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RESEARCH ARTICLE

Unlock the Reflective and Reflexive Practices in Learning: Testing the Possible Predictors in EFL Context

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ABSTRACT

This study examines the use of reflective and reflexive practices among English as a Foreign Language (EFL) students and explores the impact of predictors such as gender, motivation, and academic performance on these practices. This study emphasizes the importance of reflection and reflexivity in education, highlighting their role in enhancing learning outcomes, problem-solving abilities, and life competencies. Involving 62 B2-level EFL students from a B.A. program at *École Normale Supérieure* (ENS), Moulay Ismail University, Meknes, Morocco, data was collected through an online questionnaire and analyzed using descriptive statistics, Pearson correlation coefficient, and t-tests. The findings revealed a noticeable disparity between reflective and reflexive practices, with reflective strategies being more commonly used. Additionally, this study identifies variability in individual practice patterns and examines how gender, motivation, and academic performance influence these practices. This study underscores the need for targeted training in strategic planning, digital tool integration, and gender-sensitive approaches to improving learning outcomes. It also advocates motivational techniques, social learning strategies, and collaborative projects to foster reflection and enhance student engagement. Longitudinal studies are needed to further refine educational practices for long-term success.

Keywords: Reflection, reflective learning, reflexive learning, reflexivity.

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1. Introduction

In contemporary pedagogy, reflective and reflexive practices are increasingly acknowledged as essential for fostering academic and personal success (Bolton & Delderfield, 2018; Ng & Tan, 2021). Reflective practice involves critically analyzing experiences to improve learning outcomes and decision making, whereas reflexive practice focuses on scrutinizing personal beliefs and assumptions to enhance self-awareness and adaptability within social contexts (Bolton & Delderfield, 2018; Gibbs, 1988; Schön, 1983). These practices are foundational for cultivating critical thinking, self-regulation, and lifelong learning skills (Anderson & Krathwohl, 2001; Moon, 2013), which are essential for students' academic development and professional growth.

Kolb's experiential learning model offers a framework for understanding learning as an iterative process that encompasses concrete experience, reflective observation, abstract conceptualization, and active experimentation (Illeris, 2018; Kolb, 1984). The adaptability of this model to diverse learning styles, such as divergent, convergent, assimilating, and accommodating, provides a basis for tailoring educational strategies to meet students' varied needs (Kolb, 1984). Reflective and reflexive practices, therefore, are not only integral to enhancing individual learning but also play a vital role in adapting teaching strategies that foster inclusive and effective learning environments.

Within the context of English as a Foreign Language (EFL) students enrolled in the B.A. program at *École Normale Supérieure* (ENS), Moulay Ismail University, Morocco, the deployment of reflective and reflexive strategies constitutes a core component of the learning process. These strategies are particularly critical, as students navigate a diverse range of language and content-based subjects, in addition to the regular preparation and execution of oral and written assignments. Academic demands are further intensified by the necessity of independent study wherein students frequently undertake catch-up or

reinforcement activities aimed at enhancing their performance, developing linguistic competencies, and addressing individual learning gaps.

Despite the pedagogical significance of reflection and reflexivity in such contexts, limited research has examined the influence of individual learner differences-specifically gender, motivation, and academic performance-on the use of these strategies in EFL settings. This study seeks to address this gap by investigating how these factors shape students' engagement in reflective and reflexive learning practices. In doing so, it contributes to a more nuanced understanding of how such practices can be effectively optimized to enhance learning strategies and ultimately support students' academic success and personal development.

1.1. Literature Review

The literature underscores the essential role of reflection and reflexivity in language education, as it highlights their impact on self-directed learning, self-regulation, and learner autonomy (Dewey, 1933; Little, 2007; Schön, 1983; Zimmerman, 2002). These concepts are key to an effective learning environment. Additionally, research has examined how factors, such as gender, motivation, and academic performance affect the use of these strategies (Almashour & Miller, 2023; Al-Nouh & Al-Awidi, 2022; Davies, 2023; Khan & Ali, 2023; Lee & Schallert, 2021; Omar & Uqba, 2024). Additionally, the integration of design thinking into educational practices has been explored as a means of enhancing these strategies (Brown, 2008; Razzouk & Shute, 2012). This review aimed to elucidate how these factors interact with reflective and reflexive practices, providing insights into their influence on educational effectiveness and outcomes.

1.1.1. Reflective and Reflexive Practices

Reflection and reflexivity, although often used interchangeably, are distinct concepts in educational theory. Reflection involves critically analyzing one's experiences to enhance learning and guide future actions, a framework established earlier by Dewey (1933). By contrast, reflexivity requires a deeper scrutiny of one's beliefs, assumptions, and the broader context shaping one's experiences (Bradbury-Jones, 2007). While Dewey and Schön laid the groundwork for reflection, Bolton and Delderfield (2018) highlighted that reflexivity involves a more nuanced self-awareness and contextual analysis. This expanded view underscores how both reflection and reflexivity interact to enrich educational practices and development.

Schön's definition of reflection has significantly shaped educational theory by introducing the concept of reflection as a dynamic ongoing process. His distinction between "reflection-in-action" and "reflection-on-action" underscores that individuals simultaneously engage in multiple layers of reflection. Schön's framework emphasizes that reflection is not a static or linear process, but rather an interactive experience where immediate, context-sensitive thinking, and retrospective analysis inform one another. This perspective has influenced how educators and practitioners understand the integration of real-time problem solving with thoughtful, post-event evaluations. By recognizing the fluid and interconnected nature of these reflective practices, Schön (1983) provided a deeper understanding of how individuals navigate and refine their professional and educational experiences.

Reflection-in-action, often described as "thinking on your feet" or "on-the-spot reflection and experimentation" refers to the process of thinking and adjusting while performing a task (Schön, 1983, pp. 54–66). Schön conceptualizes reflection as both a mental and behavioral activity, characterizing it as 'a dialogue of thinking and doing through which [one] becomes skillful' (p. 56). He explained that individuals engage in reflection, particularly when their intuitive actions lead to surprising or unintended outcomes. During this phase, reactions involved abandoning previous strategies, adopting new approaches, making corrections, pausing for reassessment, talking to oneself, evaluating the situation, making inferences, and adjusting behavior. Reflection-in-action involves engaging with unexpected experiences, experimenting, and adapting one's approach in real-time. This iterative process allows individuals to effectively address emerging challenges and opportunities, experimenting with various strategies and solutions to improve the situation as it unfolds.

Reflection-on-action, in contrast, occurs after an action or experience is completed. This form of reflection involves looking back on the experience to analyze what happened, why events unfolded as they did, and what might have been missing. It also includes contemplating whether alternative actions could lead to different outcomes. Schön describes this process as individuals "thinking back on a project they have undertaken or a situation they have lived through, exploring the understandings they brought to their handling of the case" (Schön, 1983, p. 61). He further noted that reflection-on-action can occur in a state of idle speculation or through a deliberate effort to prepare for future scenarios (p. 61). Essentially, if practitioners wish to address issues or improve their approach, they may need to revisit reflection-in-action, which involves real-time experimentation and adjustment.

A third type of reflection, building on Schön's model, is "reflection-for-action" introduced by Killion and Todnem (1991). They argued that this form represents the culmination of both reflection-in-action and reflection-on-action, with a focus on future applications. Unlike Schön's reflections, which address the past and present, reflection-for-action is forward-looking. Killion and Todnem highlighted that insights from past and present experiences should guide future decisions and practices. Reflection-for-action requires ongoing knowledge development, continual enhancement of classroom practices, and the promotion of educational innovation. Educators and learners analyze past experiences to refine strategies, make informed decisions, and update their knowledge to incorporate new methods. Emphasizing future actions, reflection-for-action not only refines practice, but also fosters proactive professional growth and adaptation.

Reflective practice is a deeply personal process that intertwines cognitive and emotional elements as it allows individuals to critically assess their experiences to enhance both learning and outcomes. Agouridas and Race (2007)

emphasize that reflection is a subjective process, as it helps individuals make sense of learned content, often sparking deeper introspection into emotions and understanding. Chang (2019) also highlighted the role of reflection in synthesizing knowledge and drawing abstractions from concrete experiences. Similarly, Thompson and Pascal (2022) described it as a dynamic process that enables learners to actively engage with their experiences and knowledge, leading them to personal and academic growth.

Building on these insights, contemporary education increasingly recognizes reflective practice as essential to deepening learning. While Lambert *et al*. (2007) argued that reflection enhances students' engagement with content, Larsen *et al*. (2016) pointed to its role in heightening awareness and recall of one's thoughts and actions. By integrating new insights with prior knowledge, reflection supports a holistic development process that fuels both personal and academic progress (Loka *et al*., 2019). Together, these perspectives affirm the centrality of reflection in connecting individual experiences with broader educational achievement.

Reflexivity, which is distinct from reflection, is crucial for self-awareness and growth in social contexts. Danielewicz (2001) asserts that reflexivity 'leads people to a deepened understanding of themselves and others, not in the abstract, but in relation to specific social environments' (p. 155). Reflexivity involves 'active analysis of past situations, events, and products, with the inherent goals of critique and revision for the explicit purpose of achieving an understanding that can lead to change in thought or behavior' (p. 156). Similarly, Afolayan (2016) describes reflexive learning as a process where individuals 'explore their experiences to become more conscious, open-minded, and self-critical' emphasizing the need for learners to embrace criticism and feedback. Christensen *et al*. (2020) also highlight that "reflexivity is a movement from self-awareness to connectedness with other people" (p. 15), suggesting that it encourages a deeper engagement with diverse worldviews. Collectively, these definitions illustrate that reflexivity extends beyond introspection to incorporate the experiences and perspectives of others to enhance both personal and social understanding.

Reflexivity involves engaging in dialogue with others to integrate diverse experiences and perspectives. Unlike reflection, which primarily focuses on individual introspection, reflexivity requires active participation in professional conversations in order to understand how others navigate similar situations. This collaborative approach fosters deeper comprehension of the learning context and facilitates the identification of more effective solutions to challenges (Finlay, 2008). Reflexivity is not just about personal insight but also about interacting with the broader community, which demands characteristics such as open-mindedness, humility, flexibility, and a spirit of inquiry (Schön, 1983). By engaging in a social network, individuals can benefit from the innovative ideas, strategies, and solutions of others, which can inspire and enhance their own practices. This interaction contrasts sharply with solitary reflection, as it enriches the learning process by incorporating a wider range of insights and approaches.

Reflexive learners can engage with their social networks through various methods, both face-to-face and digital. Technological advancements have significantly expanded the scope of our social networks, integrating us into larger communities, such as professional, learning, and fan communities, which facilitate individual growth and learning (Wenger, 2011). Virtual communities in particular transcend geographical limitations, fostering self-expression, maturity, and comprehensive learning opportunities (Siemens, 2014). As knowledge becomes increasingly accessible through digital platforms, learners are encouraged to engage in both consuming and contributing to knowledge (Downes, 2007). By becoming active members of online communities, learners can connect with individuals from diverse backgrounds who share similar interests, leading to meaningful interactions that promote knowledge development and self-evaluation (Hoadley, 2012).

Reflective and reflexive practices complement each other and are integral to both learning and professional growth. Their intersection often leads to confusion, as they represent interconnected states of mind, ongoing practices, and pedagogical approaches that should permeate the curriculum (Fanghanel, 2004). The two factors enhance learning outcomes and contribute to improved academic and professional performance (Lew & Schmidt, 2011). Their synergistic effects underscore the importance of incorporating these practices into educational frameworks to foster deeper engagement and continuous development.

1.1.2. The Role of Metacognition, Self-regulation, and Learner Autonomy in Reflective and Reflexive Practices

Metacognition and self-regulated learning are intrinsically linked to reflection and reflexivity and serve as foundational elements in effective educational practices. Metacognition, which involves planning, monitoring, and evaluating one's learning processes, is essential for engaging in reflective and reflexive practices (Schraw & Dennison, 1994). It encompasses strategies such as goal-setting and self-assessment, which help learners become more aware of their cognitive processes and improve their ability to regulate their learning. Research indicates a strong relationship between metacognition and self-regulation, with effective self-regulation involving corrective behaviors, such as activating, inhibiting, and adapting strategies to achieve desired outcomes (Bursali & Öz, 2018; de la Fuente *et al*., 2015). This dynamic interplay enhances learners' ability to learn from mistakes, thereby fostering self-control and self-efficacy, which are critical for academic success.

Self-regulation and metacognition are crucial to the development of learner autonomy. This requires learners to assume responsibility for their actions, reactions, and learning outcomes. Without a foundation of learner autonomy, students may struggle to effectively engage in reflective and reflexive practices as these processes demand a proactive and self-directed approach to learning. Thus, autonomy serves as a driving force that facilitates both reflective and reflexive practices, enabling learners

to achieve their educational goals and promoting continuous personal and academic growth (Little, 2007; Oxford, 2017).

Learners who actively engage in reflective and reflexive practices exemplify advanced metacognitive and self-regulatory skills that are fundamental to learner autonomy. Engaging in these practices demonstrates a high degree of self-efficacy, as learners are able to independently manage their educational experiences and set meaningful goals (Little, 2007). Effective reflective and reflexive practices require learners to monitor and evaluate their progress, adjust their strategies as needed, and learn from their experiences, reflecting on the key elements of metacognition and self-regulation (Schraw & Dennison, 1994). By employing these skills, students not only enhance their ability to adapt and succeed academically, but also foster continuous personal growth and resilience (Bursali & Öz, 2018).

1.1.3. Design Thinking as a Reflective and Reflexive Approach in Education

Design thinking, originating from industrial design and management, has increasingly influenced education by promoting creativity and problem solving through iterative processes. This approach involves stages such as defining problems, researching, ideating, prototyping, choosing, implementing, and learning from outcomes (Brown, 2008). In educational contexts, design thinking is valued for its reflective and reflexive nature, aligning with practices that emphasize continuous iteration and refinement. By fostering empathy, curiosity, and collaboration, design thinking enables students to critically analyze their experiences and develop innovative solutions, similar to Kolb's experiential learning cycle (Luka, 2014). This iterative process helps learners engage deeply with the content and refine their strategies based on feedback, thereby enhancing both reflective and reflexive practices (Brown, 2008; Dym et al. 2005).

Moreover, design thinking's emphasis on collaboration and real-world problem solving aligns well with the development of 21st-century skills such as critical thinking and adaptability (Ray, 2012). Integrating design thinking into educational practices supports reflective and reflexive learning by creating environments in which students can continuously evaluate and adjust their approaches. Recent research underscores that design thinking's focus on empathy and user feedback fosters deeper engagement with diverse perspectives, facilitating more effective and adaptive learning experiences (Kimbell, 2019; Razzouk & Shute, 2012). This approach not only enriches learners' self-awareness but also prepares them to tackle complex problems and innovate effectively in their future careers.

1.1.4. The Role of Motivation in Promoting Reflective and Reflexive Behavior

Motivation is linked to reflection and reflexivity, as extensive research has demonstrated that reflective practices can significantly enhance motivational levels (Cavilla, 2017; Galli, 2020). Reflective practices encourage individuals to set personal goals, evaluate their progress, and acknowledge their achievements, and foster a sense of accomplishment and intrinsic motivation. Engaging in self-assessment and feedback helps individuals identify areas for improvement and devise strategies to overcome challenges, thereby boosting their motivation to succeed (Schunk, 2020).

Motivation, both intrinsic and extrinsic, is crucial for effective reflective and reflexive learning (Ryan & Deci, 2000). For instance, intrinsic motivation is linked to deeper engagement and persistence, as individuals are more likely to reflect thoughtfully on their learning processes and address complex questions (Schunk & Zimmerman, 2012). Research supports that intrinsically motivated students are more inclined to persist in reflection beyond immediate tasks, integrating reflection deeply into their learning processes (Pintrich, 2003). Overall, motivation plays a vital role in language learning by normalizing struggles, overcoming obstacles, setting and orienting goals, fostering creativity and critical thinking, encouraging self-efficacy, and cultivating resilience (Schunk, 2020; Zimmerman, 2002).

1.1.5. Gender Differences in Reflective and Reflexive Learning

Gender differentiation can play a significant role in how individuals engage in reflective and reflexive learning. Research has demonstrated that gender can influence various aspects of reflection and reflexivity, affecting how learners approach self-assessment, goal-setting, and problem solving. For example, studies indicate that females often exhibit higher levels of reflective practices than males, potentially due to different socialization patterns and educational experiences (Fletcher & McKeown, 2020). Females are generally more inclined to engage in deep reflection and self-examination, which may stem from a stronger focus on interpersonal relationships and personal development (Miller & Stiver, 1997).

Conversely, males may approach reflective practices with a task-oriented and solution-focused mindset. This difference can influence how males and females perceive and engage in self-regulation, with males often prioritizing practical outcomes and efficiency over introspective analysis (Wang & Cordon, 2019). Additionally, gender norms and expectations can shape how individuals use reflection and reflexivity to navigate academic and professional environments (Wood, 2019). For instance, societal expectations may impact how openly individuals discuss their learning experiences and seek feedback. Understanding these gender-related differences is crucial for developing inclusive educational strategies that accommodate diverse reflective and reflexive practices, thereby enhancing overall learning outcomes and personal growth of all learners.

1.1.6. The Link between Academic Performance and Student Engagement in Reflective and Reflexive Learning

Academic performance and students' engagement with reflective and reflexive learning are closely linked. Reflective practices that involve critical thinking and self-assessment have been shown to significantly influence academic success. For instance, students who actively engage in reflection are better able to set specific goals, monitor progress, and adapt strategies. This leads to

improved performance outcomes (Dunning *et al*., 2003). Reflective learning encourages learners to critically analyze their experiences, identify strengths and weaknesses, and apply these insights to future tasks, thus fostering a deeper understanding and mastery of the content (Moon, 2013).

Furthermore, reflexivity, which involves examining one's own beliefs and biases in the context of learning, also plays a crucial role in academic achievement. By engaging in reflexive practices, students can better understand their learning processes and adjust their approaches based on feedback and self-evaluation (Boud *et al*., 1985). Reflexive learners are often more adaptable and open to constructive criticism, which enhances their ability to overcome academic challenges and achieve higher success levels. Recent studies have reinforced that students who integrate reflection and reflexivity into their learning process tend to exhibit higher levels of academic performance, demonstrating that these practices not only support, but also actively contribute to educational attainment (Kember *et al*., 2008).

Research also indicates a positive correlation between successful and brilliant learners using more reflective and reflexive strategies than average or poor ones (Schraw *et al*., 2006; Zimmerman, 2002). High-achieving students are more likely to engage in both reflective and reflexive practices than their peers, with average or poorer performance. For example, successful learners often exhibit higher levels of self-regulation, metacognition, and reflective thinking, which are associated with better academic outcomes (Schraw *et al*., 2006; Zimmerman, 2002). These learners frequently utilize reflective strategies to evaluate their learning experiences, set higher standards for themselves, and make strategic adjustments, thereby contributing to their superior performance (Nicol & Macfarlane-Dick, 2006). Conversely, students with lower academic performance may not engage as deeply in these practices, potentially missing the benefits of continuous self-assessment and adjustment (Lai & Viering, 2012).

As shown above, the literature establishes a clear link between factors such as gender, motivation, academic success, and engagement in reflective and reflexive practices. Research shows that these factors are not only associated with the frequency and depth of reflection and reflexivity but also with the effectiveness of these practices in enhancing learning outcomes. Gender differences, varying levels of motivation, and academic performance have been identified as significant predictors of how students engage in these cognitive processes. Consequently, these factors can be reliably used as indicators to assess and promote reflective and reflexive practices in educational contexts.

2. Research Methodology

This study examines the use of reflective and reflexive practices among 62 EFL learners enrolled in a B.A. program in education at *École Normale Supérieure* (ENS), Moulay Ismail University, Meknes, Morocco. These students are engaged in a three-year training program that combines language and content subjects with courses in pedagogy and didactics of English, preparing them to become future English language teachers. The study specifically explores how gender, motivation, and academic performance, as identified in the existing literature, influence the extent of their engagement in reflective and reflexive practices.

Given that all participants had attained a B2 proficiency level according to the Common European Framework of Reference for Languages (CEFR), this proficiency level is likely to impact their approach to reflection and reflexivity, practices that are essential not only for language learning, but also for professional development in teaching. By focusing on this cohort, this study aimed to examine how these factors contribute to students' ability to critically self-examine and promote their professional growth.

2.1. Research Questions

This study addresses the following research questions:

1. To what extent do participants employ reflective and reflexive strategies in their learning, and engage in both practices?
2. How do factors such as sex, motivation, and academic performance influence the frequency of these practices?

These research questions aimed to explore the ways in which reflective and reflexive practices are utilized by EFL learners, with a focus on identifying patterns of use and influencing factors.

2.2. Participants

The participants in this study, as mentioned above, are 62 EFL learners (20 males, 32.3%, and 42 females, 67.7%, aged 20–23) pursuing a comprehensive three-year B.A training program at *École Normale Supérieure* (ENS) at Moulay Ismail University, Meknes, Morocco. The program integrates language and content subjects, along with pedagogy and didactics of English, to prepare students for future careers as English language teachers. The participants were selected using convenience sampling, which is appropriate for the initial phase of the study as it allowed for efficient data collection from an easily accessible group within the specific context of this educational setting. While this sampling method may limit the generalizability of the findings, it provides valuable insights into the use of reflective and reflexive practices among EFL learners in this particular cohort. The students' proficiency level was assessed as B2 according to the Common European Framework of Reference for Languages (CEFR), which is relevant to understanding their engagement with reflective practices given that language competence can influence how students approach these processes.

2.3. Research Design and Methodology

This study employed a cross-sectional, evaluative research design that is suitable for assessing the prevalence and patterns of reflective and reflexive practices among EFL learners at a single point in time. This design provides a snapshot of the current use of these practices, offering baseline data that can guide future extensive, studies. This study aimed to identify the extent to which gender, motivation, and academic performance influence

engagement in reflective and reflexive practices, with a particular focus on understanding how these factors affect students' learning outcomes.

2.4. Research Instrument: The Questionnaire

The primary data collection tool used in this study was a structured questionnaire administered to the participants in April 2023. It is organized into five sections: demographics, academic performance and grades, motivation, use of reflective and reflexive strategies, and additional strategies employed by students. Each section contains items designed to capture responses on a frequency spectrum ranging from "constant" (YES) to "non-existent" (NO), with an additional "Don't know" option for cases of uncertainty. The motivation section employs a five-point Likert scale to assess students' motivation (strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree). The final section contained open-ended questions for students to elaborate on the additional strategies they employed in their learning processes.

The questionnaire was carefully developed to align with the study's research objectives, with a particular focus on reflective and reflexive practices. Its design was grounded in a comprehensive review of relevant literature, ensuring the inclusion of key constructs, such as motivation, academic performance, and reflective strategies (King & Kitchener, 2020). The development process followed a structured approach to ensure content validity. This included mapping each questionnaire item to specific components of theoretical frameworks, such as Schön's (1983) model of reflective practice and Zimmerman's (2002) theory of self-regulated learning. A pilot test with a small representative sample was conducted to assess the clarity, relevance, and interpretability of the items. Based on this test, minor changes in wording were made to enhance comprehensibility. Additionally, an exploratory factor analysis (EFA) was conducted to examine the underlying factor structure. The results confirmed that the items loaded appropriately onto their intended constructs and provided evidence of both content and construct validity. (Boateng *et al*., 2018; DeVellis, 2017).

The internal consistency of the questionnaire was assessed using Cronbach's alpha. This statistical test determines the extent to which the items within each section of the questionnaire consistently measure the same construct. A Cronbach's alpha coefficient of 0.70 or higher was considered acceptable for ensuring reliability (Field, 2013). The pilot test results indicated a satisfactory level of internal consistency across all sections, confirming that the questionnaire was reliable for the study's purposes.

While self-report questionnaires have inherent limitations, such as potential biases and inaccuracies, they are effective for capturing participants' perceptions and attitudes. These instruments are commonly used in research to identify trends, reveal insights, and provide a snapshot of participants' experiences, which is especially valuable in preliminary investigations of complex phenomena such as motivation and reflective practices (Schwarz, 1999). Therefore, despite the limitations of self-reporting, the reliability and validity checks suggest that the questionnaire provides a robust tool for measuring constructs of interest.

2.5. Data Collection Procedure, Ethical Considerations and Limitations

The questionnaire was administered online to all the 62 participants. The data collected from the participants provided valuable information on their use of reflective and reflexive practices, along with factors such as motivation, academic performance, and frequency of these practices. Despite the potential for self-report bias, the structured format of the questionnaire allowed for the systematic collection of standardized data that facilitated the analysis of trends and patterns.

The study ensured that ethical guidelines were followed throughout the research process. Participants were informed about the purpose of the study, their voluntary participation, and the confidentiality of their responses. Informed consent was obtained from all participants before administering the questionnaire. Additionally, the study acknowledges the limitations inherent in self-report data, such as potential response biases, and suggests that future studies should incorporate multiple data collection methods to enhance validity.

2.6. Data Analysis Methods

A straightforward quantitative approach was employed to analyze the data from the online questionnaire. Descriptive statistics were used to calculate the mean scores for each reflective and reflexive strategy. This allowed for an overview of the general frequency and extent of their use among the participants. To explore the influence of predictors (variables), such as gender, motivation, and academic performance, on the use of these strategies, the analysis included the use of independent samples t-tests and simple correlation analysis using SPSS, version 27. Independent samples t-tests were used to compare the mean scores of reflective and reflexive strategies between different gender groups. This offers insights into potential gender differences. Simple correlation analysis was employed to examine the relationships between continuous predictors, such as motivation and academic performance, and the use of these strategies. This analysis revealed how changes in motivation and academic performance are associated with variations in the use of reflective and reflexive practices.

3. Results

In this study, we analyzed the results quantitatively because this approach allows for a more accurate measurement of the situation. Quantitative analysis is particularly beneficial for studying reflective and reflexive practices in learning because it offers an objective measurement of variables, facilitates statistical validation and pattern identification, enables comparative analysis across different groups, and efficiently manages large sample sizes (Creswell & Creswell, 2017).

3.1. Reflective and Reflexive Strategies Use

Table I presents participants' responses regarding their use of reflective strategies. The table provides the percentages and mean scores.

The results revealed that the majority of participants actively engaged in reflective learning strategies,

TABLE I: Scores for Reflective Strategy Use among All Participants

	Yes	No	Don't know
1. I consistently consider the worth and value of what I am learning.	87,09%	8,06%	4,83%
2. I always carefully examine what I'm learning.	62,90%	24,19%	12,90%
3. I always consider how I learn or have learned something.	77,41%	11,29%	11,29%
4. I always monitor my growth and progress in learning.	69,35%	20,96%	9,67%
5. I always connect what I already know with what I'm learning.	87,09%	8,06%	4,83%
6. I always learn from mistakes by identifying how I would approach things differently next time.	90,32%	4,83%	4,83%
7. I always critically evaluate my own ideas and decisions.	69,35%	14,51%	16,12%
8. I always seek to understand the reason behind learning something.	80,64%	4,83%	14,51%
9. I always consider applying newly acquired knowledge and skills in different contexts.	70,96%	14,51%	14,51%
10. I always assess my strengths and weaknesses in learning something.	69,35%	17,74%	12,90%
11. I always set priorities and create plans for my learning.	48,38%	27,41%	24,19%
12. I always connect my learning to my short-term, medium-term, and long-term goals.	53,22%	27,41%	19,35%
13. I always consider the skills I need to effectively perform tasks during learning.	72,58%	12,90%	14,51%
14. I always take into account the factors that hinder or obstruct my learning.	75,80%	12,90%	11,29%
15. I always consider how knowledge is constructed and meaning is created in a specific subject area.	56,45%	22,58%	20,96%
16. I always consider the gaps in the knowledge I receive or the practice we engage in.	74,19%	16,12%	9,67%
17. I always determine what to focus on and revise while preparing for an exam.	80,64%	14,51%	4,83%
18. I always reflect on how I feel after completing a task and consider what else I might have done.	72,58%	17,74%	9,67%
19. I always question whether my actions were effective or not and whether my experience was positive or negative.	85,48%	11,29%	3,22
20. I always redo the exercises assigned by professors and compare my answers to the corrections.	70,96%	20,96%	8,06%
Total%	72,74	15,64	11,61
(Mean score 'Number of answers out of 62') $\bar{x}$=	45,1	9,7	7,2

as evidenced by high percentages of practice, such as evaluating the worth of their learning (87.09%), making connections between prior and new knowledge (87.09%), assessing whether their experiences were positive or negative (85.48%), and learning from mistakes (90.32%). These findings highlight that most students exhibit strong metacognitive skills that are crucial for autonomous learning. Such reflective strategies not only bolster the understanding and retention of new material, but also showcase a high level of self-awareness and critical thinking. This reflects a commitment to improve learning outcomes. However, there is a notable variability in the use of certain strategies. Specifically, fewer students consistently set priorities and plans (48.38%) or related their learning to broader goals (53.22%). This disparity indicates potential areas for improvement. This finding suggests that additional support is needed to enhance these aspects of reflective practice. If the sample size were larger, this difference might be more pronounced.

The observed variability in strategy use is consistent with the notion that individuals often start with internal reflection before seeking external guidance. Pintrich (2003, 2004), Schraw and Dennison (1994), Schraw *et al.* (2006), and Zimmerman (2002) suggest that individuals naturally engage in self-reflection and internal dialogue to solve problems by utilizing available resources and learning materials. This process allows them to explore solutions, conduct experiments with different approaches, and apply new strategies.

Overall, while the data indicate a generally reflective approach among participants, with a mean score of 72.74% for "Yes" responses across all strategies, the lower engagement in planning and goal-setting highlights a need for targeted interventions. Enhancing these aspects of reflective learning could promote greater autonomy and deeper metacognitive engagement across different cohorts.

Building on the observed results of reflection among the participants, it is important to examine the use of reflexive strategies in more detail. The following section presents and analyzes the results of these strategies.

The results (Table II) indicated that the participants exhibited moderate engagement with reflexive learning strategies, with an overall mean score of 48.46% for "Yes" responses. High levels of engagement were observed in strategies involving digital and media resources, such as watching movies and documentaries in English (88.70%), conducting online research (80.64%), and using YouTube videos related to class topics (79.03%). These findings

TABLE II: Scores for Reflexive Strategy Use among All Participants

	Yes	No	Don't know
1. I always conduct additional research online about the lessons, topics, and concepts covered in class.	80,64%	12,90%	6,45%
2. I always watch YouTube videos related to the lessons, topics, and concepts covered in class.	79,03%	16,12%	4,83%
3. I always read books and do library work to deepen my understanding of certain topics and concepts.	38,70%	56,45%	4,83%
4. I always consult a classmate or an experienced individual to help me understand challenging points from class.	48,38%	43,54%	8,06%
5. I always collaborate with a group of classmates to review and revise our lessons together.	24,19%	70,96%	4,83%
6. I regularly reach out to senior or graduate students for assistance or guidance in understanding various concepts.	29,03%	66,12%	4,83%
7. I consistently seize the opportunity to reach out to my professors to clarify and understand the material we are covering.	25,80%	45,16%	29,03%
8. I regularly seek guidance from my professors on additional references to consult.	30,64%	53,22%	16,12%
9. I frequently email or text my professors and experts to seek further clarification or additional information.	35,48%	54,83%	9,67%
10. I actively seek out and attend extra classes to enhance my understanding and acquire additional knowledge.	24,19%	66,12%	9,67%
11. I regularly ask my classmates to share additional information in our WhatsApp group.	62,90%	32,25%	4,83%
12. I regularly search the internet for additional exercises.	74,19%	17,74%	8,06%
13. I consistently seek out additional practice exercises in books.	40,32%	51,61%	8,06%
14. I regularly ask my professors for additional practice opportunities.	27,41%	64,51%	8,06%
15. I frequently ask my classmates or senior/graduate students for additional practice materials.	37,09%	51,61%	11,29%
16. I enhance my reading and writing skills by actively participating in fandom and fanfiction communities.	40,32%	50%	9,67%
17. I regularly read and engage with posts from bloggers and YouTubers.	59,67%	33,87%	6,45%
18. I consistently watch movies and documentaries and listen to music in English to enhance my language skills and broaden my knowledge.	88,70%	9,67%	1,61%
19. I always seek out previous exams to practice.	46,77%	38,70%	14,51%
20. I am always seeking more opportunities to practice my listening and speaking skills in various settings.	75,80%	16,12%	8,06%
Total % (Mean score 'Number of answers out of 62') $\bar{x}$=	48,46 30,05	42,58 26,4	8,95 5,55

suggest that students use these resources proactively to enhance their learning and language skills. This reflects a commitment to extending the classroom experience through digital means.

However, engagement with other reflexive strategies was notably lower. For example, joining study groups (24.19%) and seeking guidance from professors (25.80%) were less commonly practiced. This finding indicates a preference for independent learning over collaborative or mentor-supported approaches. Traditional research methods, such as reading books and conducting library work (38.70%), are also less favored than digital alternatives. These trends highlight areas where students could benefit from increased support and encouragement to engage in collaborative and professor-guided learning activities to promote a more balanced approach to reflexive learning.

The observed trend reflects an increasing reliance on accessible, online content for learning, suggesting a shift in students' engagement with educational materials. Lower engagement with strategies involving social interaction, such as joining study groups or consulting professors and classmates, indicates that many students may not fully take advantage of the benefits of collaborative learning. This reluctance could be due to diverse personalities and learning preferences, with some students hesitating to seek help or interact with others, preferring to remain within their comfort zones even when assistance is needed (Almashour & Miller, 2023; Al-Nouh & Al-Awidi, 2022; Cavilla, 2017; Davies, 2023; Fletcher & McKeown, 2020; Khan & Ali, 2023).

Addressing student reluctance to seek help from others is crucial for educators and trainers. Increasing student awareness of the value of social interaction, communication, cooperation, and collaboration is essential. This can lead to innovative solutions and enhance success and excellence.

3.2. Gender as a Predictor

In our context, an observation of the scores and percentages suggests that male students use more reflective strategies than female students (although the result for both sexes is satisfactory), and the opposite is true. That

TABLE III: Gender as a Predictor for Reflective and Reflexive Strategy Use

Female students (N = 42)		Male students (N = 20)	
Reflective strategies	Reflexive strategies	Reflective strategies	Reflexive strategies
$\bar{x} = 13{,}28$	$\bar{x} = 10{,}69$	$\bar{x} = 15{,}5$	$\bar{x} = 8{,}7$
66,4%	53,45%	77,5%	43,5%

TABLE IV: Correlation and t-Test Results in Relation to Gender as a Predictor

Analysis type	Variable	Mean score (Female)	Mean score (Male)	Correlation coefficient	t-test result	Significance level (p-value)
Reflective strategies	Mean score	13.28	15.5	0.35	Not applicable	Not applicable
Reflexive strategies	Mean score	10.69	8.7	−0.30	$t(60) = 2.25$	$p < 0.05$

is, females use more reflexive strategies than males, as indicated by the results in Table III.

In our context, it is difficult to argue that the results contradict Fletcher and McKeown's (2020) assertion that females use more reflective strategies than males. This challenge arises because unlike some studies where reflection and reflexivity are often used interchangeably, we differentiate between these two concepts. By distinguishing between reflective and reflexive strategies, our approach may influence the results, potentially leading to different interpretations of gender differences in terms of strategy use. The results of our correlation and t-test analyses reveal the following.

The Pearson correlation coefficient, which quantifies the strength and direction of the linear relationship between gender and the use of reflective strategies, was $r = 0.35$. This value indicates a moderate positive correlation. This suggests that males are more inclined to use reflective strategies than females. While this correlation does not establish causation, it reveals a significant association between gender and the frequency of reflective practice, suggesting that gender may play a relevant role in influencing EFL learners' engagement in reflective strategies.

In addition, an independent sample t-test was conducted to examine the difference in the use of reflexive strategies between male and female students. The results (Table IV) revealed a statistically significant difference, with females using reflexive strategies more frequently than males did. The Pearson correlation coefficient for the relationship between gender and reflexive strategy use was $r = -0.30$. This result indicates a moderately negative relationship, suggesting that gender plays a role in the use of reflexive strategies, with males using these strategies less frequently than females.

3.3. Motivation as a Predictor

The questionnaire results indicated that participants in this study generally exhibited high levels of motivation. This latter was assessed through two distinct questions: one asked participants to rate their motivation for learning on a scale from 0% to 100% and the other required responses to a set of statements using a five-point Likert scale. These statements included sentiments such as "I enjoy learning inside class, I enjoy learning outside class, I attend classes only because absence is being marked, and I study only to satisfy my parents' wishes, among others."

By cross-referencing students' responses, we identified a clear pattern: participants with higher motivation ratings also showed stronger agreement with positive statements about their learning experiences on a Likert scale. This alignment suggests genuine and sustained interest in learning. Consequently, our analysis indicated that participants demonstrated a strong commitment to their educational pursuits.

Table V provides a preliminary idea about the frequency of reflective strategy use across different motivation levels.

The Chi-square test revealed a significant association between motivation levels and the frequency of reflective strategy use. Students with high motivation are predominantly high users of reflective strategies, with 74.42% frequently engaging in these practices. In contrast, students with moderate motivation displayed a varied pattern: half of them used reflective strategies frequently, while the rest were distributed across moderate and low levels of use. Students with low motivation showed equal distribution across high, moderate, and low use of reflective strategies, reflecting a less pronounced pattern of engagement.

These findings suggest that increasing reflective strategy use among students with lower motivation can enhance their academic engagement and performance. By understanding how motivation influences reflective practices, educators can tailor their support strategies to meet students' needs better. This approach would help create a more effective and reflective learning environment, accommodating varying levels of student motivation and promoting greater overall engagement.

As for reflexive strategy use (Table VI), the Chi-square test indicates a significant relationship between motivation levels and the frequency of reflexive strategy use. Among students with high motivation, the majority (69.35%) used reflexive strategies frequently, 44.19% engaged in high use, 25.58% used them moderately, and 30.23% used them at a low level. This pattern suggests that high motivation is strongly associated with the more frequent use of reflexive strategies. Conversely, students with moderate motivation exhibited a varied pattern: 18.75% used reflexive strategies frequently, 43.75% moderately, and 37.50% infrequently. For students with low motivation, none used reflexive strategies frequently, 33.33% used them moderately, and 66.67% used them infrequently, indicating that lower motivation is linked to less frequent engagement with reflexive practices.

TABLE V: Motivation Level and Reflective Strategy Use

Motivation level			Frequency of reflective strategy use					
			High use		Moderate use		Low use	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
High	43	69,35	32	74.42	10	23.26	1	2.33
Moderate	16	25,81	8	50.00	6	37.50	2	12.50
Low	3	4,84	1	33.33	1	33.33	1	33.33

TABLE VI: Motivation Level and Reflexive Strategy Use

Motivation level			Frequency of reflextive strategy use					
			High use		Moderate use		Low use	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
High	43	69,35	11	25.58	19	44.19	13	30.23
Moderate	16	25,81	3	18.75	7	43.75	6	37.50
Low	3	4,84	0	0.00	1	33.33	2	66.67

TABLE VII: Academic Performance and Reflective/Reflexive Strategy Use

Average & below average students (N = 40)		Good & excellent students (N = 22)	
Reflective strategies	Reflexive strategies	Reflective strategies	Reflexive strategies
$\bar{x} = 13{,}97$	$\bar{x} = 10{,}47$	$\bar{x} = 14{,}5$	$\bar{x} = 9{,}5$
69,85%	52,35%	72,5%	47,5%

These results underscore the impact of motivation on the frequency of reflexive strategy use, suggesting that students with higher motivation are more likely to regularly engage in reflexive practices. To improve reflexive strategy use among students with moderate-to-low motivation, educators may need to implement targeted interventions and support strategies based on motivation levels to foster a more reflexive and engaged learning environment.

3.4. *Academic Performance as a Predictor*

Academic excellence is often considered a predictor of reflective and reflexive practices (Schraw *et al.*, 2006; Zimmerman, 2002). Our findings show that 72.5% of high-performing students used reflective strategies, with nearly half employing reflexive strategies. Interestingly, even average students also engaged in these practices, with 69.85% using reflective strategies and 52.35% using reflexive strategies, as detailed in Table VII below.

The independent sample t-test (as shown in Table VIII) revealed no statistically significant difference in the use of reflective strategies between average and below-average students compared to those with good and excellent performance. A t-value of −0.84 indicates that academic performance does not significantly predict the frequency of reflective strategy use. Similarly, the analysis of reflexive strategies showed a moderate negative correlation (Pearson's coefficient of −0.30) between academic performance and use. The average and below-average students scored a mean of 10.47 on reflexive strategies, while good and excellent students scored lower at 9.5. Although the t-value of −1.88 suggests a difference, the p-value indicates that this difference is not statistically significant. This implies that academic performance may not be a strong predictor of reflective or reflexive strategy use. Further research is required to explore other factors that may influence these practices.

3.5. *Findings and Discussion*

The analysis of students' engagement with reflective learning strategies highlights the substantial use of these practices, indicating active participation in reflective processes that significantly enhance learning efficacy and demonstrate strong metacognitive capabilities. This high level of reflection supports deep learning and continuous self-improvement as students actively learn from their mistakes and explore alternative strategies for future success. However, there is variability in the use of specific strategies, particularly in goal setting and planning, with less than half of the participants actively engaging in these areas. This finding is consistent with previous research, such as Agouridas and Race (2007), Bursali & Öz (2018), and Cavilla (2017), which emphasize the importance of self-reflection and internal dialogue in problem-solving and strategy development. Targeted support in strategic planning and deeper reflective analysis, such as understanding how knowledge is constructed, may be beneficial to further enhance metacognitive engagement and learner autonomy.

The study also revealed moderate engagement in reflexive learning strategies, with a preference for using digital and media resources for communication and learning. This trend aligns with the growing role of digital tools in education, as highlighted by Afolayan (2016) and Hoadley (2012), who noted that digital platforms provide greater flexibility, accessibility, and opportunities for learner autonomy and interaction. Lower engagement with traditional resources, such as books and library work, reflects the ongoing shift toward digitalization in education. Additionally, the underutilization of social and collaborative learning strategies aligns with findings from

TABLE VIII: T-Test Results Corresponding to Strategy Use by Student Performance

Analysis	Metric	Average & below-average students	Good & excellent students	t-Value	p-Value	Pearson correlation coefficient
Reflective strategies	Mean score	13.97	14.50	−0.84	> 0.05	N/A
Reflexive strategies	Mean score	10.47	9.50	−1.88	> 0.05	−0.30

Stahl (2006), which suggest that, while digital tools are increasingly favored, they may inadvertently reduce opportunities for collaborative learning. Addressing these gaps canfoster a more balanced and enriched reflexive learning experience.

Gender and motivation also play significant roles in the use of reflective and reflexive strategies, with distinct patterns emerging that align with existing literature. For instance, Almashour and Miller (2023) and Al-Nouh and Al-Awidi (2022) discussed how gender differences influence self-regulated learning. In our study, males showed a stronger inclination toward reflective practices, whereas females engaged more in reflexive strategies. The strong link between motivation and the use of these strategies is supported by studies such as Galli (2020) and Khan and Ali (2023), which emphasize the role of motivation in driving engagement and effective learning. These findings underscore the importance of tailored interventions to support students with varying motivation levels, a concept echoed in literature on differentiated instruction and learner support.

Finally, the study finds that academic performance is not a significant predictor of the use of reflective or reflexive strategies. This aligns with the research that questions the direct impact of academic achievement on learning strategies. For example, Davies (2023) and Omar and Uqba (2024) suggest that, while higher academic performance is often associated with effective learning strategies, it does not necessarily determine the frequency or quality of reflective practices. The moderate negative correlation between academic performance and the use of reflexive strategies echoes the findings of Lew and Schmidt (2011), who argued that deeper learning approaches, such as reflexivity, are not always directly linked to grades or academic success. These results suggest that other factors, such as individual learner characteristics or contextual influences, may play a more critical role in determining the use of reflective and reflexive strategies.

In response to the first research question, the findings indicate that participants actively engage in both reflective and reflexive strategies, although the extent of the application varies among individuals. Addressing the second research question, gender and motivation emerged as significant factors influencing the frequency and depth of engagement with these strategies, with distinct patterns observed across groups. In contrast, academic performance did not appear to be a strong predictor. These results highlight the importance of exploring additional variables that may shape how learners adopt and apply reflective and reflexive practices.

4. Conclusion

This study explored the utilization of reflective and reflexive strategies among EFL students in the BA program at *École Normale Supérieure* (ENS), Meknes, Morocco. The results revealed significant, though uneven, engagement with these strategies, with gender and motivation emerging as key predictors of their use. In contrast, academic performance did not predict strategy use as anticipated. These findings emphasize the need for targeted pedagogical interventions to support students' reflective and reflexive learning in EFL contexts.

4.1. Limitations of the Study

However, this study has several limitations. The use of self-report questionnaires may have introduced biases, and the cross-sectional design limited the ability to draw causal conclusions. Additionally, the sample size and focus on a single institution restricts the generalizability of the findings. Future research could employ longitudinal designs, expand the sample across various institutions, and explore other predictors, such as personality traits or cultural factors, to gain a more comprehensive understanding of reflective and reflexive practices.

4.2. Pedagogical Recommendations

To enhance educational outcomes, institutions should focus on providing targeted support and training for strategic planning. Implementing workshops or courses that emphasize goal-setting and planning skills is crucial for improving reflective practices and learning strategies. The integration of digital tools into a curriculum is vital. This aligns closely with the Moroccan government's recent digital education initiatives, such as the "Maroc Digital 2025" strategy and the Ministry of Education's emphasis on expanding digital infrastructure and resources in schools. These initiatives aim to modernize the learning environment by promoting the use of digital platforms, interactive content, and online resources. Educational policies under this framework encourage not only access to technology but also training students and teachers to effectively utilize these tools. This integration supports students' learning experiences by fostering digital literacy, enhancing engagement, and developing adaptability to the evolving demands of 21st-century education.

To foster a holistic and effective learning environment, addressing gender differences, enhancing student motivation, and integrating social and collaborative learning strategies are essential. To address gender differences, educational programs should incorporate gender-sensitive approaches to better meet students' diverse reflective needs. Tailoring interventions for these needs can lead to more effective learning outcomes and improved engagement. Furthermore, students can be motivated to use

reflective and reflexive strategies by incorporating motivational techniques into teaching and offering personalized feedback. Encouraging the exploration of social contexts and fostering collaborative learning through group projects or peer sessions can deepen reflective practices and enhance interpersonal skills. Finally, conducting longitudinal studies will provide valuable insights into how reflective and reflexive practices evolve, aiding in the refinement of educational practices for better long-term results.

Conflict of Interest

The author declares that he has no conflicts of interest with any party or organization related to this work.

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