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Investigating Creative Thinking in Introduction chapter of undergraduate Student's Dissertation: The Case of Students at the Department of English at Mouloud Mammeri University of Tizi-Ouzou

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Dedication

*To my beloved father, **Youcef**, though you are no longer with us, your absence is deeply felt every single day. I wish you were here to witness this milestone. Your strength, wisdom, and love continue to guide me silently through life. This achievement is a tribute to you. To my dearest mother, **Farida**, your unconditional love, your endless sacrifices, and your unwavering belief in me have been my greatest support. Thank you for always standing by my side and for being my safe haven through every challenge. To my brothers, my partner and all my family, thank you for your love, encouragement, and faith in me. Your support has been a constant source of motivation and strength throughout this journey. And finally, to my dear partner, **Cylia**, thank you for being more than just a research partner. Through every challenge, long night, and moment of doubt, you were there resilient committed, and kind. I couldn't have asked for a better companion on this journey.*

Ouiza, BELAMRI

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Abstract

This research explores how students think creatively when writing the introduction of their Master's dissertations. The main goals were to understand the role of creativity in the early stages of research and to find out which strategies help students come up with original research questions. The study is based on Amabile's componential theory of creativity (1996), which includes domain-relevant skills, creativity-relevant skills, and task motivation. A mixed methods approaches were used, combining a questionnaire answered by 37 graduated students and interviews conducted with 5 supervisors. The results showed that while students know how to structure an introduction, they do not always apply their background academic knowledge in a creative way. Some students used creative strategies like brainstorming, mind mapping, freewriting, spider diagrams and outlining, which helped them develop more unique ideas. However, many still follow traditional models due to lack of confidence or fear of making mistakes. This study shows that creativity plays a role in academic writing, but students need more support and encouragement.

Key words: creative thinking, academic research, M2 student's dissertation, introduction chapter, writing strategies.

List of Abbreviations

AI: artificial intelligence.

EFL: English as a Foreign language

ENSB : Ecole normale Supèrieure de Bouzareah.

MCQ: multiple choice questions.

M2: master two.

MMUTO: Mouloud Mammeri University of Tizi-Ouzou

TTCT: Torrance tests of Creative Thinking

List of tables

List of diagrams

Table of contents

Literature review

Research Design and Methodology

Presentation of the findings

Discussion of the findings

General Introduction

Statement of the Problem

The introduction chapter of a research dissertation is typically the first point where researchers encounter the complexities of academic writing. It serves not only as a structured process, but as an opportunity for intellectual discovery and development of their academic stance. For Master's two (M2) students, this phase holds a significant importance. At this stage, students are not supposed only to develop clear and relevant research questions, but also to combine their works within existing scholarly debates to demonstrate its significance. This process of writing is not just following academic conventions; it plays a crucial role in shaping students' identities as a researcher, and encouraging them to move from existing knowledge to actively contributing to it.

This stage can be both exciting and challenging. On the one hand, the introduction allows students to engage meaningfully with the academic community, by showing and understanding of key concepts, debates, and relevant methodologies. On the other hand, it requires them to navigate the tension between academic expectations and introducing original perspectives or ask questions that go beyond what is already known. For many students, this balancing act is a complex and overwhelming task.

What often goes unrecognized in this process is the role of creativity. While creativity is widely acknowledged as a foundation of research and intellectual development, it is rarely explored in relation to how students write introductions. Scholars such as Csikszentmihalyi (1996) view creativity not as a rare moment of inspiration, but as a deliberate and sustained effort to make novel connections between existing ideas. Additionally, Amabile (1983) highlights how creativity allows individuals to address familiar problems from unfamiliar angles, leading to innovative and new solutions. In the context of academic research, such creative thinking is crucial, as it determines how researchers think about gaps in the literature, frame new questions, and select or design appropriate methodologies.

When it is at the center of the research process, creativity is rarely studied in the early stages of students' writing. The introduction, in particular, is often dealt with as an academic requirement rather than as a space for creative exploration. This oversight is significant. The introduction is not just a preamble to a larger project; it is the space where students begin to assert a scholarly voice and clarify the unique value of their work. It is also where they must negotiate two potentially conflicting demands: the need to follow academic standards, and the desire to express an original idea.

It is possible to gain insight into the development obstacles undergraduates students encounter as emerging researchers by understanding how they resolve this conflict and how creativity aids them to doing so. More significantly, creativity guides how supervisors and educational institutions assist students during this critical phase. It may be possible to promote writing that is both accurate and create, and eventually, research that is both grounded and forward-looking, by advancing a greater awareness of creativity in the introduction phase.

The importance of creative thinking in language learning and writing has been the subject of several studies in Algerian EFL context. For instance, Challal and Djabali (2016) evaluated the writing sections of the Algerian secondary school textbook *"Getting Through"* using Quellmalz's Taxonomy of thinking skills. According to their research, the majority of writing assignments relied on lower order thinking skills such as: recall and repetition, and only 39.7% requiring creative engagement. This suggests that students are not regularly urged to cultivate and use creative thinking in the writing work. These findings highlight the necessity of investigating more deliberate ways to encourage creativity, particularly in scholarly settings where uniqueness and critical thinking are crucial.

In addition, Chougrani and Bouhania (2023) carried out a mixed methods study to explore the implementation of critical and creative thinking in language teaching. Their research investigated EFL teachers' perceptions and teaching practices in secondary classrooms, along with classroom observations of first-year students. Although many teachers lack formal training in enhancing creativity, the study uncovered emergent expressions of students' creativity and identified a significant opportunity for advancement in this area. The researchers in this study, highlighted the necessity for curriculum reform and specialized professional training to effectively integrate creativity in language education. Another research was about exploring Algerian pre-service EFL teachers' perceptions of creative thinking in higher education by Tihal (2023). Through a questionnaire administered to fifty-seven students, the results revealed that although the participants valued creativity, they generally lacked awareness of its specific components or how apply it in structured academic tasks. The study also highlighted the impact of emotional and contextual factors, showing that creativity emerges in a supportive setting, but it is often diminished by conventional pedagogical practices.

Aims and Significance of the Study

This study explores how undergraduates students at MMUTO incorporate creative thinking into the introduction phase of their academic research. The introduction is a crucial part of scholarly writing it sets the stage for the research by outlining the context, presenting the research problem, and asking key questions. While much of the existing literature focuses on the structure and methodology of academic writing, less attention is given to how creativity shapes the process of developing original and innovative research. This study aims to fill that gap by examining how M2 students balance the need for academic rigor with creative thinking when crafting their research introduction. Another objective is to understand the strategies M2 students use to challenge conventional academic frameworks and generate original research questions. Creativity in academic research often means questioning established ideas and offering fresh perspectives. By analysing how students identify gaps in existing literature and formulate new questions, this study will shed light on the creative processes that drive the early stages of research.

This research also seeks to uncover the challenges undergraduate students face when trying to think creatively, and how they navigate these obstacles. Despite the value placed on creativity, students often encounter barriers whether from rigid academic expectations, a lack of support, or the inherent difficulty of developing new ideas. The study will investigate how these challenges affect the creative process and highlight the strategies students use to maintain their creative thinking. By exploring these tensions, the research aims to provide a deeper understanding of how students balance creativity with the formal demands of academic writing.

The significance of this study is to explore how students can bring creativity into their academic writing, especially in the introduction chapter, which is often seen as just a formal requirement. It shows that this part of the paper is not just about following rules, it is actually a space where students can express fresh ideas and shape their research in original ways. For teachers, the research offers practical ways to help students think more creatively while still meeting academic standards. For graduate students, it provides useful guidelines on how to write engaging introductions, engage with common challenges, and develop their own voice in academic work. Beyond just writing strategies, the study makes a bigger point: creativity is not just for artists, it is crucial in all fields of research. By showing how students successfully blend new ideas with solid research

methods, the study reminds us that good scholarship needs both imagination and precision to move knowledge forward.

Research Questions and Hypotheses

In an attempt to reach the objectives mentioned previously, our research seeks to answer the following questions:

Q1: To what extent do undergraduate students demonstrate creative thinking in the introduction chapter of their research?

Q2: What strategies do they use to move beyond established frameworks and propose novel research questions?

The following hypotheses are suggested as answers to the previously mentioned questions:

H1: Undergraduate students who engage in creative thinking while writing the introduction of their research are more likely to develop original and thought-provoking research questions that challenge established ideas.

H2: Undergraduate students who use creative strategies such as exploring ideas across different disciplines and brainstorming, are more likely to develop innovative research questions that break away from traditional frameworks.

Research Techniques and Methodology

This present study investigates how Master's two students engage with creative thinking in the introduction chapter of academic research writing. In this regard, we have used both quantitative and qualitative research methods, so as to collect and analyze data. We have opted for a mixed-methods approach. Two data collection instruments are used in this research which are the questionnaire and the interview. The qualitative data are collected through an online questionnaire designed for undergraduate students at the Department of English MMUTO in order to capture their authentic experiences. On the other hand, the qualitative data are gathered using an online structured interview conducted with supervisors of the same department. The quantitative data are examined through the descriptive statistical method, while qualitative data are analyzed via qualitative content analysis. The theoretical framework that we have relied on to conduct our research is Amabile Componential theory of creativity (1996), which provides a

comprehensive model to understand the elements that contribute to creative thinking in academic context.

Structure of the Dissertation

This dissertation follows a traditional academic structure, and it is divided into three main chapters. It opens with a General Introduction, which we present the topic of our research, outline the main research questions, and state our hypotheses and objectives. The first chapter is entitled Review of the Literature, which provides the theoretical framework for our study. This chapter is divided into two parts: the first section explores the conceptual foundations and key ideas related to our topic, while the second section focuses on specific theories that guide and shape our research. Next, the Research Design chapter details the methodology of our study. It describes the participants, the research context, and the procedures used for data collection. This chapter also explains the methods we use to analyze the collected data. The third chapter, Presentation of the Findings, outlines the results of our investigation. These findings are then further examined and interpreted in the Discussion chapter, where we reflect on their significance, and discuss how they align with or challenge our initial hypothesis. Finally, the dissertation concludes with a General Conclusion, where we summarize the key insights of our work and highlight its broader implications.

Chapter I

Review of the Literature

Introduction

This chapter is meant to review the literature that revolves around the topic investigated in this research: investigating creative thinking in the introduction chapter of undergraduate students' research. It is divided into three major parts. The first part deals with an overview of creative thinking. It contains its definitions, features, dimensions and techniques. Moreover, it explores some forms of thinking that support creativity. The second part presents creative thinking within the research process. Lastly, this chapter highlights Amabile's framework that will serve as a theoretical plinth for the present study.

1.1. Creative thinking

1.1.1 Definition

The word creative comes from the verb to create, meaning the ability to bring something into existence. In traditions like Judaism, Christianity, and Islam, as well as Turkish culture, creation has long been considered as a divine act, reserved for God alone. Because of this, people have often avoided using the word create in reference to human actions, seeing it as something almost sacred. In fact, the idea that humans could be "creative" in their own right did not really gain traction until the Enlightenment, when the word started to reflect human originality and innovation (Create, cited in Bacanli et al., 2011). In English, the word "creative" is directly linked to "create", which has deep etymological roots in implying growth, development, and shaping. Over time, the term evolved to carry a broader, more modern meaning that captures the idea of going beyond the present state of things. Being creative, then, means not just making something, but imagining and bringing about something new (Bacanli et al., 2011).

The concept of "creativity" has been defined in various ways by different authors. Creativity is such a kind of creation by which one produces something new, different from the known, which includes individual way of problem solving, discovery of the unknown (Stjepan, cited in Drazena, Mirela,2015, p.599). The physicist David, viewed creativity as fundamentally linked to perception and the capacity to notice something novel. He emphasized that such creativity necessitates a state of mind that is "attentive, alert, aware, and sensitive", one that remains open and receptive rather than constrained by existing preconceptions (David, cited in Drazena, Mirela, 2015, p.599). On the other hand, Amabile defines creativity as "a novel and appropriate, useful, correct or valuable response to the task at hand" (Amabile, 1983, p.33). This means that, for an idea to be

regarded creative, it must demonstrate not only originality, but also effectiveness and relevance in addressing a particular problem.

The modern perspective to creativity began with Graham theory published in his book "Art of thought" in 1926. He proposed a model outlining four stages of creativity: preparation, incubation, illumination, and verification. However, the formal scientific study of creativity was attributed to J.P.Guilford's contributions. He significantly advanced the understanding of creativity by distinguishing between convergent and divergent thinking. According to him, convergent thinking is typically deductive, involving the evaluation of ideas based on logical validity or adherence to established rules. On the other hand, divergent thinking is a conventional and exploratory, generating multiple potential solutions to problems. Focusing on originality and thinking outside the box aligns with how most people usually understand creativity. However, this approach can be problematic when a solution needs to be only new but also practical, and effective (Wynder, cited in Drazena, Mirela, 2015, p.599).

1.1.2 Features of creative thinking

Creativity, as it is understood today, is largely based on Torrance's work, which was originally inspired by Guilford's theoretical framework. Guilford was one of the earliest researchers to identify creativity as a distinct cognitive ability, particularly through his concept of divergent thinking. He mentioned that creative thinking has eight important elements (Haefele, cited in Hasan,2011, p.540):

Sensitivity to problems: recognizing needs and unconventional possibilities.

Fluidity: generating numerous thoughts and associations.

Flexibility: the capacity to overcome mental laziness and adapt one's thinking to new changing circumstances.

Originality: avoiding conversational impulses and generating ideas.

Dominance: the ability to take control of a situation and generate a wide range of diverse ideas.

Analysis: defining and recognizing key components.

Synthesis: achieving closure and integrating ideas.

Reedifying: reinterpreting information and concepts.

These characteristics of creative thinking also connect with convergent thinking, and the concept of "redefining", which is more closely related to convex thinking. The trait known as sensitivity to problems is often considered a part of evaluative thinking, and is more aligned with critical thinking, even though Torrance identified it as feature of creativity (Haefele, 1962).

Guilford's theoretical framework can be summarized into four key components:

Flexibility: avoiding rigid adherence to specific solutions.

Originality: creating unique and distinct ideas.

Efficiency: generating multiple potential solutions to problems.

Elaboration: addressing problems with thoroughness and detail.

Torrance then developed a skill based on Guilfgord's four properties of creativity, applying it to education. The Torrance tests of creative thinking (TTCT) by E.Paul Torrance include: Creative thinking is often evaluated through visual activities designed to assess key mental abilities, including fluency, originality, elaboration, abstract of titles, and resistance to closure. The figural TTCT presents abstract images and asks individuals to interpret what these images might present. In contrast, the verbal version provides real-life scenarios and encourages participants to ask questions, suggest improvements, or imagine situations. (Aslan, cited in Hasan,2011, p.540).

1.1.3 Dimension of creative thinking

Dimensions of creativity can be linked with Bloom's Taxonomy, which emphasizes creativity as a higher-order cognitive skill. Creativity has four dimensions which represent a leveled structure (Bloom, cited in Hasan, 2011, p.541):

Imitation: this is the foundational stage of creativity where individuals replicate existing words or techniques.

Relocation: in this phase, individuals adapt objects, methods, or actions in new contexts. It represents a shift from traditional functions to innovative uses.

Making connections: this stage involves linking unrelated concepts or objects to form unprecedented associations. It is characterized by real creativity, as it generates ideas, or solutions that have never been conceived before.

Method development: at this level, individuals create entirely new methods or approaches that others begin to adopt him. This mastery elevates the person to a position of leadership in their creative domain.

These four dimensions reflect a gradual progression from basic imitation to original innovation, marking the evolution of creative thinking (Bloom, cited in Hasan, 2011, p.541).

1.1.4. Forms of thinking that supports creative thinking

According to Lipman (2003), the methods of thinking that support creative thinking include the following which are listed and explained below:

Implicative thinking: it is the ability to build upon prior knowledge and let ideas glow. It includes the two primary processes of implicative thinking, including making inferences (i.e., deduction) and making connections in the form of an analogy or metaphors. It allows an individual to depart from what is known and encourages creative development (Lipman, 2003, p.249).

Defiant thinking: it furthers creativity also by examining, challenging, and even defying existing norms, rules, or expectations. Those who engage in creative thinking often have a predisposition for defying convention, which is often observed of innovators, and original thinkers (Lipman, 2003, p.251).

Maieutic thinking: as outlined by Lipman, it is a type of intellectual guidance. It is a reflective, extractive process of initiating, clarifying, and developing hidden thoughts in an individual to help elicit their best thinking (Lipman, 2003, p.252).

1.1.5 Creative thinking techniques

In the 21st century, creative problem solving has become an imperative competence. While there are individuals who seem innately more creative, creativity can be learned and improved in a number of ways. In the following methods identified by Ola et al (2020, pp.913), are particularly useful in developing and generating creative thinking:

Brainstorming: through brainstorming individuals can cultivate many possible ideas, without judgement, no matter how irrelevant or improbable they may appear. Among the multitude of thoughts, a few often stand out as innovative and practical. Brainstorming is a process used both individually and as a group; it encourages divergent thinking as it allows lots of possibilities.

Mind mapping: it provides logical structure around the ideas generated in brainstorming. Here individuals are working the mind map to create connections, patterns, and hierarchies among the thoughts. This process engages both hemisphere of the brain and analytical and organizational skills. It enhances the ability to think systematically.

Reframing: it is where individuals will look at a problem or situation from a different angle, to create different approaches. By shifting on context or on perspective, individuals can uncover innovative solutions. This technique is widely applicable across various fields and encourages analytical flexibility.

Imagine the future: this activity centers on envisioning future possibilities from current realities. By developing an image of an ideal future and identifying hox to travel to distance from the current situation to the preferred one, individuals can find innovative strategies and solutions to reach those measures.

Role-playing: assists individuals in looking at a situation from different angles by placing themselves in other's positions. This shift in viewpoint can lead to unconventional solutions and expand one's problem-solving approach by exploring different emotional and intellectual responses.

The lotus blossom technique: this method focuses on staring with a central idea or problem and moving out in a series of layers of ideas relating to the original ideas. Letting each new idea become a new center to expand into, providing an engaging way to explore ideas and create links between ideas (Ola et al, 2020, p.11).

COCD-Box: developed by the center for the Development of Creative Thinking, it organizes ideas according to their level of originality and feasibility using a matrix in some way, likewise it separates creative ideas from traditional ones and prevents reliance on solutions which have become familiar.

Random input: this technique involved introducing unrelated idea or concept to stimulate fresh thinking. By integrating unexpected elements into the thought process, it disrupts conventional patterns and leads to novel insights (Gafour,2020, pp.9,12).

1.2 Creative and critical thinking

According to Paul and Elder (2004), for creative thinking to be truly effective, it needs to begin by exploring and reflecting on the solutions that have come before it. This stage naturally draws on critical thinking, making it an essential first step in the creative process. Once a new idea or solution emerges from creative thinking, it must again be evaluated critically to assess its relevance, practicality, or impact. This need for evaluation is what sets creative thinking part from imaginative thinking. While imagination can be boundless and abstract, creative thinking stays grounded, it tackles real-world problems and aims to produce meaningful outcomes.

It starts by defining the problem in an original way, then circles back to critical thinking to assess the results, creating a thoughtful back-and-forth process. At their core, both critical and creative thinking rely heavily on cognitive efforts. They demand focused mental engagement and are deeply intertwined in how individuals process, challenge and generate ideas. As Fisher (2004) explains, in the table that follows, the two modes of thinking which are distinct yet complementary, each playing a vital role in thoughtful problem-solving and innovation.

Critical	Creative
Analytic	Productive
Convex	Divergent
Vertical	Horizontal
Possibility	Probability
Judgement	Suspective judgement
Hipothesis testing	Hipothesis creating
Objective	Subjective
Answer	Any answer
Left brain	Right brain
Close ended	Open ended
Linear	Evocative (connective)
Reason	Inference (speculation)
Logic	Instinct
Yes but	Yes and

Table 1 : Critical and creative thinking (adapted from Fisher, 2004).

1.3 Creativity in research

Research today is no longer viewed as something purely objective or neutral. Instead, it is increasingly seen as a human process shaped by context, perspectives, and emotions. As Woodthorpe (2011) points out, full objectivity is hard to achieve, especially when dealing with complex or sensitive issues like health, death, or poverty. At every stage, from asking the initial questions to analyzing the results, researchers make decisions, and these decision points often require creativity.

Weiner-Levy and Popper-Giveon (2012) describe research as "suffused with uncertainty", and this uncertainty creates room for imagination and creative judgment (Grishin 2008; Galvin & Todres 2012). Neçka's framework helps clarify the different ways creativity appears in research. For example, fluid creativity might be a spontaneous joke during an interview, while crystallized creativity shows up in designing a strong methodology. Mature creativity can be seen in the way findings are presented, like turning them into a graphic novel (Morris et al. 2012), and eminent creativity happens when someone creates an entirely new method, such as Kurt Lewin's action research. Creative thinking also pushes us to question rigid divisions. Mixed-methods research, for instance, challenges the traditional split between qualitative and quantitative approaches.

Jones and Leavy (2014) remind us that "creativity is the basis for both arts and science" showing that research does not have to be limited to one way of thinking. Crossing boundaries whether between disciplines or roles can be uncomfortable, but it is also where some of the most innovative work happen. Wang et al (2011) highlight that ambiguity and discomfort often lead to creative breakthroughs. Even in more standardized methods like systematic reviews, creativity is present in the small, subjective choices researchers make (Petticrew & Roberts 2005; Mason & Dale 2011), which they describe as "*nodes for creativity"*. Although some scientific fields still downplay creativity, in the social sciences and humanities it is seen as essential (Walsh et al. 2013). Gauntlett (2011) emphasizes that *"thinking and making are aspects of the same process".* Similarly, Davidson (2012) talks about how artistic practice and analysis feed into each other in a cycle of understanding.

1.4 How creative writing contributes to writing research introductions in a creative academic writing

Writing has been described as an effective way to enhance academic writing, especially when crafting research introductions. Jurayeva (2024) stated that creative writing allows students to play with language more, which enables them to build fluency, develop originality, and gain a stronger sense of voice. All of these features are beneficial for writing introductions, as they provide students with a means of presenting their ideas in an individual and compelling way, as opposed to a strict and objective manner. Furthermore, creative writing increases students' sensitivity to the reader. Jurayeva (2024) states that this sensitivity enables students to convey their research problems better and argue their importance in a more accessible way.

Techniques such as telling a story or using narrative illustrations can help the introduction to be more relatable and easier to follow, which is crucial in academic writing, where accessibility is important. Creative writing also promotes the development of reasoning and organizational skills. Writing creatively, as Jurayeva (2024) suggests, helps students learn how to order their arguments in a logical and coherent manner, which is required when constructing an academic argument. This can result in enhanced introductions that display ideas in a reasoned sequence.

Moreover, creative writing develops flexible thinking, which helps students deal with original subjects within the confined space of an introduction. Overall, incorporating creative writing techniques into academic writing instruction can serve to support students in producing introductions that are not only structurally sound but also clear, coherent, and original in their presentation. As indicated by Jurayeva (2024), creative approaches can be a valuable resource in the development of academic writing skills, particularly at the Master's level.

1.5 Previous research on creativity

Previous studies on creativity have provided valuable insights into how it is perceived and fostered in educational settings. Jahnke, Haertel, and Wildt (2017) conducted an exploratory survey with 20 university educators from various disciplines to explore their perspectives on students' creativity. They found that creativity can be interpreted in many ways, including self-reflective, and independent learning, curiosity, motivation, production, diverse thinking, and the pursuit of originality, and innovation.

Their conclusion was that creativity is a subjective concept that defies a single, rigid definition.

Similarly, Gaspar and Mabic (2015) examined how both teachers and students at the university level view the development of creativity. While both groups recognized the importance of creativity in education, their interpretations varied. Their definitions included generating new ideas, thinking outside the box, looking beyond the obvious, seeing the world from new perspectives, inventing, improving existing inventions, approaching familiar tasks in innovative ways, merging ideas, identifying unusual connections, being curious, seeking novelty, and critically reflecting on their surroundings.

Alencar and Fleith (2004) surveyed 35 university professors and 874 students to investigate their views on fostering creativity in higher education. While professors acknowledged the importance of creativity, many felt they lacked the teaching skills and knowledge needed to effectively nurture it in their courses. In contrast, students emphasized that teaching methods were key characteristics of instructors who encourage creativity. The authors discovered that creativity was more likely to thrive in fields like the arts, architecture, and communication, often associated with the creation of innovative written work.

To expand on these findings, Yildirim (2010) carried out a qualitative assessment of the early childhood education program aimed at children aged 36 to 72 months, along with its accompanying teacher guide book. The study highlighted that the program successfully fostered creativity, equipping educators with practical tips and strategies to promote creative thinking in early education settings. Research into creativity within the Turkish context has also yielded valuable insights. Özcan (2010) conducted a questionnaire study involving 10 English teachers from primary to high school to investigate how their teaching styles influenced students' creative thinking abilities. The findings showed a positive correlation between teacher behaviors and the enhancement of students' creativity. Notably, teachers in their first ten years of service, particularly those with higher educational qualifications and extra work experience, were more likely to engage students in creative thinking. Furthermore, teachers who worked fewer hours tended to be more actively involved in employing creative teaching methods.

1.6 Theoretical framework: Amabile's Componential Theory of Creativity

As every research work should rest on a theoretical basis, the present study relies on a theoretical framework proposed by Teresa M. Amabile in 1983 in a book called: "*The Social Psychology of Creativity"*, and it was further developed and refined in 1996 in her book

"*Creativity in Context".* It comprises three key components: domain-relevant skills, creativity relevant processes and task motivation. Making it in accordance with the aim of this study, which is to investigate creative thinking in the introduction phase of master two student's dissertation.

1.6.1 Components of Amabile's theory

The following components provide a structured understanding of the factors that contribute to creative performance.

A-Domain-Relevant Skills

Domain-relevant skills refer to the knowledge, techniques, and ways of thinking that people develop within a particular field. These skills form the foundation of creative work. They provide both the material needed to come up with new ideas and the standards used to judge whether those ideas are useful, appropriate, and original. In this sense, domain-relevant skills act as a kind of mental and technical framework that supports not only everyday problem solving but also the discovery of new possibilities within a given area of expertise.

This skill set includes both declarative knowledge such as facts, theories, and concepts, and procedural knowledge, which involves knowing how to carry out tasks or apply methods effectively. It also includes an understanding of the domain's aesthetic values and standards of evaluation, along with familiar patterns of action often referred to as "scripts," as discussed by Schank and Abelson, (1977) that guide behavior in well-known situations. In many cases, domain-relevant skills can involve highly specialized abilities. For instance, a composer might be able to mentally arrange multiple instrumental parts, while a scientist may intuitively design and adjust an experiment. These kinds of abilities usually come from a combination of natural cognitive or perceptual traits and years of formal or informal learning that shape an individual's development in a specific field.

Although this concept is similar to Newell and Simon's (1972) idea of a "problem space" the key difference is that domain-relevant skills are focused on stable and long-term expertise rather than knowledge used only for a specific task. Also, unlike purely cognitive models, this approach takes into account technical, motor, and even intuitive abilities, which are often essential in real-world creative work but tend to be overlooked in more limited theories. The way knowledge is organized in a person's mind also plays a big role in their creative potential. As Wickelgren (1979) pointed out, relying too much on very specific or narrowly defined knowledge can make it harder to connect ideas across different contexts.

On the other hand, when someone's knowledge is built around flexible and adaptable strategies rather than fixed routines, it often leads to more creative thinking. This idea goes against the common belief that being an expert can actually block creativity. In fact, when expertise is well-structured and deeply understood, it can significantly boost a person's ability to come up with original and effective ideas. While there is not a large amount of research that isolates the exact role of domain-relevant skills in creativity, studies of highly creative individuals (like those by Cox, 1926; Roe, 1952; and MacKinnon, 1962) have shown a strong link between deep knowledge in a domain and high levels of creative achievement. This connection also appears in several key theoretical models. For example, Wallas (1926) described the first stage of the creative process "preparation" as being based on previous learning and experience. Koestler (1964) talked about the idea of "maturity," suggesting that creative insights often come when someone's knowledge has reached a certain level of development. Similarly, Newell et al. (1962) found that good performance on traditional cognitive tasks often goes hand-in-hand with creativity, especially in scientific domains.

Domain-relevant skills are seen as a core component of the creative process. They provide the cognitive, technical, and intuitive tools necessary for generating new ideas. The depth, variety, and structure of these skills not only broaden the range of possible creative responses but also increase the chances that those responses will be both original and well suited to the context. (Amabile, 1983, pp. 363-364)

B-Creativity-Relevant skills

Even when individuals possess similar levels of expertise in a particular field and share a strong motivation to engage in a task, their creative outputs can differ considerably. This variation is often attributed to what are known as "creativity-relevant

skills" which are a set of cognitive, personality-based, and behavioral abilities that support imaginative thinking and innovative problem-solving. These skills represent the critical element that elevates work from simply proficient to genuinely original. In their absence, even the most knowledgeable individuals may find it difficult to produce outcomes that are truly creative or impactful. At the heart of these skills lies a distinctive way of thinking one that is flexible, open, and adaptive.

People who demonstrate high levels of creativity often have the capacity to process complex information, question conventional patterns of thought, and view challenges from unexpected perspectives. Scholars have identified several cognitive tendencies that play a key role in creative thinking:

The ability to break away from habitual ways of seeing things, such as reimagining the use of familiar objects an idea central to Duncker's work on functional fixedness, the willingness to discard ineffective problem-solving approaches and explore alternative paths (Newell et al., 1962), a comfort with uncertainty and a tendency to keep multiple options open before making a decision (Getzels & Csikszentmihalyi, 1976), the suspension of judgment during the early stages of idea generation, a core principle of brainstorming methods (Osborn, 1963; Stein, 1975), the use of broad, inclusive categories that allow for more unusual and creative associations (Cropley, 1967), a strong memory that enables individuals to retain and access a wealth of detailed knowledge (Campbell, 1960), and the ability to step outside routine or scripted behavior to consider new approaches (Schank & Abelson, 1977; Langer, 1978). In addition to these cognitive traits, creativity also benefits from the use of heuristics strategic, experience-informed mental shortcuts that guide individuals toward inventive ideas.

Unlike fixed procedures, heuristics are adaptable and often stimulate insight by encouraging exploration. Examples include thinking in opposites when conventional methods fail, making the familiar appear strange in order to see it differently, or drawing analogies from unrelated domains to inspire new solutions (Gordon, 1961; McGuire, 1973). A person's approach to work also plays a crucial role in creative success. Creativity often demands sustained focus, the ability to tolerate ambiguity, and the resilience to continue despite obstacles. Psychologist Herbert Simon introduced the concept of "productive forgetting," where temporarily setting aside unsolved problems can allow for fresh perspectives to emerge (Simon, 1966 as cited in Media studies. press, 2025).

A creative work style tends to reflect personal qualities such as independence, persistence, self-discipline, and a low reliance on external approval or conformity (Feldman, 1980; Golann, 1963; Stein, 1974). Importantly, creativity-relevant skills are not solely innate.

They can be cultivated over time through practice, education, and guided experience. Techniques like brainstorming (Osborn, 1963) and synectics (Gordon, 1961) have shown that individuals can be trained to think more creatively. Furthermore, repeated engagement with creative tasks enables people to develop their own unique strategies for idea generation, gradually enhancing their creative abilities. By recognizing the role of creativity-relevant skills, we gain a deeper and more nuanced understanding of creative performance not as the product of knowledge or motivation alone, but as the outcome of an interplay between cognitive flexibility, strategic thinking, and a resilient personal approach to problem-solving (Amabile, 1983, pp.364-365).

C-Task motivation

Motivation is seen as a key element in understanding how creative performance emerges and unfolds. While many studies on creativity have tended to focus on things like intelligence or specific knowledge in a domain, fewer have taken a closer look at the complex role motivation plays in the creative process. Yet, a growing body of research highlights that intrinsic motivation, the kind that comes from genuine interest, curiosity, or enjoyment in the task itself is essential for creativity to truly thrive.

Early thinkers such as Rogers (1954), Crutchfield (1962), and Osborn (1963) all emphasized that creativity grows best in environments that support autonomy, where people feel free to explore and are not driven primarily by external rewards or pressure. Importantly, intrinsic motivation is not something fixed or unchanging. It works as both a relatively stable trait and a flexible response that can shift depending on the context. This makes it more useful to think of task motivation as having two connected parts (Amabile,1983):

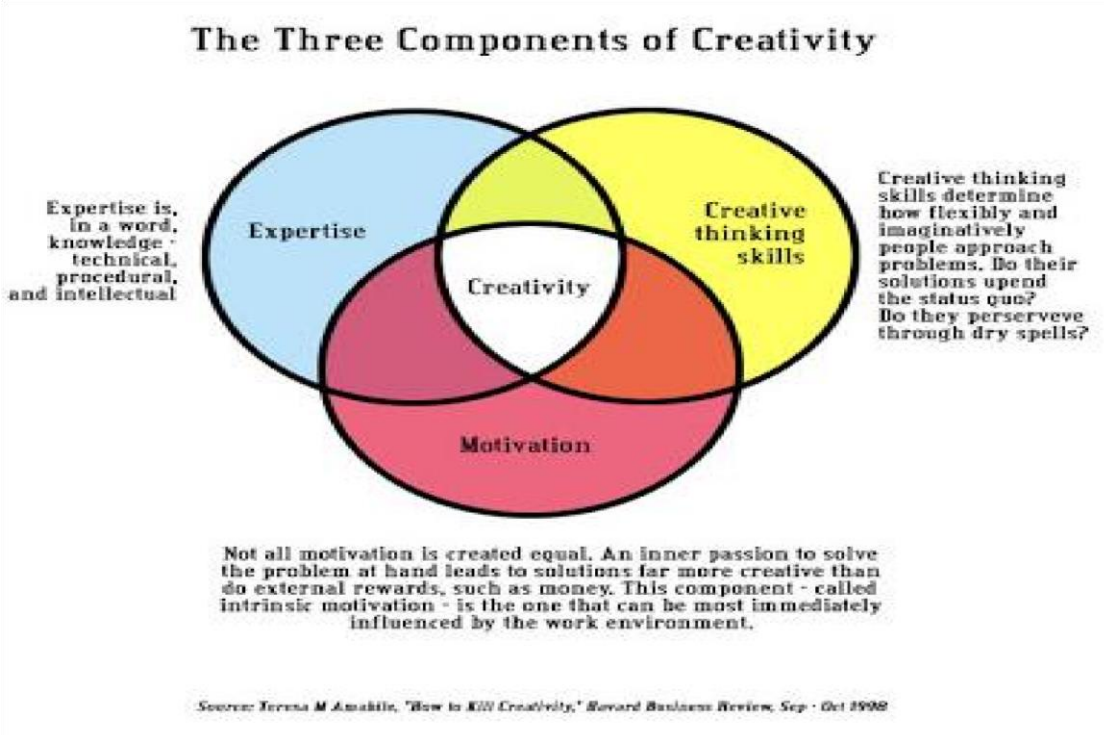
C.1 Basic orientation: this refers to a person's general attitude or interest in a type of task, shaped by past experiences and personal preferences.

C.2 Situational construal: this is about how someone interprets or makes sense of the specific task in the moment why they are doing it, how they feel about it, and what they expect to get from it.

While someone's basic orientation is formed over time and tends to be more stable, situational construal can change based on the setting, especially in response to environmental or social cues. Things like strict deadlines, constant supervision, or the promise of rewards can sometimes undermine intrinsic motivation, especially if they are perceived as controlling or evaluative.

These elements are not part of the task itself but come from outside it, and when they are too strong, they can discourage people from engaging deeply or creatively. That said, people are not all affected in the same way. Some are better at staying connected to their intrinsic motivation, even when facing pressure. These individuals often use internal strategies to protect their sense of autonomy for example, by reminding themselves of the personal meaning behind the task or reframing challenges in a more positive light. So, in the end, a person's motivation at any given time depends on how their internal drive interacts with what is happening around them. It is this dynamic process that often determines whether creativity is sparked or blocked (Amabile,1983, pp.365-366).

This diagram, developed by Teresa Amabile, illustrates the three core components of her componential theory of creativity.



Conclusion

The chapter has reviewed the literature related to the topic under investigating. It has first provided definitions of creative thinking, its features, its dimensions, forms of creative thinking and its different techniques. Afterwards, it has discussed creativity in the research process. Finally, it has presented the theoretical framework of this research. The following chapter is devoted to the research design of the study.

Chapter II

Research Design and Methodology

Introduction

This chapter presents the research design and methodology used to investigate the integration of creative thinking in the introduction chapter of undergraduate students' research. It aims to outline the methods and materials through which data are gathered and analyzed. This chapter is divided into three sections. The first section deals with the methods used to carry out our research. The second section entitled "data collection procedure", which presents the context of the study, including participants, and tools and techniques used for data collection. The third and last section is "data analysis procedure", which explains how the data have been analyzed and interpreted both quantitively and qualitatively.

2.1. Research method and design

2.1.1 Mixed-methods research

The present study is based on a mixed–methods research. It is a type of research where the researcher combines elements of qualitative and quantitative research approaches for the purpose of breadth and depth of understanding and corroboration (Gunasekare, 2015). This approach provides a richer and more comprehensive picture of how creative thinking is manifested in the introduction phase of undergraduate students' research writing. It aligns with the principle that *"the use of quantitative approaches in combination with qualitative approach provides a better understanding of research problem that either approach alone"* (Creswell & Plano Clark,2007 as cited in Cameron,2011, p.96.). In this regard, the combination of methods allows the research questions to be examined from diverse angles, integrating both numerical trends and interpretive insights, which in turn strengthens the validity and reliability of the findings.

It is also survey-based, as its main data collection instrument is a questionnaire consisting of structured questions designed to gather specific information from the participants. This approach enables the researcher to obtain a representative overview of students' experiences and perceptions regarding creative thinking in the introduction phase of their research writing. In addition, structured interviews were conducted with supervisors to gain deeper insight into their views on creativity, their expectations of students' introductions, and the pedagogical approaches they use to foster creative thinking. These interviews provide valuable qualitative data that allow for the rigorous interpretation of supervisor perspectives.

2.2 Data Collection Procedures

This section outlines the methodological instruments used to collect data relevant to our study, which investigates the presence and promotion of creative thinking in the introductory sections of undergraduate students' research writing at the Department of English at MMUTO. To meet this objective, both the questionnaire and structured interviews were employed.

The questionnaire was distributed to a sample of undergraduate students of different specialties; it aimed to collect data on their understanding of creativity, and their approaches to writing introductions. The structured format of the questionnaire facilitated the collection of quantifiable data, while also including a few open-ended items to capture students' reflections in more detail.

In addition to the questionnaire, structured interviews were held with a random group of research supervisors within the department. These interviews aimed to explore supervisors' conceptualizations of creativity in academic writing, their evaluation criteria for introductions, and the kinds of guidance they provide to support students in developing original and meaningful openings to their dissertations. The interviews were conducted via online platform, with the participants after consent, transcribed, and thematically analyzed to identify patterns and variations in their perspectives.

Together, these instruments offered complementary sources of data that contributed to a comprehensive understanding of how creative thinking is perceived and potentially cultivated in the introduction phase of undergraduate students' research writing.

2.2.1 Context and sample

This research was conducted at the Department of English at Mouloud Mammeri University of Tizi-Ouzou (MMUTO) during the 2024–2025 academic year. The study population consists of forty-two (42) participants from the aforementioned department. These include Master students enrolled in the Language Studies (all specialties), as well as a group of research supervisors. The selection of Master's students stems from their academic maturity, accumulated experience in university-level writing, and their expressed interest in participating in research that aligns with their academic and professional aspirations.

This study employed random and convenience sampling methods. A total of thirty-seven (37) students from graduated Master 2 from the academic year 2023-2024 were randomly selected to respond to an online questionnaire. This sampling technique ensures that each student within the defined population had an equal opportunity to be included, regardless of personal characteristics such as gender, age, or academic performance (Etikan & Bala, 2017).

In addition to student participants, five (05) supervisors from the same department were selected using convenience sampling to take part in online interviews. Their selection was based on their availability and willingness to contribute insights relevant to the study. This method of sampling is widely recognized for its practicality and efficiency, especially when access to participants is limited by time constraints or logistical considerations (Simkus, 2022).

Through this balanced sampling strategy, the study ensured the collection of diverse and context-rich data from both students and experienced academic staff, allowing for a comprehensive exploration of creative thinking in the introduction phase of undergraduate student's research writing.

2.2.2 Data collection tools

2.2.2.1 Questionnaire

A questionnaire is a data collection instrument that encompasses a number of clear and purposeful questions addressed to a cohort in order to obtain their answers regarding the phenomenon that is being investigated. Ranganthan and Caduff (2023, p. 152) define it as, *"a data collection tool consisting of a series of questions or items that are used to collect information from respondents and thus learn about their knowledge, opinions, attitudes, beliefs, and behavior"*, it is also defined in Merriam Webster (n.d) as, *"a set of questions for obtaining statistically useful or personal information from individuals"*. Hence, it can be stated that this tool includes differentiated items that permit the researcher to gain insights into their respondents' pinions, perceptions, attitudes, or behaviors and allows the obtention of both quantitative (statistical) and qualitative (textual) data.

2.2.2.1.2 Description of the questionnaire

In this study, the questionnaire is addressed to undergraduate students of English Department at MMUTO, it was administered to 50 students on 7th May,2025, but only 37 answered. It contained twenty-one (21) questions, including both. closed-ended and open-

ended questions, in turn, require the respondents to select one or more pre-determined answer(s) and to elaborate according to their personal experiences.

The close-ended items come in the form of dichotomies questions (yes/no questions) such as question 2, 5, and 10, frequency questions such as question 1, 3, and 4, multiple-choice questions (MCQ) such as question 19. As for the open-ended questions such as the follow-up of question 2, they give the respondents the freedom to answer using their own words.

In terms of layout, this questionnaire is organized into four parts: an introductory paragraph, and three sections. The introductory paragraph explains the objectives of the research, and acknowledgement at the end. The first section aims to assess students' domain relevant skills. The second section focuses on their creative-relevant processes, the and last section investigates students' motivation (intrinsic and extrinsic motivation).

2.2.2.2 The interview

2.2.2.2.1 Definition

According to Adhabi et al (2017, p. 88), an interview can be described as *"an interactive process where a person asks questions to seek particular information".* In qualitative research, interviews are commonly categorized as structured, semi-structured, or unstructured, depending on the level of flexibility in question design and interaction (Edwards & Holland, 2013).

2.2.2.2.2 Description of the interview

Given the scope and objectives of the present study, a structured asynchronous interview was deemed most appropriate to ensure consistency and clarity in the data collection process. Structured interviews are entirely pre-planned, with all questions designed in advance and presented in a uniform manner to each respondent (Rashidi et al., 2014). In this research, the interviews were sent to twelve (12) supervisors via email from the Department of English at the Mouloud Mammeri University of Tizi-Ouzou (MMUTO) on 7th May,2025, but only five (5) supervisors answered to the online interview.

The primary aim of these structured interviews was to gather supervisors' insights and reflections on the role of creative thinking in the introduction phase undergraduate students' research writing. The format of the interview delivered in written form allowed

respondents the time and space to formulate thoughtful responses while maintaining a clear alignment with the study's objectives. Participants were informed that their responses would remain anonymous and confidential, and that their participation was entirely voluntary. The online format offered a practical and respectful approach for eliciting expert perspectives in an academic setting.

2.3. Data analysis procedure

Given the data collection procedure, both quantitative and qualitative data are gathered; consequently, the nature of these latter determines the data analysis procedure to adopt. While the quantitative data collected through the questionnaire are analyzed following the descriptive statistical analysis, the qualitative data gathered using the same tool and the interview are interpreted using qualitative content analysis.

2.3.1 Descriptive statistical analysis

Descriptive statistical analysis is described *as "a tool to help people organize and summarize the inevitable variability in collections of actual observations or scores"* (Dong, 2023, p. 16). In other words, this type of analysis enables researchers to quantify the data collected through quantitative procedures and present it using statistics and visual formats such as figures and tables.

In the current study, descriptive statistics were employed to analyze the quantitative data derived from the closed-ended items of the questionnaire. Percentages were calculated manually using the following formula: $X=Y\times100/Z$, where X represents the calculated percentage, Y stands for the number of specific responses obtained, and Z denotes the total number of informants. The findings are then visually presented using pie charts, bar graphs, and tables.

2.3.2 Qualitative Content Analysis

Qualitative content analysis is defined as "a method for systematically describing the meaning of qualitative material. It is done by classifying material as instances of the categories of a coding frame" (Schreier, 2012, p. 1). This means that it is a systemic way which organizes and interprets the material by dividing it into sections based on themes, meanings or patterns.

In this study, this method was applied to analyze the qualitative data obtained from the open-ended items of the questionnaire and the responses gathered through the

structured online interviews with supervisors. The responses were organized into thematic categories corresponding to the processes involved in students' academic writing, particularly those reflecting creative thinking. The interpretation of the data was carried out through textual analysis, allowing for a nuanced understanding of the participants' views and experiences.

Conclusion

This chapter has provided a comprehensive overview of the research design and methodology adopted in this study. It began by outlining the mixed-methods approach chosen to conduct the investigation. It then described the data collection procedures, including the research context, participant sample, and the tools used to gather data. Finally, it explained the techniques applied to analyze both the quantitative and qualitative data, ensuring a balanced and rigorous interpretation of the research findings. The following chapter is devoted to the presentation of the research findings.

Chapter III

Presentation of the Findings

Introduction

This chapter is dedicated to the presentation of the results of our research. It is aimed to report the research findings about students' and supervisors' views regarding creative thinking in the introduction phase of Master 2 students' research. It is divided into two parts. The first part presents the results of the online questionnaire administered to undergraduate students, while the second part reports the findings obtained from the online interview with supervisors. In order to provide a comprehensive understanding of the collected data, the quantitative results from the questionnaire are analyzed using percentages and presented in pie charts and tables. On the other hand, the qualitative findings from the interviews are analyzed qualitatively using qualitative content analysis and presented in textual form.

3.1 Results of the questionnaire

The questionnaire is divided into three main sections, the first one entitled "student's domain-relevant skills", the second is "student's creativity-relevant skills", and the last one is "student's motivation".

3.1.1 Student's domain-relevant skills

The first section of the questionnaire aims to evaluate the students' comprehension and confidence in writing their research introduction. It seeks to assess their understanding of its structure and its essential components. Additionally, it aims to evaluate students' engagement with literature, theories, including their academic background that helps them to write their introductions.

1. Confidence level in understanding the structure of a research introduction

The first question aims to collect data about the students' confidence in understanding of a research introduction. The results are shown in Diagram 1.

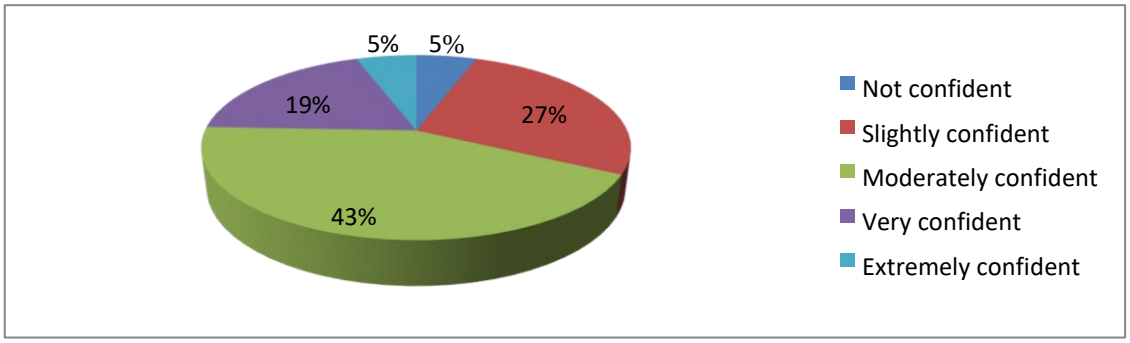


Diagram 1. Students' understanding of the structure of a research introduction

Diagram 1 displays the students' confidence in their understanding of the structure of a research introduction. The results show that the majority of the students are moderately confident with a percentage of 43%, followed by 27% who are slightly confident and 19%who feel very confident. Only a small number of respondents feel either not confident or extremely confident with a percentage of 5%

2. Enrollment in courses teaching research introduction writing

This yes /no question aims to collect data about whether students have taken courses that help them to write their introduction. The findings are shown in diagram 2.

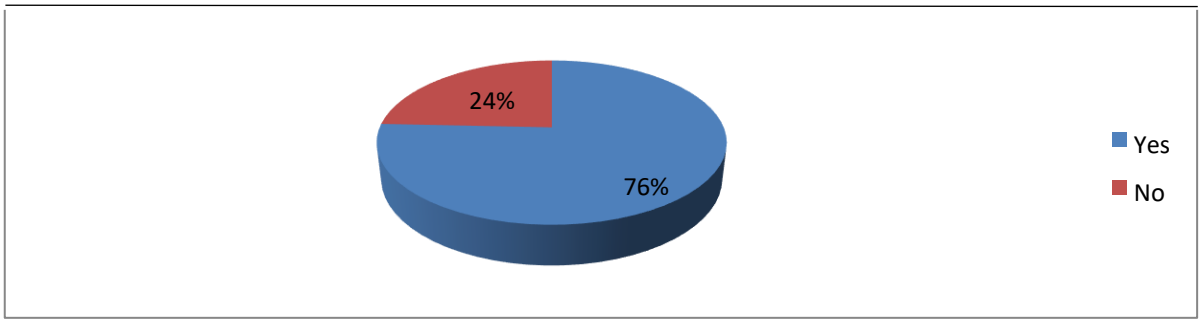


Diagram 2. Students' training in writing research introductions

Diagram 2 shows the percentages of students who have taken courses that taught them how to write their introductions. The results indicate that 76% of the participants have studied how to write a research introduction, while 24% of them have not.

-If yes, specify.

Based on students' responses, it is clear that most students had taken courses that taught them how to write their research introductions. Many participants stated that they had learned how to write introductions through research methodology, and academic writing courses at the university. Some others stated that previous dissertations, handouts provided by their teachers had a great influence on this process. One student mentioned that YouTube played a major role in understanding the steps to write a research introduction.

3. Level of familiarity with the common components of a research introduction (Background, problem statement, significance of the study, research question)

This question intends to gather information about students' familiarity with the key components of a research introduction. The findings are reported in table 1.

Table 1. Students' familiarity with the common components of research introduction

Answers	**Not familiar**	**Slightly familiar**	**Moderately familiar**	**Very familiar**	**Extremely familiar**	**Total**
Frequency	00	09	14	10	04	37
Rate (%)	0 %	24.3 %	37.8 %	27 %	10.8 %	100 %

As shown in table 1, the majority of the participants, that is 37.8%, are moderately Familiar with the key components of a research introductions, while 27% of them are very familiar. Additionally, 24.3% of students are slightly familiar, and only 10.8% of them reported being extremely familiar. On the other hand, none of the respondents are completely unfamiliar with the components of the introduction.

4. Description of familiarity with the main theories and literature in your research area

The purpose of this question is to evaluate the students' familiarity with theoretical frameworks, and their understanding of prior studies that are related to their field of research.

The findings presented in Diagram 3.

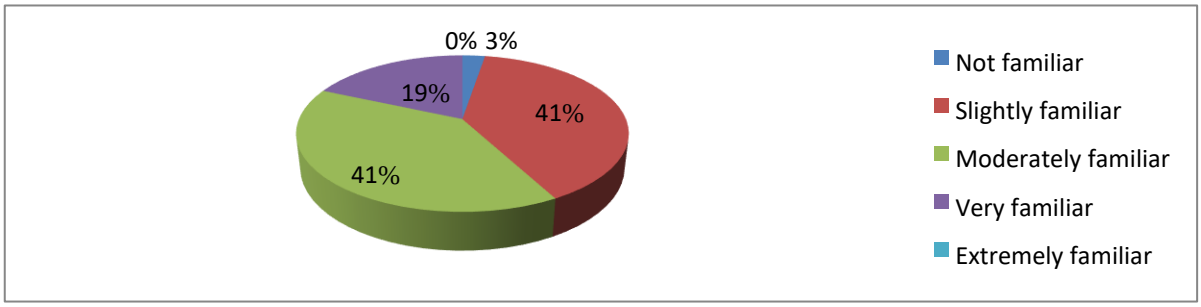


Diagram 3. Students' familiarity with the main theories and literature in research

As mentioned in Diagram 3, 41% of students are slightly familiar and an equal percentage reported that they are moderately familiar with the main theories and literature

in their research area. Moreover, 19% of them are very familiar and only 3% claimed to be not familiar. Notably, no students reported being extremely familiar.

5. Students' disagreement with a theory directly related to their research topic

This question seeks to collect information about whether Master 2 students have disagreed with existing theories related to their research. The results of this question are presented in Diagram 4.

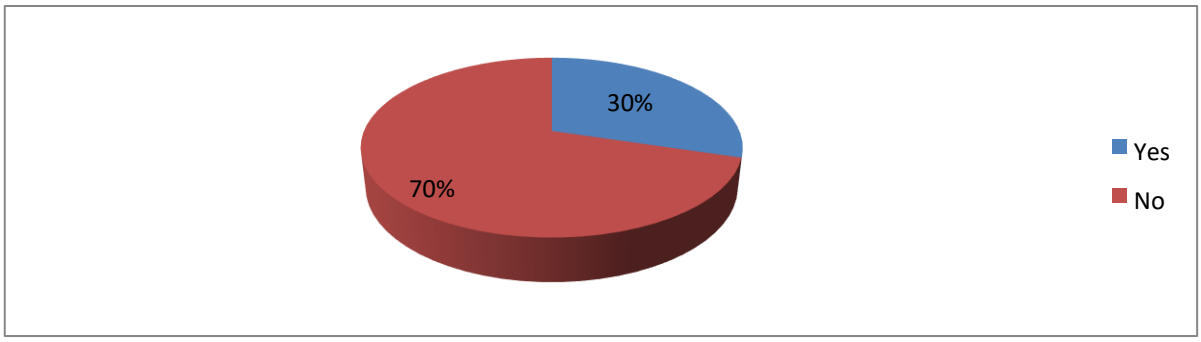


Diagram 4. Students' disagreement with theories related to their research topics

Diagram 4 shows the percentages of students' responses about whether they have disagreed with a theory that is related to their research. The findings reveal that 70% of undergraduate students have disagreed, and 30% of them have not.

-If yes, how did this affect the way you wrote your research introduction?

This question seeks to explore the impact of theoretical disagreement on students' introductions. Some students reported that their disagreement with a theory, especially feminist and postcolonial studies, gave them an opportunity to find the weaknesses of those theories. This made them shape their research introductions as a way to respond to those limitations. One student said that his disagreement highlighted the importance of using a comprehensive theory to make the research more innovative. Some other students mentioned that they had some difficulties to express their own personal viewpoints, especially when they were asked to follow a theory that did not fit with their views.

They said that this is difficult to give personal insights in research introductions. Furthermore, a small number of students mentioned that when they changed their theoretical frameworks during the research process, made them making some adjustment in their introductions by removing and replacing certain parts. However, few students

viewed their disagreement as a way for experiencing and learning new things and thinking critically and creatively.

6. The active seeking of unconventional or less-cited sources to shape research questions, and if applicable, their influence on the approach.

This question aimed to know whether undergraduate students looked for unconventional and less cited sources to shape their research questions, and it seeks to understand how these sources influenced their approach. According to responses, some students indicated that they did not actively seek out these resources; they reported that they rely only well-known academic sources, because they considered more credible and reliable. Others, however, highlighted the importance of less cited sources such as: non-western sources, blog posts, theses and dissertation from smaller institutions. They stated that these sources played a crucial role in enriching their understanding, critical thinking as well as they allowed them to see their topics from different perspectives and help them to formulate original research questions.

7. Frequency of reading academic papers in the field to understand how introductions are written

This question aims to assess students' engagement with academic papers to improve their understanding of how introductions are written. The results of this question are presented in the following table.

Table 2. Students' reading habits of academic papers

Answers	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**	**Total**
Frequency	05	08	11	12	02	37
Rate (%)	13.5 %	21.6 %	29.7 %	32.4 %	5.4 %	100 %

According to the findings presented in table.2, 32.4% of the students often read academic papers, followed by 29.7% who do so sometimes. Additionally, 21.6% of them stated that they rarely read them, while just 13.5% of the students reported that they have been never do so. Only 5.4% of the participants stated that they always read academic papers for this purpose.

8. The extent to which your academic background has prepared to write a strong research introduction

This question intends to assess how students believe their academic background had prepared them to write a strong research introduction. Some undergraduate students feel that their academic background had well prepared, and this is due to their courses in research methodology and academic writing. According to them, this plays a major role in developing necessary skills to organize their ideas, arguments, identifying research gaps, and engaging critically in literature. Moreover, Other students indicated that their academic preparation was shaped by both personal and practical experiences, as well as their engagement with previous research. However, a few numbers of the students reported that they feel not at all prepared due to lack of practice and limited access to other resources.

3.1.2 Student's creativity-relevant process

This section is aimed to examine how students incorporate creative thinking into their research introductions. It aims to assess how they approach their topics from an original perspective and examine their ability to stay flexible in modifying or changing ideas during the writing process. This section also explores different creative techniques that students use to generate and organize their thoughts effectively. Furthermore, it explores students' risk taking when they present their topics or research questions as well as the different difficulties, they face to be creative and how they overcome them.

09. The extent to which students approach the topic from a unique or original angle when writing their introductions

This question intends to evaluate students' ability to express creativity and critical thinking in academic writing. The findings are shown in Table 3.

Table 3. Students' efforts to write original introductions

Answers	**Never**	**Occasionally**	**Sometimes**	**Often**	**Always**	**Total**
Frequency	01	13	08	11	04	37
Rate (%)	2.7 %	35.1 %	21.6 %	29.7 %	10.8 %	100 %

As illustrated in Table 3, the responses indicate different levels of students' efforts to approach their topics from an original perspective when writing introductions. According to the findings, 35.1% of the participants mentioned that they occasionally seek to approach their topics from an original perspective and 29.7% of them stated that they often do this. In addition, 21.6% of the students reported that they sometimes do so, while only 10.8% of them always make efforts, and just 2.7% admitted they never do.

10. Students flexibility when it comes to changing ideas while writing introduction

The aim of this question is to evaluate students' flexibility in changing their ideas when they write their research introductions. The results are presented in Diagram 5.

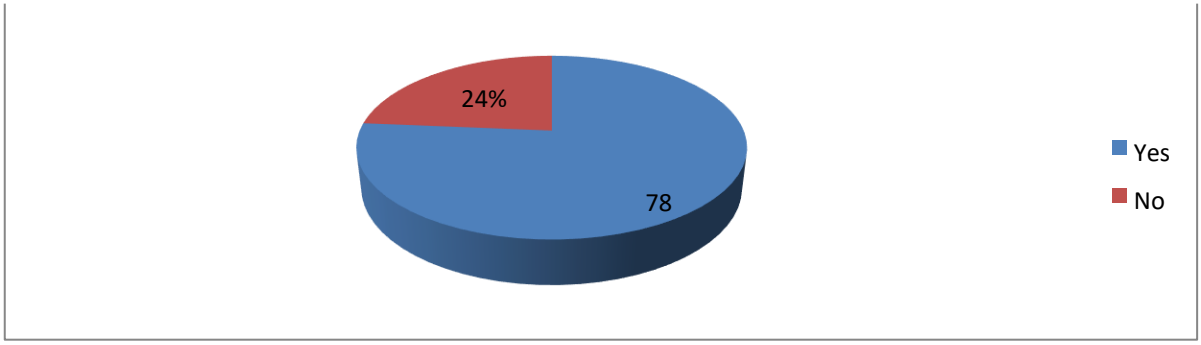


Diagram 5. Students' flexibility during introduction writing

As shown in Diagram 5, the majority of students with the percentage of 78% view themselves flexible when it comes to changing their ideas when they write their introductions. However, only 24% of them revealed that they are not flexible.

11. Explanation of how to use brainstorming to generate ideas before writing your research introduction

This question intends to know how undergraduate students use brainstorming to generate and organize their ideas before starting to write their introductions. According to the students' responses, many students adopt a variety of brainstorming techniques before the writing process. Many participants stated that they used different methods such as: writing down all their ideas and then selecting the relevant ones. Others claimed that they used mind mapping, keyword lists as well as organizing ideas from general to specific. On the other hand, some students rely on previous dissertations and academic

sources to guide them to write research introduction. However, a few students stated that they did not use it, and they are not familiar with this strategy.

The question above seeks to evaluate the effectiveness of the mind mapping technique in organizing students' thoughts before writing their introductions. the findings are presented in Table 4.

Table 4. Usefulness of mind mapping in organizing introduction ideas

Answers	**Not helpful**	**Slightly helpful**	**Moderatly helpful**	**Very helpful**	**Extremly helpful**	**Total**
Frequency	03	03	13	15	03	37
Rate (%)	8.1 %	8.1 %	35.1 %	40.5 %	8.1 %	100 %

As presented in Table 4, The findings indicated that 40.5% of undergraduate students considered mind mapping as a very helpful strategy for organizing ideas when writing introductions. In addition, 35.1% of them recognized it moderately helpful. However, some students with the percentage of 8.1% found it slightly helpful and the same percentage for both who found it extremely and not helpful technique.

13. Usage of other techniques

This question asked to know the different techniques used by undergraduate students during their writing process. According to the students' responses, a variety of techniques are used. Some students mentioned outlining as strategy that helped them to organize their thoughts and ideas during their research journey, and others selected brainstorming as an effective technique. Furthermore, Visual techniques such as: mind mapping and spider diagrams were also utilized by the participants for making their format clear and organized. In addition, freewriting emerged as a popular strategy for its effectiveness in developing and organizing more ideas; some participants stated that writing continuously without caring about the structure gives the writer an opportunity to discover unexpected insights. Moreover, there were some participants who emphasized the value of relying on previous studies like previous dissertations to guide their writing. A small number of the students noted that compiling lists of ideas, helped them organizing their thoughts before starting their process.

Finally, one student acknowledged that deadlines play a crucial role in framing their own writing. According to him, it encouraged them to manage their work and encourage their creativity.

14. Comfort level in taking risks with how to present the topic or research questions

This question asked to measure students' comfort in taking risks in how they present their topics and research questions. The responses provided by undergraduate students show different levels regarding risk taking in their research. Some participants feel themselves comfortable.

They highlighted the idea of originality and creativity, stating that taking risks lead to an effective and engaging work, and helped to address existing knowledge gaps. Some others, however, they do not feel comfortable due to the fear of making mistakes or academic rejection. On the other hand, there are a small number of participants who prefer relying on previous works and supervisors' guidance to guide their research. One student acknowledged the importance of training and practice in developing their necessary skills and confidence for creativity in their research process.

15. The challenges to face when trying to be creative in academic writing

This question is asked to identify the different challenges they encountered when they try to express creativity in academic writing. From the responses, many students were struggling to balance between both academic expectations and creativity. They reported that too much creativity might make their work less academic and unserious. Additionally, some students faced difficulties such as: lack of inspiration, organizing ideas and making them original. Moreover, there were some challenges mentioned by the students like: limited academic vocabulary, finding reliable sources, coherence, as well as the fear of unintentionally repeating concepts that have already mentioned by others. Finally, a small number of them did not face any challenges and view creativity as a positive experience in academic writing.

●The methods for overcoming the challenges - Ho do you overcome them?

This question intends to gather information about the methods and the strategies students employ to overcome the different challenges they faced to be creative when writing their academic research. From the students' answers, a wide range of techniques

used by undergraduate students. Many of them emphasized the importance of looking for an original perspective and assessing the credibility of sources. In addition, some students overcome them by giving importance to the academic structure and relying on supervisors' guidance when they include their personal insights. According to them, this personal input helped them to enhance their writing process. On the other hand, one student suggested that utilizing AI helped them organize and develop their thoughts and improve their writing.

3.1.3 Student's motivation

The aim of this section is to analyze and identify the different factors that influence students' motivation during the research process. It seeks to understand the level of students' interest in their topic and their enjoyment level when they write their introductions. Moreover, it intends to assess their motivation either intrinsic or extrinsic, including the impact of academic requirements on their research. Finally. This section aims to identify other factors that motivate M2 students to be creative while doing an academic work.

16. The extent to which approaching the topic from a unique or original angle when writing your introduction

This question aims to assess student's interest in their topic they chose for their research. The results are presented in the diagram 6.

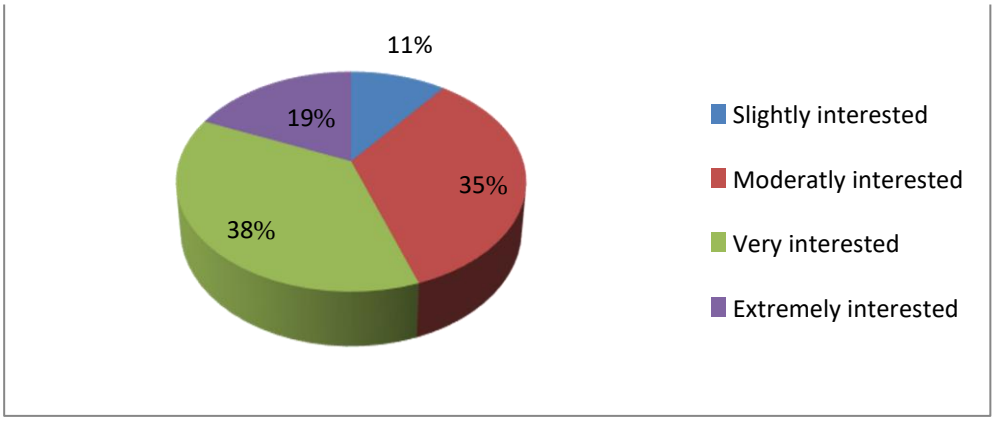


Diagram 6. Students' personal interest in their research topics

As shown in Diagram 6, 38% of the participants reported being very interested, while 35% of them described themselves as moderately interested. In addition, 19% of students indicated that they were extremely interested. However, only 11% were slightly interested in the topic they chose.

17. The enjoyment of the research introduction writing process, even if it is difficult

The aim of this question is to explore how undergraduate students respond to the process of writing their introductions. It seeks to understand whether they have enjoyed it or not. The answers reveal that many students enjoyed the process of writing even if it is difficult. They reported that writing their introductions gave them an opportunity to explore their topics, develop their thinking skills, and it helped them to understand their research deeply. Additionally, some students stated that this process is meaningful since it represents their original work. Others, on the other hand, they highlighted the importance of this process, stating that it allowed them enriching their vocabulary and their writing skills. However, a few numbers of students indicated a lack of enjoyment.

18. The level of motivation when working on the research introduction without external pressure

This question intends to evaluate the level of students' motivation when they work on their research introductions without external motivation. The results are presented in Diagram

7.

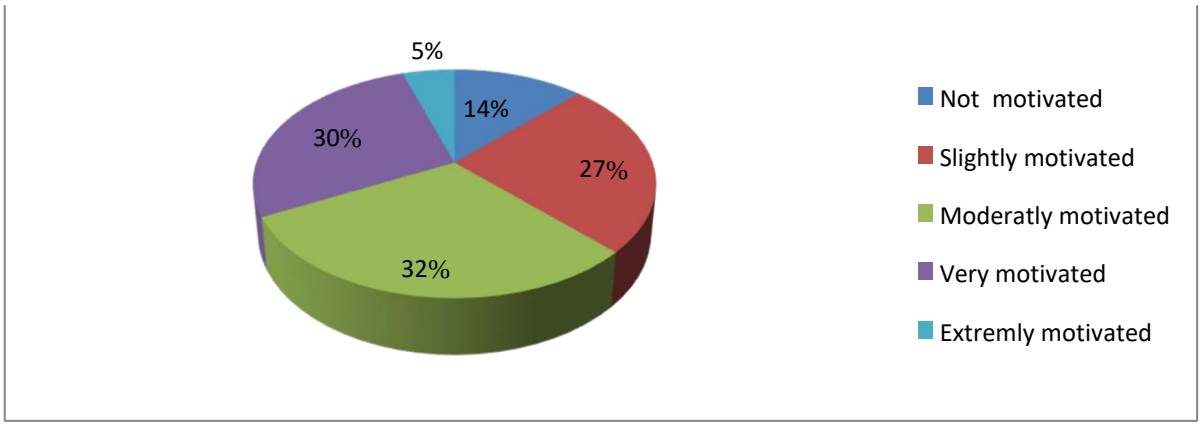


Diagram 7. Students' level of motivation without external pressure

As illustrated in Diagram 7, 32% of participants were moderately motivated, followed by 30% felt very motivated. Furthermore, 27% were slightly motivated, and only 5% of students felt extremely motivated. However, 14% reported feeling not motivated at all.

19. The purpose behind writing academic research

This question aims to determine the purpose why undergraduate students engaged in their research process, whether because of academic requirements or just want to explore their topics. The results are shown in Diagram 8.

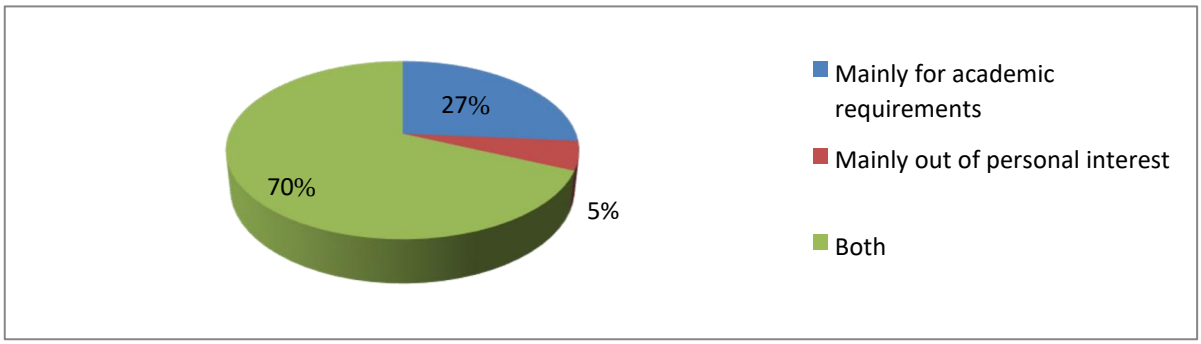


Diagram 8. Purpose behind students' academic research

Diagram 8 shows that the majority of students with the percentage of 70% had conducted their research to fulfill academic requirements and at the same time for their personal interests. Meanwhile, 27% of them just for academic requirements, and only 5% of students for personal interests.

20. The extent to which external feedback (from your supervisor, peers, etc.) influences your motivation to write a good introduction

The question above intends to determine how external feedback such as: supervisor, peers influences students' motivation to write a good introduction. The findings are presented in table 5.

Table 5. The effect of teachers' feedback on the introduction writing

Answers	**Not at all**	**Moderatly**	**Very**	**Extremely**	**Total**
Frequency	07	13	10	08	37
Rate (%)	18.9 %	35.1 %	27 %	21.6 %	100 %

As mentioned in Table 5, 35.1% of undergraduate students felt that their motivation is moderately influenced by external feedback to write an effective introduction, while 27% of them felt very motivated by it. Meanwhile, 21.6% were extremely motivated, and only 18.9% not motivated at all.

21. Other factors motivating your creativity while doing your research

This question asked to explore and identify other factors that motivated undergraduate students to express creativity in their research. From the responses, some students were motivated by the desire to explore their own new ideas, curiosity to discover their own works and contributing an original insight to their fields. Others, on the other hand, reported that finishing their research process, access to different resources, deadlines and obtaining their degrees played a crucial role for motivating them. Moreover, some participants related it to supervisor's feedback, peer collaboration, and academic competition. Finally, a few students stated that their research will be used by other students and researchers in the future, and this gives a deeper meaning to their works and motivated them to give an original and valuable research.

3.2. Presentation of the interview results

To gather additional information on the topic, interviews were conducted with teachers or dissertation supervisors in the Department of English at Mouloud Mammeri University of Tizi-Ouzou. The interview process involved email interviews only. Initially, the interview questions were sent via email to twelve teachers, but only five responded, indicating a low response rate. Despite the small sample size, the insight gathered from these interviews offered valuable information on the topic. The first interview question designed to collect the supervisor's level of experience in supervising students.

The 1st question aims to assess the supervisor's level of experience in supervising students. The supervisors who participated in this study have a wide range of experiences some, like the first supervisor with 24 years, and another with 15 years, have been guiding students for a long time. Another with 7 years and another supervisor with 12 years. The last supervisor has just started out with 1 year of experience.

The second question asked the teachers how they would define creativity in the context of academic research. One notes that students often feel limited by strict academic rules, which can stifle their creativity. Another sees creativity as the spark that pushes a

field forward with original, valuable ideas. Others emphasize looking at old topics through a new lens, asking questions no one has thought to ask, or finding smart ways to apply theory and share discoveries. Some stress the importance of choosing unique research topics and filling gaps in existing knowledge.

The 3rd question was asked to supervisors in order to know whether undergraduate students demonstrate creativity in the introduction phase of their academic research, or not, and to explore how that creativity manifests if present. The answers show a mix of opinions. Two teachers say "not really," and another notes that students often just repeat what already has been done, sticking too closely to existing work. Another teacher sees moments of creativity, especially when students take inspiration from well-known scholars and make those ideas their own. Another supervisor is believing students can be creative in all kinds of ways by framing topics differently, offering new angles, forming original hypotheses, or imagining outcomes early on. Another supervisor lands somewhere in the middle, suggesting that creativity is there, but it depends a lot on the student's confidence and willingness to take risks.

The 4th question asked the supervisors about originality in academic writing patterns in student's introductions. Responses to this question show that students introductions can take several forms of originality. One supervisor sees it in a positive light, noting that many students bring their own ideas and structure to their writing, showing independence and creative thought. Another supervisor focuses more on how students stick to expected academic formats, but still leave room for originality in how they present their research problem. Another supervisor is pointing out that real originality can show up when students tackle new problems, use unique data, or ask thoughtful, specific questions. Another agrees, noticing originality especially in the kinds of questions students ask and how well they frame their topic within a broader context. However, another supervisor is more critical, suggesting that many students play it too safe often copying models too closely or hesitating to take bold steps in their writing.

According to the interviewed supervisors, when students have background knowledge in academic research actually helps students write more creative introductions. First supervisors are suggesting that the rigid structure of academic writing might actually hold students back creatively. On the other hand, another supervisor sees academic knowledge as empowering believing that when students understand the rules,

they can use them more effectively to express original ideas. Another supervisor takes it a step further, arguing that creativity is at the heart of academic research itself. Another supervisor adds that knowing the common "moves" of academic writing like setting up a problem and stating clear goals gives students the confidence to be both clear and creative. And the last supervisor agrees, saying that when students understand academic structures like the three-move model, they can shape their introductions in thoughtful, engaging, and even original ways.

When supervisors were asked about whether previous academic writing contributes to the development of student's creativity, one supervisor suggested that too much focus on academic rules can make students feel stuck limiting their creative freedom. In contrast, another sees academic writing as a way to sharpen complex thinking skills, which actually supports creativity by helping students express original ideas more clearly. Another supervisor adds that academic writing follows common principles whether it is an essay or a dissertation, and that understanding these principles gives students a solid base to build on creativity. Another supervisor highlights confidence: "Yes, students who have written academic papers such as "exposé" before tend to be less afraid of making mistakes. This confidence allows to try new ways of organizing their arguments". Another supervisor is saying that the more comfortable students get with the writing process, the bolder they become in experimenting with new styles and approaches.

The responses of the interviewed supervisors support the use of brainstorming as a pedagogical tool though they approach it differently. One supervisor supports it but reminds students that academic writing still has formal rules, unlike more personal or creative writing. Another supervisor views brainstorming as a great way to lower students' stress about writing in English, it establishes an atmosphere in which students feel safe to express ideas without fear of criticism. Other supervisors value brainstorming for its practical use, helping students get organized and plan their work from the beginning. Another supervisor saying it helps students connect to what they already know, spark fresh ideas, and structure their thoughts clearly. Last one agrees, adding that brainstorming builds confidence and encourages creative, critical, and problem-solving thinking.

When asked supervisor about specific techniques do they use to help their students develop original ideas for their introductions, the responses highlight practical and students centered approach. One supervisor believes that originality starts with

understanding students need a solid grasp of their topic before they can think in truly creative ways. Another takes a question-based approach, encouraging students to explore their topic by asking questions rather than diving straight into writing, is also suggests reading master's dissertations to learn from strong examples and figure out how to make their own work stand out. Another focuses on keeping things fresh and relevant, advising students to use up-to-date theories, sources, and data to bring originality into their writing. Another supervisor also leans into questioning, urging students to keep digging deeper into their topic to uncover unique angles and perspectives. However, on the other hand, another supervisor uses brainstorming and freewriting to help students let go of perfectionism and discover new ideas through more open, creative thinking.

When asking supervisors about their perseverance of student motivation at the initial stage of writing research introductions, most of the responses indicate a mix of emotion at the beginning of writing their introductions. One supervisor noted that getting started is usually the hardest part many students feel stuck, which can make them lose motivation early on. In contrast, another sees students as eager beginners, ready to dive into the research process with curiosity. Another supervisor observes that students often start off motivated, and that excitement tends to grow once they dig deeper into their topic, especially when they begin collecting data. When another emphasizes the power of having a clear structure, when students understand the steps or "moves" for writing an introduction, it gives them a boost of confidence and helps them feel more in control. The last supervisor captures both sides of the experience, saying that students often feel a mix of nervousness and curiosity at the start, but that energy usually picks up once they begin brainstorming and drafting.

When asking supervisors this question, one supervisor takes a more practical view, saying creativity is not just about inspiration, but it is something students build over time through effort and discipline. Second supervisor emphasizes that when students truly care about their topic, they tend to dig deeper and produce stronger work. Another connects this interest to motivation, explaining that students who are genuinely invested in their research stay more engaged and make steady progress. Another points out that personal interest fuels motivation, originality, and focuses on key ingredients for creative academic writing. Last supervisor puts it simply: when students are interested, they are more motivated, and that alone can make a big difference.

This question was asked to explore supervisors' perspectives on what makes student's introductions impactful. The first supervisor offers pessimistic view, admitting that they have not yet come across an introduction that truly stood out. On the other hand, another supervisor sees a strong introduction as a sign of a capable student, it sets the tone and often predicts the overall quality of the work. Another supervisor values clarity and focus, especially when the research questions, hypotheses, and theoretical framework all fit together seamlessly. Another recalls being impressed by introductions that smoothly narrow from broad ideas to specific questions, especially when those questions are original and thought-provoking. Another supervisor highlights the impact of a personal story at the start when a student connects the topic to their own experience, it creates a more engaging and meaningful introduction.

The teachers offer a mix of practical and encouraging advice to help students spark creative thinking early in their research journey. One supervisor stresses the value of originality, saying that the more students read and write across different topics, the easier it becomes to generate fresh ideas. Another keeps the message simple and strong: "read, read, and read!". Another supervisor focuses on self-confidence, urging students to trust their own thinking, explore new perspectives, and avoid simply repeating what had already been done. Another suggests reading a variety of dissertations and comparing them to spot what works best an approach that not only builds understanding but also sparks inspiration. Last supervisor offers a hands-on toolkit: mind mapping, brainstorming, freewriting, asking reflective questions, and studying strong examples. They also encourage students to read broadly, drawing inspiration from diverse sources.

Conclusion

In brief, this chapter has presented the research findings obtained from a questionnaire administered to thirty-seven undergraduate students and interviews conducted with five teachers in the Department of English at the University of Tizi-Ouzou. The following chapter deals with the interpretation of the results presented.

Chapter IV

Discussion of the Findings

Introduction

This chapter aims to answer the research questions outlined in the general introduction. It gives account of the findings of this study, which are obtained through students' questionnaire and teachers' interview, discusses and interprets them in light of our literature review and analytical framework on which this study is based. Moreover, it examines the validity of the hypotheses formulated at the initial stage of this research. It is organized according to the two research questions; thus, it first explores the way Master's two students demonstrate creative thinking in their research introductions; second, it investigates the strategies they use to go beyond traditional theoretical frameworks and formulate original research questions.

4.1 Discussion of student's questionnaire results

4.1.1. The importance of domain relevant skills in writing academic research

4.1.1.1 Students' understanding of research introductions

The findings obtained from questions 1, 2, 3 and 4 highlight how well undergraduate students at English Department at UMMTO are prepared with the necessary skills such as: understanding introductions' structure, its key components and even theoretical frameworks and literature to form a well-structured and effective research introductions.

From the results of question 1, 43% of students reported being moderately confident in their understanding of the structure of a research introduction (see diagram1). This suggests that many students lack a strong confidence in their understanding of introductions' structure. From the perspective of Amabile's Componential theory of creativity (1996), confidence in domain-relevant skills is crucial for expressing creativity. Amabile explains that "Individuals with a significant expertise in a particular field may feel more confident with new ideas since their knowledge allows them to determine which ideas are suitable and which are not" (Amabile, 1996, p.85). In this quote, she makes a comprehensive connection between confidence and expertise, suggesting that this latter does not just help expressing creativity but also enhance the confidence level to engage creatively in different tasks. In academic research, students who understand how to structure introductions have more opportunities to develop original ideas since they have

their expertise that enables them to know what is appropriate for their works. However, when they lack the necessary knowledge, they may feel not confident which may act as a barrier for creativity.

The results obtained from question 2, indicate that 76% of undergraduate students have studied about how to write research introduction, primarily through research methodology and academic writing courses. In addition, some students rely on teachers' handouts, previous dissertations and online platforms like YouTube. Although these instructional strategies encourages, the moderate confidence level of students suggest, that these instructions alone are insufficient to guarantee proficiency. In this context, Amabile emphasizes that knowledge alone does not ensure creativity without integrating it into practice. This aligns with Hyland's (2004) perspective that the over emphasis on theoretical writing instruction without any application in the real world often does not give students the necessary skills for independent writing. Additionally, Badger and White (2000) suggested that focusing only on the final written product is limiting, and they highlighted the importance of interactive methods and feedback orientation. Therefore, although many students received formal instructions, these courses lacked practice and deep understanding which may have contributed to a gap in students' confidence and their creative capacities.

Moreover, these challenges are further magnified by students' familiarity with the key components of an introduction such as: background knowledge, problem statement and research questions. The findings obtained from question 3 reveal that 38% of undergraduate students reported being moderately familiar and 27% of them were very familiar, meanwhile, 24% considered themselves slightly familiar, and only 11 % extremely familiar. The encouraging outcome of this results is that none of the participants reported being unfamiliar with these components. However, the findings suggest that many students continue to struggle with fully understanding of these elements.

Furthermore, Students' familiarity with theoretical frameworks and literature also remain underdeveloped. Through the data obtained from question 4, only 19% of students were very familiar, and none of them described themselves extremely familiar with the main theories and literature in their research area (see diagram4). The results demonstrate that some students have some familiarity with theories and prior studies; however, some of them lack understanding to engage with them critically. This may result in a limited

ability to establish their research within existing academic discourse. According to Amabile (1996), Knowledge is considered as a crucial aspect that helps formulating new ideas and identifying research gaps. Without familiarity with previous studied, students may face difficulties in positioning their studies, justifying their methodological choice and even offering innovative contributions. This interpretation is supported by Belcher (2009) who suggested that many postgraduate students find it difficult to develop a clear academic voice in their literature review because they lack reading habits and critical thinking skills.

We can conclude from the findings mentioned and discussed above that undergraduate students at the department of English at MMUTO have some basic knowledge about academic writing; however, they still have a limited understanding especially at the level of literature review and theoretical frameworks. These challenges limit their creativity and make their works unclear. As a result, students need to develop their understandings on how writing is structured, the main ideas as well as the need to practice and think critically. As Kaufman and Beghetto (2009) stated: "Individuals are more creative when they really understand their domain". Fixing these gaps will help students to write an original and well-organized academic research.

4.1.1.2 The Role of Critical Engagement, Source Diversity, and Academic Background in Developing Research Introductions

The findings from questions 5 to 8 make evident the extent to which undergraduate students engage critically with theoretical frameworks, explore diverse sources, and how their academic background influences their ability to write effective research introductions.

Approximately 30% of students reported disagreeing with theories related to their research, reflecting a level of critical thinking (see diagram 4). One student noted: *"I have encountered certain traditional feminist theories that I felt did not fully account for intersectional identities… I framed my study as a response to these limitations".* This demonstrates what Amabile (1996) described as creativity through constructive problem solving. However, others minimized the impact of such disagreements, seeing them as minor adjustments, and some struggled to articulate personal viewpoints due to structural difficulties or conflicting academic expectations. One student expressed: "It was hard to elaborate my own viewpoint because I was against the main topic and I had to agree…

because it is what I was asked to." This reveals a limited intellectual agency, reflecting Canagarajah's (2002) concerns about the ideological constraints of dominant academic discourse.

When it came to source diversity, responses varied. Some students embraced unconventional or less cited sources such as blogs or non-Western literature, seeing them as enriching their research perspectives. A student said: *"I looked at some less-cited sources to get new ideas… they helped me see the topic from different angles".* This supports Matsuda and Silva's (2010) argument that diverse sources benefit multilingual writers by challenging dominant academic narratives. However, others expressed skepticism about the reliability of such sources, pointing to a need for pedagogical strategies that help students evaluate source credibility while fostering critical thinking.

Additionally, questions 7 and 8 explored how often students engage with academic texts and how their academic background shaped their research writing. While 32% reported reading academic texts "often", a concerning 36% admitted doing so "rarely" or "never". This lack of exposure can hinder the development of rhetorical skills, as Hyland (2007) emphasized the importance of reading academic texts to learn effective writing strategies.

Students' reflections on their academic preparation were mixed. Some felt moderately prepared due to previous coursework, while others cited limited practice and lack of individualized support. One student remarked: *"Not really good prepared because we are not familiar with this before".* This reflects a broader issue in higher education, particularly in EFL contexts, where writing instruction often lacks practical application. As Amabile (1996) observed, domain-relevant skills emerge through sustained engagement, feedback, and strong examples. The disparity in students' preparedness also highlights institutional and instructional variation, as noted by Paltridge and Starfield (2007), who emphasized the complex, individualized nature of academic enculturation. On the other hand, Flowerdew and Li (2003) argued that while theoretical instruction is useful, students also need hands-on experience.

Overall, critical engagement with a theory, openness to diverse sources, and strong academic modeling all play vital roles in shaping students' ability to write original and well-structured research introductions. However, structural constraints, uneven preparation, and limited support continue to challenge students' development of scholarly

voice and creativity. This provided a clear answer to the second research question in this study.

4.1.2. The role of cognitive strategies in enhancing originality in students writing process

4.1.2.1 Originality and flexibility in research writing

The responses to questions 9 and 10 provide a valuable understanding of how students demonstrate creative behavior. The findings suggest that although many students recognize the value of originality, only a limited number actively and consistently incorporate it into their academic practices (see table 3). The findings point to a restrained engagement with creativity, in which students appear constrained by institutional norms or feel insufficiently confident to explore non-traditional ideas. This resonates with Hyland (2004) statement that students, particularly in EFL contexts, often view academic writing as a domain governed by linguistic accuracy and formal conventions, rather than as an opportunity for creative expression. Thus, Students' hesitation to take intellectual risks may arise from the assumption that academic rigor is best demonstrated through conformity, particularly in contexts where assessment systems privilege correctness over originality.

In contrast to earlier results, question 10 highlights a more encouraging trajectory. The majority of M2 students with percentage reported being flexible (see diagram 5). These findings indicate that, while students may initially hesitate to generate novel perspectives, they often exhibit a capacity for intellectual flexibility as their writing progresses. Flexibility is considered as a fundamental component of creative cognition, as it enables the re-evaluation of perspectives, problem-solving as well as refining different ideas. This aligns with what Amabile (1996) refers to as "iterative creativity", a process in which advancement is achieved through cycles of experimentation, reflection, and adaptation.

Therefore, the distinction between originality and flexibility offers an important observation that students are more flexible in adapting established ideas than proposing novel ideas. In this context, Torrance (1995) claimed that creative writers are required not only to embrace change but also to initiate deviation from established norms. Thus, this gap between students' flexibility and difficulty in initiating original approaches may be

limited "creative selfefficacy", a concept rooted in Bandura's 1997 theory of self-efficacy and further explored by Tierney and farmer 2002 in relation to creativity. This aligns with Kaufman and Beghetto's model of "little-c creativity" which emphasized that creativity with familiar academic context, may not extend to the production of original contributions or scholarly innovation. This interpretation answers the first question of this research.

4.1.2.2 Students' use of creative techniques

According to Amabile (1996), creativity-relevant processes involve both cognitive thinking and the intentional use of specific techniques to generate and organize ideas. In line with this, Questions 11, 12, and 13 of the present study explore the strategies undergraduate students use during the early stages of writing their research introductions. A significant number (25) of students reported beginning their writing process with brainstorming. They described writing down all their thoughts, then organizing and selecting the most relevant ones to shape their introductions. Some also used visual techniques such as keyword lists, spider diagrams, or organizing ideas from general to specific. These strategies demonstrate student's active efforts to manage the cognitive demands of academic writing.

This corresponds with Amabile's (1996) observation that "structured ideation methods" can foster creativity by enabling individuals to move beyond rigid thinking and explore new possibilities. Similarly, Jones (2009) emphasized that brainstorming supports creativity by allowing writers to connect ideas freely without immediate judgment. This reflects both a familiarity with creative processes and a deliberate effort to ease the common difficulty of starting an academic text.

When asked about the effectiveness of mind mapping, students' responses further highlighted the role of visual tools in supporting academic creativity. About 41% found mind mapping very helpful (see table 4). These findings suggest that many students benefit from visual structuring techniques when organizing complex ideas. This supports Buzan's (2010) view that mind mapping mirrors the brain's natural associative patterns, transforming linear information into meaningful, organized structures.

Furthermore, when asked students to report any other techniques they used in their writing process, a wide range of strategies were mentioned like: outlining, spider diagrams, freewriting, compiling ideas lists and even mentioned previous dissertations as a tool for guiding them. One student wrote: "*I generally use free writing; I write*

everything that comes to my mind about the topic for a few minutes without stopping. It helps me get started and discover useful ideas…". This aligns with Elbow's (1973) concept of "writing without stopping" which encourages a smooth flow of ideas and brings hidden or unconscious thoughts to the surface. Additionally, one student acknowledged external constraints such as deadlines, suggesting that in a certain situation, time pressure can encourage original thinking.

Therefore, these answers indicate that students not only recognize various creative strategies but are also actively exploring and applying them in different ways. This agrees with what Torrance (1995) mentions as "creative elaboration", which is the skill of developing and expanding ideas through various forms. Moreover, students' use of both outlining and freewriting reflects an increasing awareness of the need to balance creativity with clarity in academic writing.

The findings suggest that both brainstorming and visual planning techniques play a significant role in helping students overcome the initial challenges of academic writing. These strategies not only facilitate idea generation but also promote a more creative and structured approach to developing research introductions. The data discussed in this point, provide a direct answer to the second research question of this investigation.

4.1.2.3 Students' risk taking and challenges to creativity in academic writing

Questions 14 and 15 provide meaningful and valuable insights to the psychological and contextual influences shaping students' creative expression throughout the research process. When asked students whether they feel comfortable taking-risks in how they present their topics or research questions, the responses indicate varying levels of comfort. Some undergraduate students reported being comfortable, explaining that taking risks enable them to be more creative and engaging in their works as well as help them addressing gaps in current research. One student explained: "…I feel comfortable taking risks because it allowed me to explore innovative angles and contribute something unique to the field". Another said: "I feel comfortable taking creative risks especially when I believe they add originality or challenge conventional perspectives…". These answers demonstrate a developed perception of academic research as an opportunity for original contribution rather than repetition. In this context, Amabile claimed that creative individuals demonstrate a capacity to tolerate ambiguity and readiness to depart from

established norms when the task demand it. This aligns with Kaufman and Beghetto's perspective (2009), highlighting that risk-taking often serves as the link between originality and practical relevance, particularly when students attempt to introduce new research questions or theoretical perspectives.

However, some students feel uncomfortable taking risks due to the fear of making mistakes or being rejected academically, while others just relied on formal models and supervisors' guidance. One student stated: *"I feel uncomfortable because I am afraid of mistakes".* This highlights an underlying fear of deviating from established academic conventions. This interpretation is supported by Hyland (2009) observation that the strict conventions of academic writing often restrict opportunities of individual expression and creative exploration, particularly for inexperienced writers. In this case, students are not only afraid of grammar or formatting mistakes, but also of going beyond what is seen as acceptable in academic writing.

Moreover, this concern is further elaborated in the responses to question 15, which investigated the challenges students encounter when they attempt to express creativity in academic writing. The most mentioned challenge was the difficulty of balancing between being creative and adhering to the conventions of academic discourse. One student mentioned: *"one major challenge is balancing creativity with academic expectations".* Another one said: "*... I sometimes worry that being too creative might make my writing less serious or academic".*

Additionally, lack of inspiration, difficulty in organizing original ideas, limited academic vocabulary, coherence and finding reliable sources all these challenges were mentioned by undergraduate students. These responses highlight both cognitive and systemic obstacles that students faced and which may be a barrier for students' creativity in their research process. Such concerns are consistent with Hall and Chand (2019) findings, stating that creative approaches are often indirectly penalized in academic settings due to the emphasis on standardization and fixed writing conventions. In the other hand, when students were asked about how they overcome these challenges, different strategies were adopted such as: seeking original perspectives, evaluating the reliability on non-traditional sources, and discussing with supervisors before incorporating personal view points in their works, while others preferred to rely to AI tools for helping them. These strategies reveal with what Amabile described as "creative problemsolving", which is the capacity to navigate limitations while actively pursuing innovative outcomes. These

strategies also demonstrate that although students encounter substantial challenges, many are actively fostering metacognitive awareness of their creative processes with an important progression toward achieving autonomy as academic thinkers. The results discussed in this point responded to the first and the second research questions explored in this research.

4.1.3. The role of motivation in enhancing students' creativity in writing research introductions

4.1.3.1 Intrinsic task motivation

According to Amabile (1996) intrinsic motivation is considered as a crucial component that enhances creative performance. It gives individual opportunities to be original and overcome challenges. The questions 16, 17 and 18 were asked to investigate students' personal interests on their research topic, their enjoyments in the writing process and their motivation when working without external pressure. From the students' responses, many of them were positively engaged with their research topics. 38% of them were very interested and 19% were extremely interested, while only 11% reported being slightly interested (see diagram 10). This indicate that most participants chose topics that reflected their personal interests. This reflects what Deci and Ryan (1985) refer to as self-determined learning, where students experience a sense of autonomy in selecting their topics, leading to greater engagement in the learning process. This perspective was supported by Amabile (1996) claim that creativity tends to emerge more easily when individuals are fully engaged in an activity that they find enjoyable, stimulating and personally significant.

Additional evidence supporting the importance of intrinsic motivation in creative work is provided by undergraduate students' reflections on their experiences with writing research. Many students indicated that they enjoyed the process, even when it was challenging, describing it as an opportunity to deepen their understanding, expand their thinking, and articulate unique perspectives. One student remarked, *"Yes, I enjoy it because it allows me to explore my ideas deeply and shape how others will understand them, even though it's challenging…"*. These responses suggest that the act of writing was not seen as a purely procedural, but as a meaningful and valuable intellectual engagement. This reinforces Amabile's view that individuals driven by intrinsic motivation tend to persevere through challenges and are more inclined to produce creative

solutions. Enjoyment, in this context, does not associate with simplicity; rather, it involves intellectual stimulation, personal investment, and sustained effort. This aligns with Hennessey's (2003) observation that enjoyment and creativity are closely linked, particularly when students are allowed to explore questions that matter to them within a supportive learning environment.

However, when asked about their motivation to write research introductions without external pressure, responses revealed varied levels of intrinsic drive: 32% felt moderately motivated, 27% slightly motivated, 14% not motivated, and only 29% reported being very motivated (see Diagram 07). These findings suggest that while some students are self-motivated by personal goals, a significant number still rely heavily on external support to engage with the writing task. As Ryan and Deci (2000) argue, students who are intrinsically motivated are more likely to take ownership of their learning, engage with topics on a deeper level, and generate more innovative ideas. In contrast, students lacking such motivation may approach writing as a task to complete rather than an opportunity for creative exploration, and while external motivators can serve as useful scaffolds, overdependence on them may hinder deeper involvement and creative engagement. The findings presented in this point provide a direct answer to the first research question.

4.1.3.2 Extrinsic Motivation

Question 19 offers a valuable insight into the types of motivation that oriented students to engage in their research. Many students with percentage of 70% mentioned that they were motivated from both personal interest and academic requirement while 27%of them stated only academic requirement and 5% personal interest. These results suggest that external factors, such as grades, supervisors' expectations and deadlines, continue to play a crucial role in shaping students' engagement. Although students exhibit intrinsic motivation, the dominant influence of academic pressure indicates a continued dependence on extrinsic forms of motivation. In this context, Amabile (1996) claimed that external motivators can be beneficial when they reinforce a sense of competence or offer meaningful feedback without diminishing the learner's sense of autonomy. This combination of different types of motivations illustrates what Ryan and Deci (2000) describe as "integrated regulation", which is a type of extrinsic motivation in which external objective is aligned with the individual's personal values or interests. Although

it is still considered extrinsic, this form of motivation is more self-directed and can foster creativity when students feel a sense of ownership over their work.

Additionally, students were asked about how external factors such as supervisors, peers, or others affected their motivation to write an effective introduction. From the responses, 35 % reported moderate influence, 27% mentioned very influenced, and 22% stated that were extremely motivated, while 19% reported that they had not impact on their motivation. These suggested that many students view these external factors as a crucial element in driving motivation, especially when delivered in a constructive manner. According to Deci and Ryan (1985) "feedback that id perceived as supportive rather than controlling can foster both motivation and creativity". These results reflect the perspective of Hennessey and Amabile (2010) which suggest that feedback framed as a learning tool, rather than a judgment, can enhance creative outcomes.

Question 21 is closely related to the previous questions; it investigated the additional factors that motivate M2 students to engage creatively in their research process. The responses indicated that students mentioned a wide range of factors such as: aspiration to generate novel contributions, intrinsic curiosity, and their potential impact of their works on others. In addition, External motivators were mentioned such as: deadlines, academic evaluation, and students' degree. Moreover, some students highlighted the importance of supervisors' guidance, peer collaboration and even academic competition. This diversity of factors indicates that student's creativity is not shaped only by a singular motivational factor but also by a connection between intrinsic and extrinsic factors. This interpretation aligns with Grant and Berry' theory of motivation multiplicity (2011), which suggests that creativity emerges from the interaction of diverse motivational forces. This analysis answers the first question of this investigation.

4.2. Discussion of supervisors' interviews results

4.2.1. The role of the supervisors' experience in the understanding of creative thinking in academic research

The responses to the first two interview questions revealed different perspectives among supervisors on creativity when it comes to academic studies. These divergences seem to be linked with their level of experience.

Supervisors with years of experience typically provided more detailed and insightful definitions of creativity. For them, it is not only about having a fresh idea but also about the formulation of new and original research questions, identifying new gaps in the literature, and fresh interpretative angles. This corresponds with models of creativity of Amabile (1996), who also said creation follows phases like preparation and insight, or Wallas (1926), who discussed several steps in the creative process. It would seem that the more experience supervisors have, the more they have noticed and appreciated originality in the academic research.

One supervisor, at the same time viewed things in a limited scope, he said: "*I do not think that students are allowed to be creative in their academic research*". For him, following the rules and doing things "right" comes before trying something new. This resonates with what Lillis (2001) maintains, that academic writing occasionally suppresses the voice of the student in the name of being formal and objective.

Supervisors have a difficult profession as well. One side of their job is to ensure that students' needs are fulfilled, and at the same time to ensure academic standards. Alternatively, they are meant to encourage creative thinking in student's dissertations. Some believe creativity is reduced to the selection of a non-traditional subjects, but this it is ineffective if the topic is not deeply understood, thoughtfully developed, or clearly connected to the research purpose. However, creativity, connecting ideas, posing thoughtful questions, or viewing anything from a fresh angle, is a major component of effective research. This theory is closely related to Koestler's (1964) notion of "bisociation", which holds that bringing two unrelated ideas together produces something novel.

Also, it is important to support students in developing creativity within their research. Students must believe they are free to experiment with fresh ideas even when it does not always come out favorably. Supervisors have an important role here, they should support and believe in creative thinking, this can have a significant impact on student's creativity. This also fits Deci and Ryan's (1985) self-determination theory, which proposes that students who feel free, and competent are more motivated. But students who believe creativity is unwelcome will likely just follow what is safe and stick to what others already did.

Ultimately, this response reveals that supervisor's perception of creativity is not solely based on how long they have been teaching, but on how they view the aim of research, which it seems more important. Supervisors who see research as a dynamic and creative activity are more likely to encourage their students' creativity. Furthermore, Woodthorpe (2011) said that creativity is in every choice and interpretation that researchers make, not just a beneficial element of investigation. It should to be something that is encouraged, not neglected.

In short, even if experience helps, on its own it is insufficient. Supervisors must be openminded as well as ready to encourage creative thinking. Departments might organize reflective training or workshops to encourage supervisors to consider more on how to foster creativity. This could foster a better learning environment in which invention is viewed as a strength rather than a risk.

4.2.2. Analysis of supervisor's insights on the originality of student's research writing

The answers to questions 3 and 4 show different views among supervisors on how original research introductions by students are. Some said they were showing marks of originality whereas others believed many students relied mostly on copying already existing ideas or sticking too strictly to academic rules. This opposing perspective asks some more basic questions about how creativity is encouraged, in academic writing, especially in the Algerian context. From a theoretical standpoint, originality in academic research writing is often seen as a key indicator of creative performance. According to Amabile (1983, 1996), creativity comes from a mix of suitable knowledge, imaginative thinking skills, and individual drive. One stated:

"yes of course they do that in every step in their general introduction from providing an overview of the selected topic, suggesting a new perspective to investigate it, to suggesting hypotheses, and imagining possible results before the investigation takes place". Originality here is generating original ideas being inspired by important scholars, and suggest a new perspective to investigate them. Many supervisors noticed this in their students' introduction.

One supervisor held a stricter expectation in saying: *"no, most students try to reproduce previous works".* This is consistent with Wickelgren (1979) on how inflexible knowledge structures hinder innovation by discouraging students from experimenting

with new ideas. One supervisor noticed that many students show creativity depending on their level of confidence in expressing original ideas, this corresponds to Deci's (1975) who emphasizes the importance of intrinsic motivation and psychological safety in fostering creativity. Looking more closely at the research introductions, a few supervisors said that some of their students kept posing original questions or offered new angles even if they conformed to academic structures. This demonstrates a kind of structural or procedural originality. Engaging in deep work supported by background knowledge before attempting to produce something original aligns with Wallas (1926) viewpoint that, the first phase of invention is preparation. Some students' compositions showed evidence of this level of preparation. Some students found ways to express themselves and personalize their work even within a strict framework.

Still, not every supervisor was optimistic. One said that there is always a lack of originality. this reflects that students are only taught to follow regulations and avoid errors will not feel free to be creative, even if they have the capacity. This seems rather real in the Algerian academic context, where students are under constant pressure to remain within their comfortable zone.

In brief, although occasionally present, the originality found in students' writing seems not to be very prevalent and appears not well supported. Most of it depends on the surroundings the student is in as well as their personality. This implies that supervisors have to go beyond only teaching conventions of academic writing. Encouragement for students to take risks, think differently, and share their own ideas is also required. According to the results discussed, the first question of this study is answered.

To summarize, supervisors' opinions reveal that, although creativity is present in student writing, it is yet quite undeveloped. Creativity is not only talent; it is also something that may develop if students get appropriate space and help. When students are motivated, confident, and supported, Amabile (1996) says that their creativity can really blossom.

4.2.3. The role of academic experience in shaping creativity in research writing

From the data gathered from questions 5 and 6, it obvious that many supervisors view academic background as a significant factor in shaping student's capacity for creativity in writing academic introductions. One supervisor mentioned: *"the more*

students write academic papers, the more they have to respect certain norms". This agrees with Amabile's (1996) hypothesis, which contends that having great domain-relevant skills like academic writing experience actually enhances rather than restricts creativity. In other words, the more students understand the "rules", the more assured they feel to experiment with them.

One supervisor cited: *"yes, students who have written academic papers such as 'exposé' before tend to be less afraid of making mistake. This confidence allows to try new ways of organizing their arguments"*; students who have completed exposé, research papers, or earlier writing projects tend to be more able to work effectively within academic norms. Consequently, they are predisposed to experiment with fresh concepts or approach problems differently.

Supervisors remarked that more seasoned students frequently show increased self-awareness in their approach to writing. They can analyze their writing, consider their decisions, and make changes as necessary. According to Schraw et al (2006), this kind of self-regulation is crucial for creativity as it keeps students adaptable and consistently reflective in the writing process.

Fundamentally, academic experience certainly fosters creativity in research writing. Although it enables students to change those frameworks, when necessary, it also provides them with the confidence and structure they need to participate in academic introductions. This demonstrates how knowledge of the rules enables one to strategically engage and creatively use them rather than ignore them. In this context, the findings align with the initial research question.

4.2.4. The use of brainstorming techniques and other strategies to foster originality in research writing

It is evident from the answers to questions 7 and 8 that supervisors usually favor brainstorming and other techniques to encourage students to be more original in their research writing. All five supervisors said they thought brainstorming was helpful, even if they used it differently according to their teaching approach, and what they thought academic writing should appear like. This support is consistent with the literature on originality, which argues that important components in generating original work include being mentally flexible, generating many ideas, and seeing problems from fresh angles (Amabile, 1983).

Most supervisors considered brainstorming as something students do before writing, viewing it not just as a starting point, they instead view it as a serious teaching instrument that assists students in creating ideas, reducing their anxiety, and taking creative risks. One supervisor noted that brainstorming helps students acquire confidence and feel more comfortable in presenting their ideas. Another said brainstorming helps students activate prior knowledge and organize their thoughts, which reminds us of Wallas's (1926) "preparation" stage, where learning from the past helps create space for new insights.

Some supervisors also mentioned using freewriting or other methods. These are regarded as beneficial since they reduce pressure and permit more open thinking. These habits promote creative thinking, which is essential for producing original ideas. Most supervisors were open to this kind of creativity, but one supervisor kept stressing the need to remain within academic constraints, demonstrating that some conflict still exists between being creative and following academic norms.

Apart from brainstorming, participants of the study mentioned additional methods that foster creativity. They advise students to keep asking, read past dissertations for ideas, or select recent theories and sources. These are all methods to encourage students to investigate their themes more thoroughly, and at the same time raising their domain knowledge. Particularly relating to the concept of "productive ambiguity" (Robert,1976), where students are given permission to use unclear or open-ended language in a text not to confuse, but to explore debatable or difficult ideas without requiring immediate answers, something that frequently results in more creative output, and encourage deeper thinking.

Overall, the results indicate that supervisors employ a variety of strategies, such brainstorming, freewriting, exploring recent theories, and motivating students to ask pertinent inquiries through reading, to help them move beyond traditional approaches and come up with original research topics. These methods encourage students to engage more deeply with their subjects in addition to assisting them in creating ideas and becoming less concerned about writing. Though supervisors have distinct methods of achieving this, they all seem to concur on the extreme significance of fostering creative thinking, while remaining within academic expectations. Obviously, there are still some obstacles when it comes to combining invention with academic rules, but on the whole, these methods appear to empower students to take chances and investigate fresh paths in their study.

This clearly answers the second research question, which examined what strategies do they use to move beyond traditional frameworks and create their own research questions.

4.2.5. Supervisors' insights about student's motivation and its influence on their creativity in a research introduction

The reflection gathered from supervisors, in questions 9 and 10 show that MMUTO English Department supervisors strongly emphasize how creative students are while composing research introductions. Most supervisors agree that students usually start with a mixture of inquiry and confusion; however, their interest usually grows as they get more engaged in their research. This is especially true during data collection or brainstorming phases. This process draws attention to Amabile's (1983) assertion that motivation is a key element of creative performance instead of being just something additional.

One supervisor claimed: "as the moves for writing the introduction are clear, the students are excited to write their introductions because by following the moves they can write a clear and organized introduction"; when students know well the moves and what they are doing, it increases their confidence, and seems to stimulate innovative thinking and enhance motivation. Deci and Ryan (1985) further explained how students' intrinsic motivation grows when they believe themselves able and have the freedom to decide, therefore, encouraging creative thinking.

Another significant point advanced was that individual curiosity drives innovation. Supervisors noted that students who sincerely care about their research subjects were more likely to write with depth and originality. One supervisor stated that students with unique interests remain engaged even under difficulty. This idea fits Amabile's (1996) theory that kids thrive best when they are working on something they really care about, rather than only doing research. Not all supervisors, meanwhile, saw innovation as something that arises naturally from interest alone. One pointed out that because it calls for discipline and work, students must work for creativity. Therefore, although interest is crucial, it still has to be driven by intrinsic motivation, concentration, and effective techniques. Many supervisors agreed that motivated students are more likely to approach problems creatively, that is, by examining them from many points of view, establishing comparisons, or exploring fresh ideas. One supervisor even observed that inspiration typically arises during brainstorming or even later throughout drafting,

therefore, suggesting that motivation and originality build on each other during the writing process.

In essence, what the supervisors said demonstrates the value of motivation for creativity especially those driven by intrinsic motivation. Their opinions align with what many creativity researchers have emphasized, that students' internal drive and personal involvement might significantly affect the originality of their academic output (Deci & Ryan, 1985; Amabile, 1996). Assisting students to be more investigative, providing them important choices, and demonstrating to them why their work matters can strongly support the development of creativity. Students first concerns turn into significant and creative work when they are inspired and encouraged. This clearly answers the first question introduced in the current study.

4.2.6. Supervisors' reflections on students' introductions and their recommendations to improve creative thinking

The interviewee responses to questions 11 and 12 offer a great insight into how MMUTO's supervisors see early writing research introductions, and how they think creativity can be enhanced. The introductions they had read so far did not impress all supervisors; one supervisor even noted: *"I do not want to sound optimistic, but so far, I have not been impressed by an introduction"*. Although that may seem a bit too strict, it also exposes a more fundamental problem: many introductions seem to lack creativity and analytical depth.

Other supervisors, however, emphasized the benefits of clarity, cohesion, and theoretical relevance. According to them, a strong introduction demonstrates the student's knowledge of the subject, critical thinking, and clear direction. For instance, one supervisor commended a student who arranged their ideas logically and framed excellent research inquiries. This captures what scholars like Amabile (1996) refer to as domain-relevant abilities that is, the kind of knowledge and structure required to enable creativity.

Another supervisor pointed out that a student rooted their research to personal motivation, not just academic instruction, which seemed to enhance the creativity of their work. This emphasizes that personal participation and intrinsic motivation, not only formal education, contribute to creativity. This concept fits Deci and Ryan's (1985) theory of intrinsic motivation, which holds that people are more inventive when they feel linked to their job and are performing it out of true interest.

Many supervisors cited reading a broad variety of sources as a means for early development of creative thinking among students during the introduction phase. They claimed that reading helps create a solid knowledge base that can foster original thinking later on; it is not only gathering of knowledge, they also advised against just reproducing what had been done before. One supervisor specifically told students*: "I advise students to be self-confident as this helps them to break the ground and tackle novel subject, choose new perspectives and theories, and avoid blind imitation of previous researchers in the same fields"*. This recommendation will enhance students to be more analytical and have the ability to critically evaluate ideas. This is particularly crucial in the Algeria context, where academic models often tend to be inflexible.

Understanding how to assess the structure and quality of academic work can help one develop creative-relevant skills like the capacity to challenge conventions and investigate issues in fresh ways, skills that Duncker (1945) and others have noted as critical for original thinking.

One supervisor, suggested four quite pragmatic actions: using mind maps, posing reflective questions, freewriting, and brainstorming. These strategies help students open up space for more creative ideas and distance themselves from fixed or repetitive thought. Early stages of academic writing particularly depend on both the cognitive and emotional aspects of creativity, which they also support. The supervisors admitted in general that several students have a difficulty composing highly unique or analytic introductory essays, but at the same time, shared a view that development is both realistic and achievable. Students can grow their creative thinking throughout time if they are given the appropriate direction, inspiration, and resources. This is consistent with what academics such as Amabile (1996) and Simonton (1999) have stated that, with practice and support, creativity can be learned and cultivated rather than being an innate ability.

In brief, supervisors stressed the need of providing constant directions starting from the introductory phase, so students could develop into more confident, inquisitive students ready to take intellectual risks and carefully examine their ideas. Although not all students start their research with a creative approach, supervisors may help students to surpass simple academic standards by using proven methods and offering constant motivation. Finally, this process lets students develop and express a unique academic voice in their research writing.

Conclusion

This chapter has discussed and interpreted our findings in view of Amabile's componential theory of creative thinking (1996), and the literature review. It has answered two research questions and hypotheses advanced in the general introduction based on the findings obtained through the questionnaire for master's two students, and the interview for the supervisors at the Department of English at Mouloud Mammeri University of Tizi-Ouzou. The analysis of the results proven that students do use creative thinking when writing introductions, but not at the fullest extent, in addition students were able to show flexibility and creative thinking, especially when they used techniques such as brainstorming.

General Conclusion

General Conclusion

The present dissertation has investigated creative thinking in the introduction chapter of the undergraduates student's dissertations. It focused on how students think creatively during the initial stage of academic work. The study was conducted with undergraduate students in language studies at the Department of English at Mouloud Mammeri university of Tizi-Ouzou (MMUTO).

This study has sought to reach two main objectives. First to analyze the role of creative thinking in shaping the introduction chapter of undergraduates student's research, with a focus on how originality, contributes to the overall quality, and coherent work. The second objective is to identify strategies that enable students to break away from conventional frameworks and propose innovative research questions. In order to conduct this study, we have drawn upon Amabile's componential theory of creative thinking was first introduced in 1983, and further developed in 1996. It encompasses three core components: domain-relevant skills, creativity relevant skills and task motivation.

A mixed-Methods approach has been used as data have been collected and analyzed both qualitatively and quantitatively. The data collection has been done using two tools: an online questionnaire answered by thirty-seven (37) students who obtained a Master degree, in addition to an online interview conducted with five (5) supervisors within the same department. As for the data analysis, it has been done through a descriptive statistical analysis of the close ended items of the questionnaire, in addition to qualitative content analysis for the open-ended items, and for the interview.

The analysis of the data collected from both the students' questionnaire and the teachers' interview have demonstrated that students do use creative thinking when writing their research introductions, but not to the fullest extent. The results revealed that while students generally understand how to structure an introduction and are familiar with its components, many of them still struggle to apply this knowledge in a creative and original way. Some students were able to show flexibility and creative thinking, especially when they used techniques like brainstorming, mind mapping, and outlining to generate and organize their ideas.

In addition, the study found that although students sometimes try to approach their topics from new and original angles, many still prefer to follow traditional academic models. This may be due to a lack of confidence or fear of making mistakes. However, it is encouraging that some students did challenge existing theories and used less

conventional sources, which helped them come up with more unique research questions. These behaviors show that creativity is there, but it needs more support and encouragement.

Based on these results, the first hypothesis, which said that students who think creatively are more likely to write original and engaging research questions, was partially confirmed. Some students showed this clearly, but others still found it difficult. The second hypothesis, that students who use creative strategies are more likely to propose new ideas, was confirmed. The students who used such strategies such as brainstorming were more successful in coming up with fresh and interesting research questions.

Like every scientific work, ours has encountered a number of limitations mainly in the process of data collection. As it has previously mentioned, we have opted for an online questionnaire, and an online interview as data collection instruments. Initially the objective was to collect data from fifteen 50 graduated master two students at the English Department; however, only thirty-seven (37) students were able to complete the questionnaire. Furthermore, in order to gain a deeper understanding of the supervisor's perspectives, we sent the interview to twelve (12) teachers, unfortunately, only five (5) of them responded. Although, the answers provided were rich and informative, the small number of responses limited the diversity of the viewpoints that could have been explored.

Notwithstanding these limitations, this study opens up new avenues for inquiry. Since digital tools, and artificial intelligence are becoming more present in education, especially in writing, it would be interesting to explore how they might help students to be more creative in their academic work. For this reason, we suggest that future research in the Algerian context could focus on how AI tools can support students in developing creative thinking while writing their dissertations. This case of study could give new insight into how technology might not only help with writing accuracy but also encourage more original and creative ideas in academic research.

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Appendices

Appendix A

Student's Questionnaire

Thinking Outside the Box: Creative Thinking in the Introduction Phase of M2 Students' Research

This questionnaire is designed to assess students' competencies and experiences related to writing research introductions. This survey explores students' understanding of research introductions, their academic writing habits, creative approaches, and motivations, aiming to highlight common challenges and strengths in their writing process. The data collected willhelp inform future academic support and training in research writing, particularly in enhancing students' ability to craft clear, engaging, and well-structured introductions.

Thank you for taking the time to complete this questionnaire. Your input is greatly appreciated and will play an important role in improving support for students in academic writing, especially in crafting effective research introductions.

SECTION 1: DOMAIN-RELEVANT SKILLS

1.1 Knowledge and Understanding of Research Introductions

1. How confident are you in your understanding of the structure of a research introduction?

Not confident

Slightly confident

Moderately confident

Very confident

Extremely confident

2.Have you taken any courses that taught you how to write research introductions?

Yes

No

If yes, please specify

……

3.How familiar are you with the common components of a research introduction (Background, problem statement, significance of the study, research question)?

Not familiar

Slightly familiar

Moderately familiar

Very familiar

Extremely familiar

4.How would you describe your familiarity with the main theories and literature in your research area? Not familiar

Slightly familiar

Moderately familiar

Very familiar

Extremely familiar

5.Have you ever disagreed with a theory that is directly related to your research topic?

Yes

No

If yes, how did this affect the way you wrote your research introduction?

……

6.Did you actively seek out unconventional or less-cited sources to shape your research questions? If yes, how did they influence your approach?

1.2Exposure to academic paper Writing Practices.

7.How often do you read academic papers in your field to understand how introductions are written?

Never

Rarely

Sometimes

Often

Always

8.To what extent do you feel your academic background has prepared you to write a strong research introduction? Justify?

……

Section2: Creativity Relevant Process

2.1 Creative Approach in Writing

9.To what extent do you try approach the topic from a unique or original angle when writing your introduction? Never

Occasionally

Sometimes

Often

Always

10.Do you consider yourself flexible when it comes to changing ideas while writing your introduction?

Yes

No

2.2 Use of Creative Techniques

11.Explain how do you use brainstorming to generate ideas before writing your research introduction?

12.How helpful do you find mind mapping when organizing your thoughts for the introduction? Not helpful

Slightly helpful

Moderately helpful

Very helpful

Extremely helpful

13.What other techniques do you use?

……..

14.Do you feel comfortable taking risks with how you present your topic or research questions?

If yes, explain

……

15.What challenges do you face when trying to be creative in academic writing?
How do you overcome them?

……

Section3: Motivation

3.1 Intrinsic Motivation

16.To what extent are you personally interested in the topic you chose for your research?

Slightly interested

Moderately interested

Very interested

Extremely interested

17.Do you enjoy the process of writing your research introduction, even if it is difficult?

Explain.

…….

18.How motivated do you feel when working on your research introduction without external pressure? (deadlines, or supervisors)

Not motivated

Slightly motivated

Moderately motivated

Very motivated

Extremely motivated

3.2 Extrinsic Motivation

19. Are you writing your research mainly to fulfill academic requirements, or because you genuinely want to explore your topic?

Mainly for academic requirements

Mainly out of personal interest

Both

20.To what extent does external feedback (from your supervisor, peers, etc.) influence your motivation to write a good introduction?

Not at all

Moderately

Very

Extremely

21. What other factors that motivate you to be creative while doing your research?

……

Appendix B

Interview with supervisors

This interview aims to explore the role of creativity in academic research writing, with a particular focus on how Master 2 students develop their research introductions. By gathering perspectives from experienced supervisors, the goal is to better understand how creativity is expressed in students' writing, the factors that influence it, and the strategies that can help foster it.

Thank you very much for taking the time to answer these questions. Your insights will be a valuable contribution to our understanding of creativity in academic writing and will greatly benefit students engaged in research.

Q1. How many years have you been supervising students?

……..

Q2. How would you define creativity in the context of academic research?

…….

Q3. Do you think M2 students show creativity in their introductions? If yes, how?

……

Q4. What are some common features you observe in student's introductions regarding originality?

……

Q5. How does student's background knowledge about writing academic research affects their ability to write creative introductions?

…….

Q6. Do previous academic writing experiences significantly influence a student's creative thinking? If yes, how?

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Q7. Do you encourage Brainstorming when guiding student's in writing their introductions? why?

……

Q8. What specific technique, do you use to help students develop original ideas for their introductions?

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…….

Q9. How do you perceive student's motivation when they begin writing their research introductions?

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Q10.What role do you think personal interest plays in fostering creativity in their writing?

…….

Q11. Describe a time when a student's introduction particularly impressed you? How did it impact the overall research?

…….

Q12. What would you recommend to students to improve their creative thinking in the early stages of research?

……

Appendix C

Interview Transcripts

Q1. How many years have you been supervising students?

Teacher A: 12 years

Teacher B: 24

Teacher C: I have been supervising students for 7 years.

Teacher D: 15 years

Teacher E: 1

Q2. How would you define creativity in the context of academic research?

Teacher A: I don't think that students are allowed to be creative in their academic research **Teacher B:** Creativity in the context of academic research can be defined as the ability to produce innovative, interesting, and valuable ideas that contribute to the research advance within a specific field.

Teacher C: Creativity in academic research is to be able to approach a given subject from new perspectives or to treat a subject which has never been investigated before.

Teacher D: In the context of academic research, creativity can be defined as the ability to generate original and valuable ideas that contribute to advancing knowledge within a discipline. It involves formulating innovative research questions, designing original methodologies, using relevant theories and presenting clear findings.

Teacher E: Dealing with original themes and identifying new gaps in literature. Moreover, The ability to innovate methodologies and formulate new hypothesis. Furthermore, providing new interpretation and discussion that contribute new insights to the area of study.

Q3. Do you think M2 students show creativity in their introductions? If yes, how?

Teacher A: Not really

Teacher B: In my opinion, a few M2 students are creative when writing the introduction. This is by being inspired by important scholars' models of introductions

and by adapting them and creating a new version relevant to their own specific research.

Teacher C: Yes, of course they do. They can do that in every step of their general introduction from providing an Overview of the selected topic, suggesting a new perspective to investigate it, to suggesting hypotheses and imagining possible results before the investigation takes place.

Teacher D: Sometimes and not all of them. They show creativity depending their level and their confidence in expressing original ideas.

Teacher E: No, most students try to reproduce previous works

Q4. What are some common features you observe in student's introductions regarding originality?

Teacher A: They write their unique ideas and follow their own structure.

Teacher B: Common features include the structure of the introduction, and the expression of the problematic issue.

Teacher C: The common features are: a new problem, the uniqueness of the data to be collected, the questions and the hypotheses provided.

Teacher D: The features I observe in students' introductions regarding originality are original questions and the capacity to contextualize the problem.

Teacher E: Unfortunately, there is usually a lack of originality

Q5. How does student's background knowledge about writing academic research affects their ability to write creative introductions?

Teacher A: I think that academic research limits their creativity

Teacher B: Knowledge of writing academic research can foster their ability to be creative when writing the introduction of their dissertation.

Teacher C: One of the principles of academic research is originality, so knowing about it helps students to think outside the box and find novel topics and ideas. Students need also to know about the methodology of doing research in a specific field to implement it in the introduction phase of their dissertations and even later on.

Teacher D: When students know the right moves of academic writing (e.g., how to present a research problem, establish significance, and state objectives), they feel more confident to write an introduction that is creative.

Teacher E: They tend to write well structured, purposeful and organized introductions. Their knowledge of the three moves helps them to introduce their issues and present their ideas creatively.

Q6. Do previous academic writing experiences significantly influence a student's creative thinking? If yes, how?

Teacher A: The more students write academic papers, the more they have to respect certain norms.

Teacher B: Student's creative thinking can be enhanced by previous academic writing experience, through academic writing, students engage in various cognitive activities that stimulate the development of original thought.

Teacher C: This is obvious as there are principles that are common in all types of academic writings and thus applicable in this context i.e. writing a dissertation.

Teacher D: Yes, students who have written academic papers such as « exposé » before tend to be less afraid of making mistakes. This confidence allows to try new ways of organizing their arguments.

Teacher E: Yes, they do. They become more familiar with academic writing and then more confident to develop new styles and strategies.

Q7. Do you encourage Brainstorming when guiding student's in writing their introductions? why?

Teacher A: Yes, but at the end of the day they have to follow certain norms. I believe writing an academic research is very different from writing a personal essay, story, or poem. **Teacher B:** Yes because it helps students become more comfortable in expressing their ideas in English, reducing anxiety and fear of making mistakes. In addition, it serves as an initial stage for speaking or writing assignments, helping students organize their ideas before producing language.

Teacher C: Yes, I do because it is a useful technique that contributes to a good organization and planification of the work.

Teacher D: Yes, I strongly encourage brainstorming when guiding students in writing their introductions, because it helps activate prior knowledge, generate original ideas, and organize thoughts before drafting.

Teacher E: Yes, I do. It helps them to become confident and generate new and diverse ideas about their topics. It encourages creativity, critical thinking, and problem solving. **Q8.** What specific technique, do you use to help students develop original ideas for their introductions?

Teacher A: Originality and creativity do not always mean the same think. For originality of ideas, they have to be more knowledgeable and familiar with their topic of research. **Teacher B:** One technique I often use is: Instead of asking students to immediately write an introduction, I guide them to suggest some questions related to the topic. These questions help them explore different angles and for their writing. Another technique is: advise them to have a look at a number of master's dissertations focusing on the introductions.

Teacher C: After selecting an original subject, i ask them, for instance, to use a very recent theoretical framework, use new and recent sources, and select new data.

Teacher D: To develop original questions students I ask my students to ask as many questions as possible about the topic to deepen their understanding about the topic.

Teacher E: I use brainstorming and freewriting to get them more confident to address ideas without pressure, which often open new horizons to surprising and original perspectives. **Q9.** How do you perceive student's motivation when they begin writing their research introductions?

Teacher A: I think that they find it challenging. The hardest part is to start writing.

Teacher B: Positively. They are learners, novice researchers.

Teacher C: When students start writing their introduction, their motivation is quite remarkable, and generally it increases once they get more knowledge about the subject, and mainly when they start Collecting their data.

Teacher D: As the moves for writing the introduction are clear, the students are excited to write their introductions because by following the moves they can write a clear and organized introduction.

Teacher E: Most students show a mix of hesitation and curiosity. Some are anxious. Others their motivation often increases during the brainstorming and drafting stages.

Q10. What role do you think personal interest plays in fostering creativity in their writing?

Teacher A: I don't think that it come out of nowhere. Students have to be productive and force themselves to think and come up with new idea. It's like a muscle that they have to work through discipline and perseverance.

Teacher B: It actually plays a prominent role. Students that are interested in writing and developing their ideas work well and achieve satisfactory results.

Teacher C: Personal interest means intrinsic motivation and if it is present in the student, then he is continuously involved in his research and advances better than the one who lacks this type of motivation.

Teacher D: Personal interest plays an important role in fostering creativity in students' writing, particularly in academic research. When students are interested in a topic, it significantly enhances their engagement, motivation, and originality.

Teacher E: It boosts students' motivation

Q11. Describe a time when a student's introduction particularly impressed you? How did it impact the overall research?

Teacher A: I don't want to sound pessimistic, but so far, I have not been impressed by an introduction.

Teacher B: A well written introduction is a good sign of the student's abilities which contribute significantly to the overall writing of the academic research.

Teacher C: An introduction impresses us when it is concise and precise, the hypotheses match the questions asked, and the theoretical framework is pertinent.

Teacher D: What impressed me was that the introduction was very clear. The student knew how to move from general to specific and the questions were original and thought-provoking that made the whole work grab my intention.

Teacher E: When students' introduction starts with personal story associated to the topic, it becomes interesting and will make all the research more interesting.

Q12. What would you recommend to students to improve their creative thinking in the early stages of research?

Teacher A: I would rather use the word originality. They need to accept that the more they read and write about a variety of topics, the more they are be able to come up with original ideas.

Teacher B: Read, read, and read! This is my advice to them.

Teacher C: I advise students to be self-confident as this helps them to break the ground and tackle a novel subject, choose new perspectives and theories, and avoid blind imitation of previous researches in the same field.

Teacher D: My advice is to read as many dissertations as possible and to compare between them in order to see and notice which ones are the best.

Teacher E: Start with mind mapping, ask reflective questions, brainstorming, freewriting activities and analyzing sample introductions can also help spark creativity and develop a unique angle early on. In addition, read varied sources for inspiration.