

ORIGINAL RESEARCH PAPER

A QUALITATIVE INQUIRY INTO COGNITIVE AND PERCEPTUAL PROCESSES AMONG SPEAKERS OF THREE OR MORE LANGUAGES

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ABSTRACT

Multilingual individuals often report that the language they use can influence how they think, remember, and create. Drawing on three complementary theoretical strands, Vygotsky's account of inner speech as an internalized cognitive tool, linguistic relativity (the Sapir-Whorf hypothesis), and research on the bilingual and multilingual cognitive advantage, this study investigates these subjective experiences through a qualitative survey of adults who speak three or more languages. The survey examined internal dialogue, problem-solving, memory recall, creativity, and emotional associations across languages, and this theoretical framework guides our interpretation of participants' responses. Most participants reported using their dominant or context-relevant language for reasoning and reflection, with switches to other languages when facing difficulties or seeking nuance. Abstract concepts (e.g., "freedom," emotional nuance) were often easier to express in the language with a richer vocabulary for that concept. Many felt "more creative" or emotionally expressive in one language versus another, consistent with findings that multilingualism can enhance creativity through cognitive flexibility. Memory recall tended to align with the language of encoding (e.g. childhood memories recalled in one's first language). Notably, participants generally saw their core moral judgments as stable across languages, although prior research suggests subtle "foreign-language" effects can occur. Together, these findings suggest that multilingual experience contributes to adaptive cognitive flexibility: switching languages can aid problem-solving, creativity is modulated by linguistic context, and inner speech serves as a flexible cognitive tool that shifts with the language of thought.

Keywords: multilingualism, inner speech, linguistic relativity, creativity, memory, identity



MAP EDUCATION
AND HUMANITIES

Volume 7

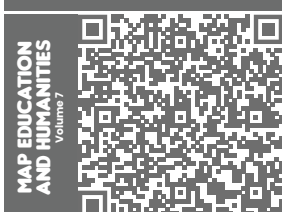
ISSN: 2744-2373/ © The Authors.
Published by MAP – Multidisciplinary
Academic Publishing.

Article Submitted: 29 June 2026
Article Accepted: 04 September 2026
Article Published: 05 September 2026



Publisher's Note: MAP stays neutral with
regard to jurisdictional claims in published
maps and institutional affiliations.

<https://doi.org/10.53880/2744-2373.2026.7.62>



HOW TO CITE THIS ARTICLE

Šahinović M., Delić H. (2026). A Qualitative Inquiry into Cognitive and Perceptual Processes among Speakers of Three or More Languages.

MAP Education and Humanities, 7, 62–72. doi: <https://doi.org/10.53880/2744-2373.2026.7.62>



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1. Introduction

Language is not only a medium of communication but also a lens through which we perceive and interpret the world. According to Boroditsky (2011), differences in language can lead people to pay attention to different aspects of experience – for example, English speakers may remember the agent of an accident, whereas Spanish speakers may focus on the event itself. Bialystok (2017) notes that, by some estimates, over half of the world's population is multilingual to some extent, making it crucial to understand how multilingualism interacts with thought. Studies in cognitive psychology and neuroscience (e.g. Bialystok, 2017) highlight that managing multiple languages can produce broad cognitive effects, such as enhanced executive control and flexible attention. In addition, Vygotsky's classic theory posits that language becomes internalized as a tool for thinking: "Inner speech is to a large extent thinking in pure meanings" (Vygotsky, 1986, p. 149). Yet much of this work has emphasized laboratory tasks or broad cognitive outcomes, in which language is typically held constant or treated as a control variable rather than examined as a lived, subjective experience. This leaves a gap in understanding how everyday thinking and problem-solving feel different across languages, from the perspective of the people actually switching between them. A qualitative, self-report approach addresses this gap directly: where quantitative paradigms are well suited to measuring outcomes such as reaction time or accuracy, they are not designed to capture how multilingual individuals themselves experience the moment-to-moment work of thinking, remembering, and creating in more than one language. Qualitative self-report therefore adds essential value here, not as a substitute for experimental cognitive science, but as a complementary lens onto the subjective, everyday texture of multilingual cognition that laboratory tasks are not designed to capture.

This paper explores those subjective experiences. We focus on questions such as: Do multilinguals find themselves thinking in the language in which they learned a concept? Does one's default internal dialogue shift with context? Do creative ideas emerge differently in different languages? How do languages color memory and emotion? We combine theoretical insights from cognitive psychology with the voices of multilingual individuals who completed an open-ended

survey. By analyzing respondents' descriptions of their thought processes, this study aims to bridge empirical findings with lived experience; the specific research questions that guided this analysis are set out in full following the literature review.

2. Motivation and Gaps

Much cognitive research on bilingualism focuses on performance metrics – such as reaction times on cognitive control tasks or test scores on problem-solving tasks. These studies have established that multilingual individuals often outperform monolinguals in executive functions and exhibit delayed cognitive decline (e.g., Bialystok, 2011; Marian & Shook, 2012). However, less is known about how multilinguals personally experience their thinking processes in different languages. In particular, there is a need to connect the quantitative findings with qualitative evidence about how language use shapes internal cognition and creativity.

For example, we know that constant language switching can enhance cognitive flexibility, but how do individuals actually feel this when solving everyday problems? How does language choice affect the sensation of creativity or emotional resonance? The present study addresses these gaps by directly asking multilingual individuals about their thought patterns. This first-person perspective is underexplored in the literature. Pavlenko (2006) observed that bilinguals often report shifts in personality and emotionality between languages, but systematic data on internal problem-solving and creativity differences remain sparse. Moreover, while some research (e.g. Boroditsky's work) illustrates broad patterns of language-influenced cognition, there is a lack of cohesive analysis tying those patterns to bilinguals' own reports.

By conducting a qualitative survey, this study aims to fill these gaps. It seeks to elucidate how people think, learn, remember, and feel in each language, providing nuance to cognitive theories. The motivation is both theoretical – to deepen our understanding of linguistic relativity and internal speech – and practical, as insights may inform educational strategies for multilingual individuals. Lastly, we aim to show how qualitative self-reports can complement experimental findings to offer a more comprehensive view of bilingual cognition.

3. Literature Review

3.1. Bilingual Cognitive Advantages

A large body of research suggests that bilingualism confers advantages in various cognitive domains. Bialystok (2017) notes that bilingual children, in particular, often outperform monolinguals on tasks requiring selective attention and executive control, and demonstrate greater cognitive flexibility, theory-of-mind understanding, and creativity on certain tasks. In adults, bilinguals frequently show improved problem-solving and multitasking abilities, an effect that Kharkhurin (2015) attributes to the way habitual language-switching trains cognitive flexibility more broadly. This supports the idea that juggling multiple language systems trains the brain in novel ways. This influence runs in both directions: Cook (2003) shows that learning additional languages also reshapes a speaker's first language, meaning the languages of a multilingual mind are never fully independent of one another.

Enhanced memory and focus have also been documented. Bialystok (2011) and Marian and Shook (2012) both report that bilingual individuals tend to have stronger working memory and can better inhibit distractions than monolingual peers. Bialystok (2017, p. 250) attributes these benefits to the way lifelong bilingualism affects "a set of processes subsumed under the category of executive attention," which also supports sharper focus and more efficient decision-making. Importantly, managing multiple languages regularly is akin to a mental workout, which contributes to a cognitive reserve that protects against aging-related decline. These findings suggest that language experience shapes brain function and cognition, consistent with Vygotsky's (1986) broader view of language as a tool that supports higher-order thinking and intellectual adaptation.

3.2. Language and Thought (linguistic relativity)

The idea that language influences thought has a long history (the Sapir-Whorf hypothesis; Sapir, 1929). Contemporary research finds clear examples: Boroditsky (2011) has shown that speakers of different languages attend to and remember aspects of experience differently. For instance, in languages with grammatical gender, speakers ascribe gendered attributes to objects, and memory of events can be biased by language

structure. Boroditsky (2011) reports that Spanish speakers, whose grammar can hide the doer of an event, are less likely to remember who caused that event than English speakers, who grammatically encode the doer. Color perception offers a related case: Athanasopoulos (2009) found that Greek speakers, who distinguish light and dark blue with separate terms, discriminate those shades more readily than English speakers, whose single word "blue" spans both. These examples illustrate that habitual language use affects attention, memory encoding, and categorization. Kramsch (2009) similarly argues, based on multilingual speakers' own accounts of their experience, that each language carries its own conceptual and cultural scaffolding, so that thinking in a different language is rarely a simple matter of translation. While most linguistic relativity research has compared different language communities, together these findings imply that multilingual speakers switching languages may also shift their cognitive framing in daily life.

3.3. Internal Speech and Problem-Solving

According to Vygotsky's sociocultural theory, children internalize language through interaction and eventually use it as a thinking tool. By adulthood, this inner speech (silent self-directed language) underlies much of our reasoning and planning. Vygotsky famously noted that "inner speech is to a large extent thinking in pure meanings" (Vygotsky, 1986, p. 149), highlighting its central role in cognitive processes. In bilinguals, inner speech may occur in either or both languages, and switching the language of inner speech could reframe a problem. Resnik (2018) found that multilinguals often think in the language of their current mental context, and may switch languages internally when solving complex tasks. While we lack definitive data on how inner speech varies with language, it is reasonable to expect that bilinguals use inner speech flexibly, leveraging whichever language best supports the task at hand.

3.4. Creativity and Language

Creativity is often assessed via tasks of divergent and convergent thinking. Recent research finds a positive link between bilingualism and creative problem-solving. Xia et al. (2022) found that highly proficient bilinguals scored higher on both convergent (Remote Associates Test) and divergent (Torrance Tests) thinking tasks than less proficient bilinguals, with cognitive control

mediating these effects. The authors conclude that strong bilingual proficiency supports creativity by strengthening both cognitive inhibition and cognitive flexibility (Xia et al., 2022). Similarly, Kharkhurin (2011) reports bilingual advantages in generating novel uses for objects and in nonverbal creativity. It is hypothesized that the experience of navigating multiple linguistic and cultural systems broadens one's perspective, thereby fostering creative insights.

However, context matters since cultural background and language context can influence the creativity outcome.

3.5. Emotion, Identity, and Language

Language choice can carry emotional weight. Pavlenko (2006) surveyed over 1000 bilinguals and found that more than two-thirds reported sometimes feeling like a different person depending on the language they used, a pattern Dewaele and Nakano (2013) also documented among multilinguals switching between three or more languages. Some bilinguals feel more authentic in their native tongue and more "fake" or emotionally distant in a second language. Emotional language is also often connected to cultural identity. Bilinguals tend to associate personal memories and deep emotions strongly with their first language (L1). For example, people learning a second language later in life often describe the L2 as emotionally "cooler" or less intimate. These patterns suggest that the emotional resonance of words differs between languages, affecting both self-expression and moral reasoning; Wierzbicka (2004) similarly argues that bilingual lives involve navigating genuinely different emotional and cultural worlds rather than simply translating one set of feelings into another language. Indeed, research on the "foreign language effect" suggests that bilinguals may judge moral dilemmas more abstractly and less emotionally in an L2 than in their native language (Pavlenko, 2014).

Together, this literature shows multilingual cognition as more complex, as language learning shapes attention and memory (linguistic relativity), inner speech grounds thought (Vygotsky, 1986), and multilingualism often sharpens certain cognitive abilities (executive function, creativity). Yet many questions remain about everyday experience. How do multilingual people subjectively experience these effects? The present survey data can illuminate these questions by providing direct quotes and themes from multilingual respondents themselves.

4. Research Questions

This study investigates how multilingual individuals experience their cognitive processes, such as thinking, remembering, and creating, differently across the languages they speak. Because the study adopts an exploratory, interpretative phenomenological approach (see Methodology), it does not test pre-specified hypotheses in the deductive sense; rather, it is guided by four open research questions, developed directly from the gaps identified above. RQ1: Which language, if any, do multilingual individuals default to for internal thinking and self-talk, and under what conditions do they switch languages internally? RQ2: How does language choice shape the way multilingual individuals approach problem-solving and learning? RQ3: How do memory, emotion, and moral reasoning vary, if at all, across the languages multilingual individuals speak? RQ4: In what ways, if any, do creativity and self-perception vary by language context? Together, these four questions guided both the design of the survey instrument and the thematic analysis of responses, and each is addressed in turn in the Results and Discussion below. A fifth, cross-cutting aim was to relate participants' accounts back to cognitive psychology constructs such as inner speech, linguistic relativity, and the multilingual cognitive advantage; this connective work is taken up throughout the Discussion rather than treated as a separate research question.

5. Methodology

This exploratory study employed a qualitative survey design to examine how multilingual adults experience internal language use and related cognitive processes. We constructed an open-ended questionnaire covering key domains such as inner speech, language switching, memory recall, emotion, morality, creativity, etc. Questions were deliberately open-ended (e.g. "Describe what language your thoughts usually occur in," "How does switching languages influence your thinking?") to elicit rich, reflective responses. Participants were explicitly encouraged to answer in whichever language felt most comfortable, and to give as much detail as they wished. As in similar bilingual cognition studies, this format allowed respondents to express nuanced personal insights in their own linguistic code. Our primary interest was in patterns of thought and feeling across languages, rather than in quantifying responses, so the qualitative survey design (rather than fixed-choice items) was appropriate for uncovering detailed experiences and emergent themes.

5.1. Participants and Sampling

We recruited a purposive sample of multilingual young adults living in Bosnia and Turkey. Participants (N = 20; age range 19–27) were selected because they each spoke at least three languages fluently. For the purposes of this study, multilingualism was operationally defined as self-reported functional fluency, in both comprehension and production, across three or more languages used regularly in daily life, consistent with participants' own self-identification as multilingual speakers. This fluency was evaluated through self-report rather than independent proficiency testing: recruitment messaging specified the three-language fluency criterion, and participants' language background was then confirmed through the demographic screening questions administered at the outset of the survey (see Procedure and Ethical Considerations, below); we return to the limits of this self-report approach in the Conclusion. The sample included speakers whose native and additional languages included Turkish, Bosnian, English, and Arabic, reflecting the linguistic diversity of the target regions. Both males and females were represented. All participants had learned their additional languages during childhood or adolescence (e.g. through family, schooling, or immersion in multilingual communities). The online survey was distributed via language-learning forums and social media groups, targeting individuals known to be multilingual. Though non-probabilistic and limited in size, the purposive sample suited our exploratory aims. We note that, as with other qualitative studies of multilingual cognition, the relatively small and culturally specific sample (for example, an unequal balance of different language groups) constrains broad generalizability. However, each respondent offered extensive written reflections, providing deep insight into multilingual thought processes. Demographic questions (included at the survey outset) confirmed participants' age, gender, language background, and contexts of language use (e.g. family, school, community).

5.2. Survey Instrument

The questionnaire was custom-designed for this study, drawing on prior research on multilingual cognition and inner speech. Topics were informed by the literature on language-thought interaction (e.g., Dewaele, 2015; Pavlenko, 2011). We pilot-tested the questions with two multilingual volunteers to ensure clarity and relevance. The final instrument

consisted of approximately 10 open-ended prompts. For example: "When you solve a problem or do mental calculation, which language do you use in your mind?" or "Can you recall a memory differently depending on the language you use?" These prompts encouraged participants to reflect on (and describe) their subjective experiences of "default" thinking language, imaginative use of language, the emotional coloring of language, and moral reasoning in different languages. Prompts on creativity and morality were included to see if language choice affected attitudes or values, areas noted in bilingual literature. Participants typed their responses directly into the online survey form via Google Forms. We deliberately placed no word-count limits, allowing answers to vary naturally in length. Many respondents wrote detailed paragraphs while a few gave very brief replies. Using an online platform enabled reaching multilingual individuals in different locations conveniently. All materials (consent form, instructions, survey items) were provided in English, with participants free to answer in any familiar language.

5.3. Procedure and Ethical Considerations

Data collection took place in spring of 2026. We obtained approval and all participants gave informed consent. The consent form explained the study purpose (investigating language and thought), assured anonymity, and noted that they could skip questions or withdraw at any time. No personally identifying information was collected. To respect language preference, the survey introduction was bilingual (English/Bosnian), but participants could answer in Bosnian, Turkish, English, or Arabic as they preferred. Responses in other languages (e.g. code-mixed sentences) were allowed if participants used multiple languages organically.

5.4. Analytic Approach

We analyzed participants' responses using reflexive thematic analysis (Braun & Clarke, 2006), adopting an interpretative, phenomenologically informed orientation that aims to understand how participants make sense of their own cognitive experiences. We chose this approach, rather than a strict Interpretative Phenomenological Analysis (IPA), because IPA's idiographic case-by-case method is designed for very small, homogeneous samples, and is not well suited to a sample of twenty participants; thematic analysis retains IPA's interpretative, meaning-focused stance while

remaining appropriate for a sample of this size. This orientation focuses on personal meaning and context, which is appropriate for exploring subjective language-thought interactions, and is the reason the study is guided by open research questions rather than deductive hypotheses (see Research Questions, above). By interpreting participants' narratives, we sought to capture the nuances of multilingual cognition beyond what can be measured quantitatively. In reporting, we use first-person perspectives where relevant to preserve authenticity, but our analysis remains anchored in existing cognitive theories and findings. Throughout, we maintained reflexivity, acknowledging that our interpretation is influenced by theoretical knowledge but grounded in participant voices.

5.5. Data Analysis Procedure

Coding followed the phases outlined by Braun and Clarke (2006): the first author read all responses repeatedly to become familiar with the data, generated initial codes across the dataset, grouped codes into candidate themes, and then reviewed and refined these themes against both the coded extracts and the full dataset before finalizing the four themes reported in the Results. Coding was conducted by a single researcher (the first author) rather than by multiple independent coders, so no inter-rater reliability statistic was calculated; this is a limitation we return to below. Quotations requiring translation into English were translated by the first author and then independently checked by a second bilingual reader to help preserve nuance and accuracy, a step kept separate from the thematic coding itself.

6. Results

6.1. Default Internal Language and Self-Talk

Most participants reported a dominant language for inner dialogue, generally the language of their education or daily use. One respondent noted that English "feels better" for academic thinking, decision-making, and journaling, whereas Turkish or Arabic came to mind for personal or cultural reflections. Another said complex reasoning defaulted to their first language, with other languages acting as mental "translations." When participants had learned a specific concept, such as a math skill, in a particular language, they tended to recall and reason about it in that same language.

Context, however, often drove language shifts. Participants described switching languages internally depending on the situation: one explained that during an exam, their thoughts alternated between Turkish and English depending on which language the exam question was posed in; another reported always switching to English when searching for information online because the available resources were predominantly in English. These accounts suggest that multilinguals do not remain in one internal language; rather, the environment and task at hand shape which language dominates their inner speech. This pattern extended to journaling and self-reflection specifically as many respondents said they journal or mentally rehearse decisions in English and attributing this to greater writing practice or a larger vocabulary for abstract thought, while a few used their native language spontaneously but treated English as a learned habit for introspection. One participant described this as automatic, saying "my brain does it for me automatically," suggesting that language choice in inner speech is often subconscious. Taken together, these findings align with Vygotsky's (1986) view that inner speech is flexible and derived from social use and adapting to whichever language feels most supportive for the task at hand.

6.2. Problem-Solving and Learning

When solving complex problems or facing mental blocks, several participants deliberately switched languages. One respondent said, "I can rationalize situations or predicaments faced better in English and make a better structure of things," implying that English offered clearer problem structuring. Another noted that switching to English helped clarity when stuck in Turkish, partly because, in their words, "more educated people speak English." Switching languages as a problem-solving tool was a recurrent theme: several participants reported resorting to English when they could not find the right words in another language.

This same pattern extended to learning. Participants reported that the language of instruction strongly shaped how they learned and conceptualized new material. Most found it easier to grasp academic concepts in English, the language of their education; one said, "English is better for learning... I solved more problems in that language," while another noted that their technical vocabulary was stronger in English. In contrast, when a concept was first introduced in Turkish or Bosnian, participants tended to use that language

to learn and reason about it. Participants also felt they “understand math concepts better” or recalled lessons more clearly when thinking in the original language of instruction, echoing the idea that learning is smoother in the language in which it was first encoded.

6.3. Memory, Emotion, and Moral Reasoning

Personal memories were tightly bound to language. Almost all participants found that childhood memories were more easily recalled in their first language: a respondent whose native language was Bosnian said childhood memories are “mostly tied to Bosnian... easier to explain and think about in Bosnian,” while adult experiences at university were remembered in English. Another noted that early years felt “understood in Turkish” because that was the home language. When describing memories, participants typically switched to the language in which the memory had occurred, suggesting that shifting between languages can partition memories into language-linked “context layers” of one’s life.

Emotional and cultural associations followed a similar pattern. Participants tied humor, family relationships, and religious or cultural identity to specific languages: one described joking and humor as easier in Turkish and English than in Bosnian, while another said, “I use Arabic when I talk about religion and my roots.” Generally, the mother tongue carried the heaviest emotional weight and familial resonance, while English or other additional languages were experienced as “cooler” or more detached, though two participants reported feeling more creative or emotionally expressive in English specifically. This diversity suggests that emotional resonance varies across individuals: some multilinguals feel stronger emotions in their first language, while others find greater emotional nuance in an additional language, depending on proficiency and context.

Despite these emotional differences, participants’ moral judgments appeared comparatively stable across languages. Most respondents said their ethical decision-making did not change with the language they were using, and several explicitly described their “core” values as language-invariant. A few noted more subtle shifts in framing: discussing a moral dilemma in English felt more academic, while the same discussion in Turkish felt more personal. Overall, participants’

reports suggest that while language may shape the framing of a moral question, their underlying values were experienced as language-neutral.

6.4. Creativity, Translation, and Self-Perception

Participants also described shifts in communication style, self-perception, and creative expression across languages. Several noted changes in tone: one felt “more assertive in Turkish and more reasonable in English,” while another said conflicts felt easier to handle in Turkish because they could fully express anger and passion there. Others felt more “patient” or “diplomatic” in English. About half of participants noticed such differences in how they came across in each language, while the other half reported no discernible change in personality or tone.

Many participants also described specific ideas, jokes, or feelings as untranslatable between languages. One said that a Bosnian poem read in English “just isn’t the same,” because its emotional nuance could not be duplicated; another explained that certain English terms have no Bosnian equivalent, and that she tries to convey the essence of an idea rather than translating literally. These experiences suggest that language-specific concepts shape thought, and that expressing an idea first learned in one language requires active mental adaptation when using another.

This same divide extended to creativity. Some participants found their creativity flowed most easily in their culturally familiar language, citing greater cultural knowledge or a stronger sense of narrative style in Turkish or Bosnian. Others favored English for creative writing, citing a broader vocabulary; one said, “I find it easier to write creatively in English since I can manipulate the language better.” Almost all participants agreed that creativity felt different depending on the language they were using, suggesting that multilingualism widens the range of thought by allowing a person to adopt different creative “modes” shaped by each language’s cultural style.

Across these four areas, several clear patterns emerged. Participants consistently had a default internal language, typically the one tied to their education or daily use, but switched fluidly when context demanded it. Language choice also shaped cognitive tasks differently: academic learning and self-reflection tended to occur in

English for these respondents, while emotional and cultural thinking occurred more often in the mother tongue. Memories and emotions were tightly bound to the language in which they were first experienced, while participants' core values and moral reasoning were described as comparatively stable across languages, even when the framing of an issue shifted. Finally, creativity and self-expression were widely reported to feel different depending on the language used, pointing to the kind of internal flexibility and varied self-expression associated with multilingual cognitive advantages.

7. Discussion

These results support several key concepts in the multilingual cognition literature, organized here around the same four themes used to present the findings above.

7.1. Inner Speech as a Flexible, Context-Sensitive Tool

The dominance of participants' first language in inner speech echoes prior work on language and thought: Resnik (2018) similarly found that multilinguals generally rely on their first language more often in self-talk. Our participants likewise relied on a default language, consistent with the notion that the most entrenched language shapes internal cognition. However, participants' ability to switch inner languages as needed points to genuine cognitive flexibility, consistent with linguistic relativity accounts (the Sapir-Whorf hypothesis; Sapir, 1929) holding that different languages offer different conceptual frameworks, such that shifting languages can reframe a problem. This flexibility likely has a neurocognitive basis as well: bilingual experience is known to engage frontal brain regions involved in language selection (Abutalebi & Green, 2008), which could underlie the reported shifts in internal language use.

7.2. Cognitive Flexibility and the Limits of Encoding Specificity

Many respondents reported that switching languages helped them overcome mental blocks, a subjective strategy consistent with research on multilingual cognitive control: multilinguals continuously practice selecting and inhibiting competing language cues, which is thought to enhance executive function and flexibility, and habitual code-switching has been linked to stronger performance on divergent-thinking tasks

(Kharkhurin, 2015). Participants who described switching languages to "see a problem in a new light" appear to be drawing on this same advantage; switching languages may momentarily disrupt entrenched associations and evoke new perspectives (Kharkhurin, 2015).

A related pattern emerged in learning. Participants' reports that they understood and remembered material better when learning and recalling it in the same language reflect the classic encoding-specificity effect: multilingual memory research shows that matching language context between study and test improves recall, and Marian and Fausey (2006) similarly found that bilingual students remembered content more accurately when the language of instruction and assessment matched. Our participants extended this pattern subjectively, reporting that they felt mentally fluent studying in one language and found it harder to reason through material in a different one, suggesting that educators working with multilingual students should be attentive to language context when introducing new material.

7.3. The Affective and Moral Architecture of Multilingual Experience

The strong emotional associations with participants' first language align with the broader view that early-acquired languages carry deeper affective weight; Dewaele (2011) and Pavlenko (2014) both note that individuals often experience emotions more intensely in their first language, consistent with what our participants described anecdotally, for example, stronger reactions to romantic or taboo words in L1. This emotional resonance likely reflects the way language and self-concept become entwined during childhood, though highly proficient use of an additional language can also become affectively rich over time, as some participants suggested when describing idioms or poems that "hit different" after extensive use of that language. A parallel pattern may hold for memory: encoding memories in one language rather than another likely creates distinct retrieval cues, making recall easier when the language of retrieval matches the language of encoding (Marian & Fausey, 2006), consistent with participants' reports of language-linked "context layers" in their own memories.

Despite these emotional differences, participants' moral reasoning appeared comparatively stable across languages, which is consistent with prior surveys of multilinguals

reporting that core identity and values often remain consistent even as tone and self-presentation shift with language (Grosjean, 2010). While language choice can shift communication style, since cultural scripts differ across languages (Dewaele, 2010), our respondents largely agreed that their moral reasoning itself did not change, suggesting that for these individuals, ethical judgment is anchored in personal values that remain stable regardless of the language in which they are expressed.

7.4. The Role of Linguistic Context in Creativity and Self-Presentation

Participants' reports of feeling more assertive, reasonable, or diplomatic depending on the language they used mirror Pavlenko's (2006) finding that many multilinguals perceive themselves as almost different people in each language, although, consistent with our results, this experience is far from universal. The mixed creativity preferences our participants described, some feeling more creative in their first language and others in an additional one, likewise reflect a nuanced literature: bilingualism has been linked to stronger creative problem-solving, particularly among highly proficient speakers, and Xia et al. (2022) found that Chinese-English bilinguals with strong English proficiency performed better on both convergent and divergent thinking tasks than less proficient peers. Our participants' ability to imagine scenarios differently across languages suggests that multilinguals draw on multiple "cognitive toolkits," consistent with Chung-Fat-Yim et al.'s (2024) suggestion that knowledge of multiple languages can support more creative outcomes; hearing different linguistic structures may in turn inspire new associations (Kharkhurin, 2011).

8. Conclusion

8.1. Summary and Implications

This study offers a cohesive view of how multilingual individuals experience cognition across languages, integrating theory with first-person reports. The survey data confirm that language context profoundly shapes internal thought. Individuals think and learn in the language in which ideas were acquired, and they readily switch languages as a cognitive strategy when needed. This everyday code-switching likely underpins the enhanced cognitive flexibility observed in bilingualism. Inner speech, a key component of problem-solving, was found to adapt fluidly to the

language of discourse, just as Vygotsky's (1986) theory suggests.

Emotional and cultural associations also play a major role. Languages carry distinct emotional "colors," making some memories or feelings more vivid in one tongue than another. Respondents' accounts of feeling like different persons in different languages mirror Pavlenko's (2006) findings. Nevertheless, many did not perceive their deepest values to change with language and as that they are indicating a core identity beyond linguistic boundaries. Creativity emerged as a particularly compelling domain: participants' varied experiences align with research that bilingualism fosters creative thinking through multiple perspectives. Most researchers agree that being multilingual gives people a unique set of cognitive resources, so they can use any of their languages to express ideas, solve problems, and understand the world.

These findings suggest that language is both a mirror and a mold for thought: it reflects our experiences, since memory and emotion are often encoded in a particular language, and it molds how we reason, since we draw on language structure in thought itself. This has practical implications for education and clinical practice. Educators and therapists working with multilingual individuals should recognize that clients might reason differently in each language, and that switching languages can be a legitimate strategy for clarification rather than a sign of confusion; matching the language of instruction to a learner's inner-language preference, for instance, may support learning more directly than a one-size-fits-all approach. The study also underscores the value of qualitative research in cognitive psychology: by listening to multilinguals' own words, we gain depth beyond what experiments alone can reveal.

8.2. Limitations and Future Research

These conclusions should be read alongside the study's limitations. Its exploratory nature and purposive sampling (N = 20 young adults from two countries) limit generalizability, and small or uneven subgroups (e.g. more Turkish speakers than Arabic speakers) may have influenced which themes predominated. Participants were also self-selected, possibly reflecting higher motivation or interest in language than the general multilingual population, and their three-or-more-language fluency was established through self-report during recruitment

and screening rather than independent proficiency testing, which leaves room for over-estimation. The data themselves are self-reported and retrospective, relying on participants' introspection about their own internal language use; some respondents found it genuinely difficult to articulate their inner speech, a common challenge in surveys of thought processes, and memory biases, such as exaggerating differences between languages, cannot be ruled out. Because thematic coding was conducted by a single researcher rather than by multiple independent coders, we cannot report an inter-rater reliability statistic, and it is possible that a second coder would have organized the data into somewhat different themes; a second bilingual reader did independently check the translation of quotations, but this check was limited to translation accuracy rather than the coding itself. Translation adds a further layer of uncertainty beyond this: despite this check, nuance can still be lost or shifted when translating quotes, and "meaning" in one language may not map perfectly onto another. The online written survey format also limited probing depth compared to interviews, and all participants were drawn from a similar age range and cultural context, so findings may not generalize to older or differently-educated multilinguals. Finally, because the study relied entirely on subjective reports, we cannot quantitatively verify the benefits participants described, such as whether switching languages actually speeds up problem-solving.

Future research could address these limitations through mixed methods. Combining written questionnaires with interviews or think-aloud protocols could allow for deeper probing than an online survey alone, and independently verified language proficiency measures would strengthen the self-report criterion used here. Involving a second independent coder to establish inter-rater reliability would also strengthen confidence in the thematic structure reported here. A longitudinal or diary approach might capture how these experiences change over time, and quantitative experiments, such as task-switching or memory tests conducted in different languages, could help validate the self-reported effects described in this study. Comparing simultaneous versus sequential multilinguals would also be valuable, given that age of acquisition was a factor in related research, and investigating brain activity, for example through fMRI studies of inner speech, could link subjective experience to neural patterns. Finally, practical applications such as multilingual education strategies should be explored with larger and more diverse samples than the present study allowed.

For now, this exploration underscores a key message: language profoundly shapes our cognitive life, and multilingual minds are continually navigating multiple conceptual worlds, enriching both creativity and cognition.

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