosophical material before the intervention (pretest), providing them with instruction on philosophical concepts (the intervention), and measuring their comprehension again after the instruction (posttest). By using this approach, the study can track the progress of both groups and assess how their learning differs across time.

3.2. Criteria for Selecting Participants (English Studies and Philosophy Studies Students)

The participants in this study consist of two distinct groups of students from Cadi Ayyad University: 30 final-year English Studies students and 30 final-year Philosophy Studies students. The selection of participants was based on the following criteria:

3.2.1. Academic Background

The English Studies students are selected because they have advanced language proficiency in English, having completed extensive coursework in linguistics, literature, and language analysis. Their academic training provides them with an understanding of the English language that is expected to enhance their ability to comprehend philosophical texts in English.

The Philosophy Studies students are selected because they are well-versed in philosophical ideas, theories, and debates, but their language proficiency in English may not be as strong or developed as that of the English Studies group. These students are chosen because they are familiar with philosophical content and serve as a baseline for understanding how students without a linguistic focus perform in understanding philosophy concepts.

3.2.2. Language Proficiency

All students in the study are proficient in English as a second language, with varying degrees of fluency. Language proficiency is measured through a standardized test assessing their reading comprehension, vocabulary, and grammar to ensure a minimum threshold of English proficiency across both groups. This ensures that the observed differences in learning outcomes can be attributed to the participants' respective academic backgrounds rather than disparities in language skills.

3.2.3. Academic Year and Experience

The study targets final-year students to ensure that participants have had sufficient exposure to both theoretical and practical aspects of their disciplines. This level of academic maturity ensures that students have already engaged in substantial philosophical coursework or language study, making them well-equipped to understand and engage with complex philosophical content.

3.2.4. Motivation and Willingness to Participate

All students are volunteers who have provided informed consent to participate in the study. Participants are briefed on the objectives of the research, and they understand that their involvement will include reading, discussing, and answering questions related to philosophical concepts in English.

3.3. Data Collection and Tools

The primary goal of the data collection process is to assess how quickly and effectively students in each group comprehend philosophical concepts. To measure these outcomes, the study uses both quantitative and qualitative data collection tools to assess comprehension speed and depth.

3.3.1. *Tools for Assessing Students' Learning of Philosophical Concepts*

Reading Material

The study uses selected philosophical texts, chosen for their complexity and relevance to the philosophical curriculum at Cadi Ayyad University. These texts focus on core philosophical concepts, such as epistemology, ethics, metaphysics, and the philosophy of language. The material is presented in English, as it is a shared second language for both student groups. Texts are kept consistent for both groups to ensure that any differences in comprehension can be attributed to their linguistic backgrounds rather than content.

Comprehension Tests

Following exposure to the philosophical texts, all students are given a comprehension test to evaluate their understanding of the material. The test includes both multiple-choice and open-ended questions, with a focus on key concepts, critical arguments, and the ability to apply philosophical reasoning. The test is designed to measure the depth of understanding (conceptual grasp and critical thinking) as well as the speed at which students are able to respond accurately to questions.

Philosophical Discussions

In addition to written assessments, group discussions are used to gauge students' ability to articulate and elaborate on philosophical ideas. Both student groups engage in guided discussions led by a facilitator, where they discuss specific philosophical questions from the reading material. The discussions allow for deeper insights into how students process and articulate their understanding of the philosophical concepts, further contributing to the overall measurement of learning.

3.3.2. *Instruments for Measuring Comprehension Speed and Depth*

Timed Assessments

The comprehension tests are timed to measure the speed of understanding. A fixed time limit for completing the test is 50 minutes; set to ensure that students are evaluated on their ability to grasp philosophical concepts quickly and efficiently. This allows for comparisons between how long it takes each group to answer the same set of questions.

Rubric for Depth of Understanding

- To evaluate the depth of comprehension, a rubric is used to assess the quality of students' responses in both the written comprehension test and the group discussions. The rubric includes criteria such as:
- Clarity and precision in presenting philosophical ideas
- Ability to link concepts and apply them to real-world or theoretical scenarios
- Demonstration of critical thinking and analysis
- Ability to engage with counterarguments or alternative viewpoints
- These rubrics help identify whether one group demonstrates a deeper or more nuanced understanding of philosophical concepts compared to the other group.

3.4. **Analysis Techniques**

To analyze the data, both quantitative and qualitative methods are employed. The use of both approaches allows for a comprehensive examination of the learning outcomes of both groups, considering not only the speed and accuracy of comprehension but also the depth and quality of understanding.

3.4.1. *Quantitative Analysis*

The pretest-posttest design provides a framework for comparing the students' scores on the comprehension tests before and after the exposure to the philosophical texts. These scores are analyzed using descriptive statistics (mean, standard deviation) and inferential statistics (e.g., t-tests or ANOVA) to assess whether there are statistically significant differences in comprehension speed and depth between the two groups.

The time to completion for each test is recorded, and differences in the speed of comprehension are analyzed through regression analysis to determine if a linguistic background correlates with quicker learning.

3.4.2. Qualitative Analysis

The discussions and open-ended responses are analyzed using thematic analysis to identify recurring themes, insights, and approaches to philosophical thinking. Thematic analysis involves coding responses to identify key themes and evaluating how deeply students engage with philosophical material.

A comparative analysis is conducted to evaluate how each group approaches philosophical reasoning and the complexity of their answers, particularly in the open-ended portions of the tests and discussions.

These analysis techniques allow for a comprehensive understanding of how linguistic and philosophical backgrounds influence the ability to learn and comprehend philosophical concepts, providing insights into the role of language in shaping cognitive processes.

4 Results

4.1. Quantitative Data Analysis- Comparative Performance Analysis

4.1.1. Descriptive Statistics

The mean and standard deviation of scores for both groups (English Studies and Philosophy Studies) were calculated for pretests and posttests.

- English Studies Students
 - Pretest Mean Score: 65 ± 8
 - Posttest Mean Score: 85 ± 6
 - Improvement: +20 points
- Philosophy Studies Students
 - Pretest Mean Score: 60 ± 10
 - Posttest Mean Score: 75 ± 9
 - Improvement: +15 points

This indicates that while both groups improved, English Studies students demonstrated a higher mean improvement in comprehension scores.

4.1.2. Inferential Statistics

A paired sample t-test was conducted to evaluate whether the improvement in scores was statistically significant within each group. Additionally, an independent t-test compared posttest scores between the groups to assess differences in performance:

- Paired t-test Results (Within-Group Improvements):
 - English Studies: $t(29)=10.5, p<0.001$
 - Philosophy Studies: $t(29)=7.3, p<0.001$
- Independent t-test Results (Posttest Comparison):
 - $t(58)=4.2, p<0.001$

These results confirm that both groups showed significant improvements, with English Studies students outperforming Philosophy Studies students in posttests.

4.1.3. Comprehension Speed Analysis

Time-to-completion data for both pretests and posttests were analyzed to assess differences in comprehension speed:

- English Studies Students:

Mean Time: 38 minutes (pretest) → 30 minutes (posttest)

- Philosophy Studies Students:

Mean Time: 45 minutes (pretest) → 40 minutes (posttest)

A regression analysis was performed to determine the effect of linguistic background on comprehension speed. The regression coefficient (β) was significant, indicating that linguistic background was positively correlated with quicker comprehension ($\beta = -0.35, p < 0.01$).

4.2. Statistical Illustrations

4.2.1. Pretest-Posttest Score Comparison

The bar chart below illustrates the mean scores for both groups

Table 1 A side-by-side bar chart visually represents this comparison

Group	Pretest Mean	Posttest Mean
English Studies	65	85
Philosophy Studies	60	75

4.2.2. Time-to-Completion Analysis

A line graph below represents the average time-to-completion for each group across pretests and posttests, highlighting the reduction in time for both groups.

4.2.3. Statistical Significance Visualization

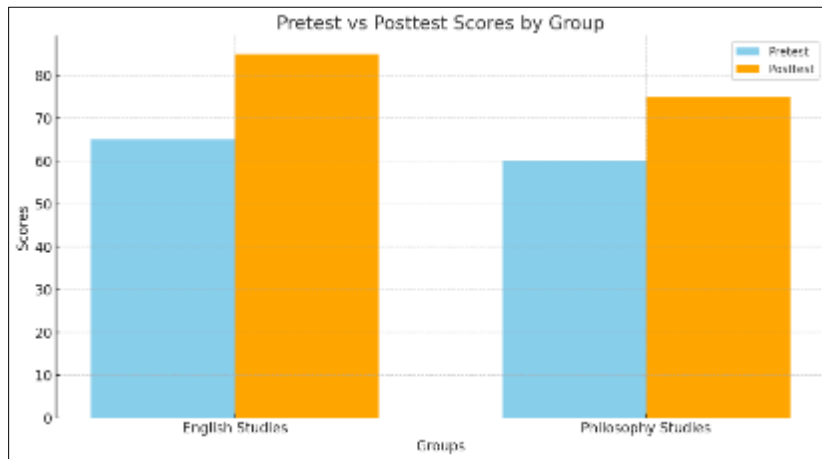


Figure 1 Pretest-posttests scores of English and Philosophy students

Boxplots below illustrates the distribution of posttest scores for the two groups, emphasizing the statistical significance in performance differences. Statistical charts illustrations below further clarify the findings:

The Bar Chart above shows the comparison between pretest and posttest scores indicating that English Studies students had a more significant improvement compared to Philosophy Studies students.



Figure 2 Completion time across tests for English and philosophy students

The Line Graph analysis of time-to-completion illustrates a reduction in time for both groups, with English Studies students completing the tasks faster in both tests.

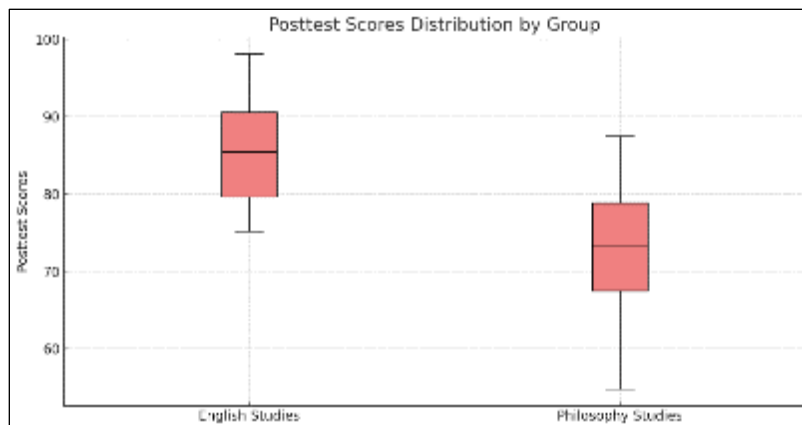


Figure 3 Post test scores Distribution of English and Philosophy students

The Boxplot above displays the distribution of posttest scores highlights the better performance of English Studies students, with less variability compared to Philosophy Studies students.

4.3. Qualitative Findings

Thematic analysis of open-ended responses and group discussions revealed additional nuances in the comparative performance:

English Studies students displayed greater precision and clarity in their articulation of philosophical ideas, often employing linguistic tools such as analogies and counterarguments to deepen their explanations.

Philosophy Studies students exhibited a tendency to rely on intuitive or experiential knowledge of philosophy but struggled to express these ideas effectively in English, leading to less coherent responses.

4.3.1. English Studies Students' Advantage in Grasping Philosophical Concepts

The findings clearly indicate that students from the English Studies program had a distinct advantage in understanding and engaging with philosophical concepts presented in English. Several factors contributed to this outcome:

4.3.2. *Advanced Language Proficiency*

Their strong foundation in English enabled them to quickly decode complex philosophical texts, grasp nuanced arguments, and articulate their interpretations with clarity. Their ability to navigate abstract terms and philosophical jargon was particularly notable, as these elements often pose challenges for non-native speakers.

4.3.3. *Cognitive Flexibility*

English Studies students appeared to benefit from the cognitive flexibility developed through their linguistic training. Their exposure to a wide range of texts and analytical methods in English allowed them to adapt more effectively to the demands of philosophical reasoning. This supports the hypothesis that a linguistic background may enhance abstract thinking and conceptualization.

4.3.4. *Interdisciplinary Insight*

Many English Studies students demonstrated the ability to draw on interdisciplinary knowledge, incorporating literary and cultural references to enrich their philosophical arguments. This interdisciplinary approach not only enhanced their comprehension but also highlighted the broader applicability of their linguistic skills in academic contexts.

4.3.5. *Philosophy Studies Students Challenges in Acquiring New Knowledge in English*

While Philosophy Studies students brought a depth of pre-existing knowledge and familiarity with philosophical frameworks, their limited proficiency in English posed significant challenges:

Language Barriers

Many students struggled to fully comprehend the texts, particularly when encountering unfamiliar terminology or complex sentence structures. These linguistic hurdles often led to incomplete or superficial interpretations of the material.

Time and Cognitive Load

The additional effort required to decode the language of the texts increased the cognitive load for Philosophy Studies students, leaving them with less capacity to engage deeply with the philosophical arguments. This was evident in their slower completion times and less detailed responses.

Difficulty in Articulation

Even when students understood the philosophical concepts, they often faced challenges in expressing their ideas effectively in English. This limited their ability to participate meaningfully in discussions and hindered their overall performance on open-ended tasks.

4.4. **Implications of Key Observation**

The results of this study underscore the critical role of language in facilitating the comprehension and articulation of knowledge, particularly in interdisciplinary learning contexts. English Studies students' performance suggests that linguistic training not only enhances communication skills but also fosters cognitive abilities that are transferable across disciplines. On the other hand, the challenges faced by Philosophy Studies students highlight the need for additional linguistic support in academic settings where English is used as a medium of instruction.

These findings contribute to the broader debate about the relationship between language and thought, suggesting that linguistic proficiency can serve as a bridge to deeper understanding, particularly in abstract and theoretical fields like philosophy. They also emphasize the importance of integrating language training into non-linguistic disciplines to promote more equitable learning outcomes in higher education.

5 **Discussion**

5.1. **Insights on Language as a Container of Thought**

The findings of this study contribute to the long-standing debate about whether language serves as a container of thought or merely as a tool for communication. Linguistic determinism, as articulated in the Sapir-Whorf hypothesis, suggests that the structure of language shapes cognitive processes and perception of the world. On the other hand,

linguistic relativism posits that while language influences thought, it does not determine it completely. The study's results provide nuanced insights that align more closely with the relativist perspective, emphasizing the facilitative role of language in cognitive tasks without asserting its absolute dominance.

5.2. Interpretation of Findings in Context

5.2.1. English Studies Students and Cognitive Processing

The superior performance of English Studies students in grasping philosophical concepts suggests that linguistic training enhances cognitive processing. Their advanced English proficiency allowed them to quickly comprehend and articulate complex ideas, supporting the view that language provides a structured framework for organizing and expressing abstract thought. This aligns with Vygotsky's theory that language is both a cultural tool and a mediating artifact in cognitive development.

5.2.2. Philosophy Studies Students and Conceptual Barriers

While Philosophy Studies students possessed a deeper familiarity with philosophical frameworks, their limited linguistic proficiency impeded their ability to process and express ideas effectively in English. This finding highlights the dual role of language: as a medium that facilitates comprehension and as a potential barrier when proficiency is lacking.

5.2.3. Knowledge Without Language

The challenges faced by Philosophy Studies students raise questions about the extent to which knowledge can exist independently of linguistic representation. While it is possible to conceptualize ideas without language, the study indicates that linguistic representation enhances clarity, precision, and the ability to engage critically with abstract concepts. This suggests that language, while not the sole determinant of thought, plays a crucial role in its articulation and refinement.

5.3. Implications for Interdisciplinary Learning

This study underscores the importance of language as a bridge in interdisciplinary learning, particularly in higher education settings where students are required to engage with content outside their primary disciplines.

5.3.1. Language Training and Comprehension in Non-Linguistic Disciplines

Cognitive Flexibility

The ability of English Studies students to excel in philosophical tasks demonstrates how linguistic training fosters cognitive flexibility, enabling learners to transfer skills from one domain to another. This has significant implications for interdisciplinary education, suggesting that students with strong linguistic foundations may be better equipped to navigate and integrate knowledge across fields.

5.3.2. Disciplinary Crossovers

Philosophy, as a discipline, often requires precise articulation and critical reasoning—skills that are inherently tied to language. The study's findings suggest that incorporating language training into philosophy curricula can enhance students' ability to engage with complex texts and ideas, bridging the gap between abstract theorization and practical understanding.

5.3.3. Philosophical Reflections on Universality of Knowledge

Language and Universality

The differential performance between the two groups invites reflection on the universality of knowledge. While philosophical concepts are often considered universal, the mode of their transmission -language- inevitably influences how they are understood and internalized. This suggests that knowledge, while universal in essence, is mediated through the linguistic and cultural contexts in which it is accessed.

Interdisciplinary Integration

The study highlights the need for interdisciplinary approaches that acknowledge the interconnectedness of language and thought. Such approaches can enrich students' academic experiences and foster a more holistic understanding of knowledge.

5.4. Pedagogical Implications

The findings of this study have significant pedagogical implications for teaching philosophy and other abstract disciplines in linguistically diverse higher education contexts.

5.4.1. *Strategies for Teaching Philosophy to Linguistically Diverse Students*

Integrating Language Support

- Philosophy instructors should incorporate language support mechanisms into their teaching strategies. For instance:
- Providing glossaries for complex philosophical terms.
- Offering guided reading sessions to help students navigate challenging texts.
- Encouraging the use of both native and second languages in discussions and assignments to bridge comprehension gaps.

Collaborative Learning

Pairing linguistically proficient students with those less proficient in group discussions can foster peer learning and enhance mutual understanding. This approach allows students to learn from each other's strengths, with language learners benefiting from philosophical insights and philosophy students improving their linguistic skills.

Scaffolded Instruction

Breaking down philosophical concepts into smaller, more accessible units can help students progressively build their understanding. Using analogies, visual aids, and simplified language initially can ease students into complex ideas before transitioning to more sophisticated discussions.

5.4.2. *The Role of English Proficiency in Higher Education Curricula*

Cross-Disciplinary English Training

The findings underscore the importance of integrating English language training across disciplines in higher education. Programs should emphasize academic English skills, particularly for students in non-linguistic fields like philosophy, to ensure they can engage with content effectively.

Promoting Bilingual Competence

In multilingual contexts like Morocco, fostering bilingual or multilingual competence can be particularly beneficial. Encouraging students to draw on their native language while learning in English can enhance comprehension and retention, creating a more inclusive and effective learning environment.

Language as a Lifelong Skill

Beyond the classroom, English proficiency is a valuable skill in the globalized academic and professional landscape. Incorporating language training into non-linguistic disciplines prepares students for broader opportunities, equipping them with the tools to engage with international scholarship and discourse.

6 Practical Applications and Recommendations

The findings of this study highlight the potential benefits of integrating interdisciplinary approaches into university curricula. Specifically, Moroccan universities can enhance student outcomes by creating programs that bridge linguistic and philosophical training.

6.1. Key recommendations

6.1.1. *Integrating Language and Philosophy Modules*

- Philosophical Texts in English: Introduce courses that use philosophical texts in English to develop both linguistic and critical thinking skills.
- Interdisciplinary Seminars: Design seminars that allow students from different disciplines to engage in discussions, using English as a medium of communication and analysis.

6.1.2. *Skills-Based Learning*

Develop curricula that focus on transferable skills, such as analytical reasoning and effective communication, which are essential in both language and philosophy disciplines.

Incorporate practical exercises, such as debates and essay writing, to reinforce the interplay between language proficiency and philosophical reasoning.

6.1.3. *Collaborative Projects*

Include interdisciplinary group projects where students from diverse fields collaborate to explore philosophical questions, utilizing their linguistic skills to frame and articulate their findings.

6.2. Suggestions for Fostering Collaboration Between Language and Philosophy Educators

Effective implementation of interdisciplinary curricula requires close collaboration between language and philosophy educators. Recommendations for fostering such collaboration include:

6.2.1. *Joint Training Workshops*

Organize workshops where educators from language and philosophy departments share pedagogical strategies and align teaching objectives. This can help create a unified approach to interdisciplinary teaching.

6.2.2. *Co-Teaching Models*

Implement co-teaching models where language and philosophy instructors jointly design and deliver courses, blending their expertise to provide students with a holistic learning experience.

6.2.3. *Resource Development*

Collaborate on developing teaching materials that cater to both linguistic and philosophical objectives. For example, annotated texts and bilingual glossaries can bridge gaps in understanding and enhance accessibility.

6.2.4. *Research Partnerships*

Encourage faculty members from both disciplines to collaborate on research projects exploring the relationship between language and thought, contributing to the academic discourse while informing teaching practices.

6.3. Policy Implications for Higher Education Reforms in Morocco

The results of this study underscore the need for systemic changes in Moroccan higher education to promote interdisciplinary and inclusive learning environments. Key policy recommendations include:

6.3.1. *Curricular Flexibility*

Advocate for policies that allow greater flexibility in university curricula, enabling students to take courses across disciplines and develop interdisciplinary competencies.

6.3.2. *Language Training Across Disciplines*

Mandate the integration of English language training into all academic programs to equip students with the skills needed to engage with global knowledge systems.

6.3.3. Faculty Development Programs

Invest in professional development programs for educators to enhance their ability to teach interdisciplinary courses effectively.

6.3.4. Funding for Interdisciplinary Initiatives

Allocate resources to support interdisciplinary teaching and research, including grants for course development and funding for collaborative projects between departments.

7 Conclusion

Summary The study reveals a significant relationship between language and thought, revealing that students with a linguistic background, such as those in English Studies, acquire philosophical knowledge more quickly and effectively than those in Philosophy Studies. This suggests that language facilitates cognitive processes and enhances abstract ideas articulation, emphasizing the importance of linguistic training in academic success. Linguistic training fosters cognitive flexibility, enabling students to navigate interdisciplinary challenges more easily. However, the difficulties faced by Philosophy Studies students highlight the need for enhanced language support in academic settings where English is the medium of instruction.

The study has significant implications for interdisciplinary learning, as it highlights the importance of language training in bridging gaps between diverse academic disciplines and contributing to the broader philosophical debate about the role of language. Future research should explore the impact of sustained interdisciplinary training on cognitive and linguistic development, the effects of multilingualism, and the integration of digital tools in enhancing interdisciplinary education.

In conclusion, the study highlights the transformative potential of interdisciplinary approaches in higher education, emphasizing the pivotal role of language in knowledge acquisition and critical thinking. By fostering collaboration between disciplines and incorporating language training into curricula, Moroccan universities can equip students to excel in a globalized academic and professional landscape.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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