| **RESEARCH ARTICLE**

Factors Inhibiting the Development Process of Reflective Thinking through Journal Writing: A Literature Review

Nawal Abrouq

Department of English Studies, Ibn Tofail University, Kenitra, Morocco
Corresponding Author: Nawal Abrouq, **E-mail**: nawal.abrouq@uit.ac.ma

| **ABSTRACT**

Reflective journal writing is an innovative and learner-centered activity. In recent years, its use has exponentially increased in both academic and professional education due to its versatile nature and its myriad of evidenced advantages. Such a pedagogical tool has the potential to fulfill diverse functions and serve different purposes. It can be used as a teaching, learning, and assessment tool. Besides this, it can be utilized to stimulate different modes of thinking and hence influences the quality of reflective reasoning. However, reflective journal writing can fail to fulfill this purpose due to a set of inhibiting factors or barriers. There is a range of intrinsic and extrinsic factors that hinder the developmental process of reflective thinking through journal writing and negatively affect its enhancement. This article review, therefore, aimed to expose and synthesize the inhibiting factors existing in the literature. Being conscious of these factors, educators and academics would optimize the design and implementation of reflective journal writing and hence maximize to the fullest the development of students' reflective thinking.

1. Introduction

There is an increasing interest in developing the skill of reflective thinking in university students of diverse disciplines. Such a thinking mode permits students to deeply mull over things, thereby preventing premature judgments and hasty decisions. To this end, various methods, including reflective journal writing, are used to nurture students' reflective skills. According to Ryan and Ryan (2015, p. 17), the use of such a pedagogical tool is a frequent method in higher education. Essentially, regardless of the academic discipline, reflective journal writing is widely used in a student-centered environment to serve different purposes. Such a pedagogical tool has the potential to enhance learning, deepen understanding, stimulate metacognition, enhance creativity (Moon, 2006), and most fundamentally develop different modes of thinking, inter alia, reflective thinking (Boud, 2001; Moon, 2006).

The ultimate purpose of using reflective journals in higher education is to facilitate the development of profound reflection (Dyment & O'Connell, 2011, p. 82). Accordingly, the aim is to enable students to hone their reflective abilities and therefore move from superficial reflection to an advanced level that involves higher-order reasoning. Unfortunately, reflective journals can have the opposite effect due to a set of limiting factors or barriers that impede the engagement in deeper levels of reflection, hence blocking the development process of reflective thinking. Boud and Walker (1993) define barriers as "those factors which inhibit or block learners' preparedness for the experience, their active engagement in it, and their ability to reflect rationally on it with a view of learning from it" (p. 80). They found that these barriers impede reflection during and after the experience, thus making it unthoughtful and depriving it of its learning possibilities. Though these potential limiting factors found to be inhibiting the development process of reflective thinking have been explored in previous studies, they have not been regarded in a comprehensive way as with the enabling factors to reflection. In this regard, Salahi and Farahian (2021) confirm that insufficient consideration has been accorded to the barriers to reflective thinking. Also, most of the existing studies have focused either on extrinsic or intrinsic barriers to reflection. As such, there is a notable paucity of studies exploring both of these barriers in a single

study. To address this problem, a narrative review (Grant & Bootht, 2009) was the appropriate way. The unique contribution of this paper is, therefore, twofold. First, it provides a synthesis of the potential intrinsic and extrinsic limiting factors which merit attention as they can hinder the developmental process of reflective thinking through journal writing and thereby preclude any possibility of achieving the hoped-for objectives. Second, it increases academics' awareness of these barriers and makes them visible to be taken into account and carefully considered during the planning and implementation process of reflective journal writing activity.

2. Method

To address the aforementioned problem, a narrative literature review was adopted. The Scale for the Assessment of Narrative Review Articles (SANRA) was used to assess its quality (Baethge et al., 2019). A literature search was undertaken using multiple databases, namely Sage, Scopus, Springer, Taylor and Francis, and Wiley Online Library. The search process was limited to articles published between 2000 and 2020 using phrases such as *barriers to reflection* OR *reflective thinking* and *limiting factors to reflection* OR *inhibiting factors to reflective thinking* AND *reflective journal writing*. To select studies for this narrative literature review, inclusion and exclusion criteria were established. The inclusion criteria include articles from 2000 to 2020 and literature reviews and empirical studies. The exclusion criteria include articles prior to 2000, theses and dissertations, and studies published in a language other than English. A total of 11 works fulfilling the research criteria were selected. These sources were dissected and synthesized to provide an overarching insight into the potential hindering factors that may either directly or indirectly inhibit the process of students' engagement in reflective thinking and hence impact the quality of their reflection. To this effect, it is important to note that the haphazard implementation of reflective journal writing activities does not guarantee the development of the skill of reflective thinking. The successful implementation needs to be done in a thoughtful, pensive manner taking into account various parameters to make tailored decisions so as to restrict the negative effects of the potential limiting factors. The key to achieving this is for the relevant stakeholders to be aware of these barriers and take them into consideration during the planning, design, and implementation process of journal writing activities to optimize reflective thinking development and successfully achieve the desired outcomes.

3. Results and Discussion

Though the critical role of reflective journal writing in stimulating students' reflective thinking is well documented, there are a set of intrinsic and extrinsic inhibiting factors or barriers that may hinder this process and take a toll on the development of reflective thinking through journal writing. Dewey (1933) notes that thinking reflectively or logically can be influenced by intrinsic and external factors. These factors impinge on students' involvement in a higher-order reflection which results in producing non-reflective accounts. Consequently, reflective journaling in higher education can be unsuccessful in fulfilling its role of facilitating higher order reflection to its fullest potential (Dyment & O'Connell, 2011, p. 82). These inhibiting factors or barriers fall into two dimensions, namely intrinsic arising from within the learner and extrinsic coming from without the learner.

3.1 Intrinsic Barriers

Intrinsic or internal barriers are related to the learner (Boud & Walker, 1993). In other words, these factors come from within the learner. They include lack of motivation (Avarzamani & Farahian, 2019; Davis, 2003; Miller, 2020; Otienoh, 2009), lack of readiness (Oxman & Barell, 1983; Sultana et al., 2020), student's emotional state (Sultana et al., 2020), individual differences (Varner & Peck, 2003), learners level of language proficiency (Avarzamani & Farahian, 2019; Sultana et al., 2020; Wong et al., 1995), gender (Dyment & O'Connell, 2003b; O'Connell & Dyment, 2013), technological competence (Sultana et al., 2020), learners perceptions of journaling (Dyment & O'Connell, 2003b; O'Connell & Dyment, 2003), learners epistemological beliefs (Phan, 2006), learners' approaches to learning (Leung & Kember, 2003; Phan, 2006), and learner's experience (Rogers, 2001).

3.1.1 Lack of motivation

Lack of motivation (Avarzamani & Farahian, 2019; Davis, 2003; Miller, 2020; Otienoh, 2009) can negatively affect students' engagement in reflection. Motivation is a driving force that directs learners' choices in attaining objectives and exerting effort to reach them (Brown, 2000, p. 72). Therefore, learners' motivation influences their interest, enthusiasm, commitment, willingness, and engagement to reflect. In this regard, Rogers (2001) notes that learners' willingness, engagement, openness, and readiness to engage in the reflective process are crucial ingredients in the improvement of students' reflective thinking. Being knowledgeable of the techniques of how to reflect is not sufficient as it is necessary to have both the willingness and thirst to apply them (Dewey, 1933, p. 30). To him, personal dispositions along with techniques play a crucial role in the development of reflective thinking. Both of them are of equal importance and operate synergically in the development process of this thinking skill. Developing reflective thinking is a lengthy and strenuous process. Students' motivation is the fuel for their determination, tenacity, and commitment to endure the challenges of this process. From this perspective, students' lack of motivation can be a limiting factor since they impinge on their engagement and active participation in the reflective process.

3.1.2 Lack of readiness
Students' lack of readiness for reflection constitutes a barrier to reflection (Oxman & Barell, 1983; Sultana et al., 2020). Dewey (1933) sheds light on the importance of readiness to think reflectively and thoughtfully consider things. Engaging in the process of reflective thinking is an intellectual effort that necessitates learners' willingness, preparedness, and potential to think reflectively. Consequently, their degree of preparedness to exert this mental effort and their ability to think reflectively may undoubtedly influence their engagement in higher order reflection.

3.1.3 Student's emotional state
Students' emotional state (Sultana et al., 2020) can constitute a limiting factor to their engagement in an in-depth reflection. Essentially, reflection is centered on considering personal experiences, be they actions, thoughts, or effects. In case of nerve-wracking or failed learning experiences, students may show hesitation and feel ashamed to look back on them (Sultana et al., 2020, p. 14). This unwillingness to concentrate on emotions (Miller, 2020), specifically negative ones, results in students' blockage to considering them deeply. As noted by Sultana et al. (2020, p. 14), these negative emotions can have repercussions on achieving the deepest levels of reflective thinking. They influence students' drive to engage in profound levels of reflective thinking and thereby constitute a block to their reflective reasoning.

3.1.4 Individual differences
Individual differences (Varner & Peck, 2003) are another important parameter playing a key role in the development of reflective thinking. This parameter highlights the heterogeneity of learners in terms of learning style, culture, personal characteristics and personality, and interest. First, each student is unique and therefore has a preferred mode of learning, absorbing, processing, and digesting information; and acquiring knowledge. To Pashler et al. (2009), the term learning styles refers to "the concept that individuals differ in regard to what mode of instruction or study is most effective for them" (p. 105). From this perspective, engaging learners in journal writing activities may not align with all their learning styles. Essentially, journaling can match the learning style of read/write and kinesthetic learners and mismatch auditory and visual learners. Consequently, using journal writing may not meet the needs of all students. It can be in itself a barrier to students who prefer other forms of reflection, such as self-reflection or verbal reflection (Greiman & Covington, 2007, p. 118). Second, learners come from different cultural backgrounds, which can influence the way they approach reflective activities. For instance, in high power distance cultures, students tend to prize reverential and formal student-teacher relationships (Varner & Peck, 2003, p. 65). In this context, the hierarchical structure in the classroom is accentuated by involving one-way communication, and the teacher is the authority. Consequently, this may negatively impact students' involvement in the reflective process as among the specificities of journal writing activity is introspecting personal issues be they learning experiences, feelings, emotions, or weaknesses. Students may feel embarrassed to disclose their personal issues since the teacher-student relationship in a teacher-centered classroom is basically formal with invisible barriers. Third, learners' personal characteristics (Jaeger, 2013) and personality play an important role in their rigorous engagement in reflection. To illustrate this concern, unlike extrovert learners, introverts perceive journaling as a means by which they can easily externalize their thoughts as opposed to class discussion (Varner & Peck, 2003, p. 64). Also, intuitive learners find this reflective activity significant in relating theory to practice (Varner & Peck, 2003, p. 64). Last, learners' interest in engaging in reflection through journaling is a prerequisite. Most likely, however, journal writing does not trigger all students' interests. Therefore, this activity does not suit all students because not all of them find it an easy and interesting assessment mode (Mills, 2008, as cited in O'Connell & Dyment, 2013, p. 40). Journaling is a student-centered activity as it implies learners' active engagement in this process. Passive learners, for example, are inactive and disengaged with journal writing experience, which may impact the quality of their reflection. As a result, their reflections tend to be descriptive and exhibit poor analytical and critical reasoning. Additionally, journaling is an intellectual activity that requires students' mental effort. Gardner's (1983, as cited in O'Connell & Dyment, 2013) Multiple Intelligences Theory offers a reasoned explanation for the lack of students' interest in engaging in journaling activities. To him, learners have different intellectual abilities of varying degrees. For instance, logical-mathematical and intrapersonal learners are likely to develop reflective thinking through journal writing. Logical-mathematical intelligence refers to the ability to think abstractly and solve problems, and intrapersonal intelligence is the capacity of inward-looking using skills such as self-awareness, self-diagnosis, self-analysis, and self-reflection (Gardner, 1983).

3.1.5 Gender
Gender (Dyment & O'Connell, 2003b; O'Connell & Dyment, 2003, 2013) is another parameter justifying this lack of interest in journaling. Male and female students can be different in terms of perceptions as well as behaviors regarding journaling (Dyment & O'Connell, 2003b; O'Connell & Dyment, 2013). Studies have shown that female students demonstrate more interest in journaling tasks than male students, who consider it as a routine activity necessitating superficial reflection, unlike females (Blaise et al., 2004). As a result, male students may appear uninterested and reluctant vis-à-vis journaling.

3.1.6 Learners' level of language proficiency
Learners' level of language proficiency (Avarzamani & Farahian, 2019; Sultana et al., 2020; Wong et al., 1995) is a potential barrier to students' engagement in reflective thinking through journal writing. Wong et al. (1995, p. 55) posit that students' articulation of the reflective process can be hindered by a poor mastery of English and writing proficiency. The results of a study conducted by Avarzamani and Farahian (2019) investigating EFL (English as a foreign language) learners' reflection in writing and the inhibitors to their reflection reveal that engaging in profound levels of reflective thinking necessitates a satisfactory level of language proficiency. Mastering the language increases students' self-efficacy since they have the ability to use the language accurately (e.g., use pertinent words and use correct grammar, among others) and fluently (e.g., express themselves lucidly and easily). Poor language proficiency (e.g., vocabulary deficiency, poor writing, and poor grammar) constitutes a handicap as it has detrimental repercussions on students' ability to express their thoughts easily and communicate clearly. This frustrating situation can lead to a mental block paralyzing students' involvement in reflective thinking. Their concentration, therefore, is centered on finding appropriate words rather than thoughtfully mulling over things. Generally, to overcome this problem related to vocabulary deficiency, students resort to translation which is the case in non-English speaking countries. In this regard, Sultana et al. (2020, p. 14) infer that students' difficulty in translating words impedes their engagement in deeper levels of reflective thinking and verbalization as well. Essentially, in reflective journal writing, writing is a medium of reflection and communication. Writing serves a triadic purpose, namely helping students to think and reflect, translating their thoughts into words to make them visible, and conveying these thoughts to the receiver (e.g., reader). With poor English language proficiency, students' mental focus is deflected from thinking deeply and reflectively and directed on solving their language problems. For this reason, students' level of language proficiency impacts the development of reflective thinking through journal writing.

3.1.7 Technological competence
Technological competence (Sultana et al., 2020) may be a constraining factor in the development of reflective thinking. In recent years, digital learning has flourished. To this end, completing journals can be either paper-based or digital-based through electronic devices, such as iPad tablets, smartphones, or laptops (Chittooran, 2015, p. 87). As such, with the growing use of digital devices, this activity can be carried out electronically (Hiemstra, 2001, p. 23). Technological literacy is, therefore, a prerequisite to successfully performing the activity. Instead of engaging in reflective thinking, students with low technology skills feel frustrated when utilizing platforms to submit their reflective assignments (Sultana et al., 2020, p. 14) and manipulating electronic devices. Consequently, students direct their mental energy to concentrate on how to use these devices and platforms in place of reflecting on their learning experiences, thereby resulting in discouragement and frustration. These negative feelings fuel students' disinterest and cripple their engagement in the process of reflective reasoning.

3.1.8 Learners' perceptions of journal writing
Learners' perception of journal writing (Dyment & O'Connell, 2003b; O'Connell & Dyment, 2003) is a determinant factor in the development of reflective thinking through journal writing. In other words, the way learners conceive and perceive journal writing activity is fundamental to the developmental process of reflective thinking. For example, journaling can be considered an unnecessary and annoying activity (O'Connell & Dyment, 2013, p. 37). From this perspective, journaling has the reverse effect of being a burden and increasing learners' cognitive workload. Moreover, some students may consider journaling as a waste of time because they cannot perceive the importance of time dedicated to reflecting upon things (Moon & Boullon, 1997, p. 70). Even the benefits of reflection itself are not perceived (Miller, 2020). Considering journal writing and even the reflective reasoning in itself as a trivial, time-wasting activity results in students' resistance to reflect due to their misconception of this learning tool and misperception of its advantages. Consequently, they are disengaged, disinterested, and they end up producing thoughtless accounts.

3.1.9 Learners' epistemological beliefs
Learners' epistemological beliefs (Phan, 2006) are an influential factor that can potentially hinder the development process of reflective thinking through journal writing. Essentially, they contribute to reflective thinking development and therefore affect reflection via influencing how learners think and perceive both knowledge and learning (Phan, 2006). Epistemological beliefs disclose individuals' beliefs about knowing, how knowledge is acquired, and the way under which these epistemological assumptions affect and are involved in both reasoning and thinking (Hofer & Pintrich, 1997, p. 88). Learners' epistemological beliefs can therefore affect not only their use of a specific learning approach but also their promotion and insight about reflective thinking as well (Phan, 2006). For instance, learners who believe in experiential learning and learning by doing can develop reflective thinking through journal writing because, for them, experience is an integral part and a source of learning. Contrariwise, learners who are not reflective believe learning necessitates less time and effort and view knowledge as absolute that cannot be subjected to explanation (Phan, 2006, p. 603). This category of learners is unlikely to develop reflective skills through journal writing since they believe that learning does not require much time and effort. Reflective journal writing is both a time-taking and cognitively demanding task. Consequently, the effective development of reflective skills entails deploying time and intellectual effort as well.

3.1.10 Learners' approaches to learning

Learners' approaches to learning (Leung & Kember, 2003; Phan, 2006) are an influencing factor that may affect the development of reflective thinking. A learning approach refers to "the *methods* in which a student prefers to approach a learning task" (Tsingos et al., 2015, p. 492, emphasis in original). The results of the studies conducted by Leung and Kember (2003) and Phan (2006) provide evidence attesting to the positive causal relationship between learners' approaches to learning and levels of reflective thinking. The surface approach to learning is linked to habitual action, which is a non-reflective form of thinking, whereas the deep approach is linked to engaging in higher levels of reflective thinking (Leung & Kember, 2003, p. 70). Based on this analysis, learners who adopt a surface learning approach are passive, use lower order reasoning skills, and tend to be less reflective by simply regurgitating and reproducing the absorbed knowledge. This is reflected in the quality of their reflective journals as they are basically descriptive and superficial, showing no evidence of analytical and reflective reasoning skills. Conversely, learners who adopt a deep learning approach are active and reflective, go deeper, and exhibit advanced reasoning skills. Their reflective journals evidence higher order reflection.

3.1.11 Nature of learner's experience

The nature of the learner's experience (Rogers, 2001) is an influential factor in the promotion of reflection. Dewey (1933, p. 12) notes that engaging in reflective thinking is stimulated by a problematic situation or experience that entails (a) a state of uncertainty, confusion, and skepticism; and (b) an act of probing, questioning, and searching for solutions to address and tackle the problem. From this perspective, for reflection to be activated, unusual experiences need to happen. According to Rogers (2001, p. 42), the nature of learners' experience is crucial to their enhancement of reflective thinking. Engaging in a reflective process is unlikely to happen if the learning experience or the event is ordinary; that is, it does not imply learners to "stop and think" (Mezirow, 1991, p. 67). In other words, it does not challenge their thinking and intellect and triggers their inquisitiveness in digging deeper into things. Lethbridge et al. (2013, p. 323) note that the learning situation influences learners' engagement in different levels of reflective thinking. Not only does the nature of the experience provide a stimulus to think reflectively, but it also affects the engagement in higher order reflection.

3.2 Extrinsic Barriers

Extrinsic barriers are external to the learner (Boud & Walker, 1993). They concern the conditions, environment, and context in which reflection transpires; and how reflective activities are infused and implemented. Though these barriers exert their influence from external factors, they significantly affect learners' reflective performance and engagement in profound levels of reflective thinking. Developing a propitious learning environment that encourages students to reflect, creating favorable conditions conducive to the promotion of a reflective culture, and effectively implementing journaling activities are sine qua non to obtain successful results. These parameters act synergically to make journaling an interesting and effective activity, provide an enriching and encouraging opportunity for learners to engage in reflective reasoning, help them build their reflective abilities, and unlock their reflective potential. Boud (2001) infers that "the conditions under which journal writing takes place can have a powerful influence on what is produced and the extent to which writers can engage in critical reflection" (p. 17). These external factors include lack of time (Hatton & Smith, 1995; Greiman & Covington, 2007; Miller, 2020; Otienoh, 2009; Thorpe, 2004), ambiguous purpose and expectations of journaling (Dyment & O'Connell, 2010; O'Connell & Dyment, 2013), paucity of training (Dyment & O'Connell, 2010; Miller, 2020; O'Connell & Dyment, 2013; Sultana et al., 2020), lack of feedback and negative response (Dyment & O'Connell, 2010; O'Connell & Dyment, 2013), reader or audience (Boud, 2001; Dyment & O'Connell, 2010; O'Connell & Dyment, 2013), over assigning reflective journals (Dyment & O'Connell, 2003a; O'Connell & Dyment, 2013), grading and assessment (Dyment & O'Connell, 2010; Woodward, 1998), and classroom environment (Phan, 2008).

3.2.1 Lack of time dedicated to reflection

Lack of time dedicated to reflection (Greiman & Covington, 2007; Hatton & Smith, 1995; Miller, 2020; Otienoh, 2009; Thorpe, 2004) is a potential barrier that can preclude the promotion of reflective thinking. Reflective journal writing is both time-taking (Javis, 2001; Thorpe, 2004) and task-demanding for students and teachers alike (Thorpe, 2004). Reflecting under tight time constraints and pressure can put students in a psychologically stressful and anxious situation. Consequently, students' concentration decreases which impedes their engagement in deep levels of reflection. Under these conditions, students end up producing superficial and descriptive accounts because reflective reasoning is cognitively demanding, entailing sophisticated cognitive processes, namely evaluation, analysis, and judgment. Providing appropriate time-space is, therefore, important in developing students' reflective skills (Boud et al., 1985; Harris, 2008; Wong et al., 1995). It is noted that allotting sufficient time to reflect is linked to producing quality reflection (O'Connell & Dyment, 2013, p. 26). Promoting authentic reflection necessitates educators to dedicate enough time to it and provide learners with tailored guidance until they get used to the reflective process and its advantages (Walter et al., 1994, as cited in Ertmer & Newby, 1996, p. 19).

3.2.2 Ambiguous objective and expectations of journaling

Ambiguous purpose and expectations of journaling (Dyment & O'Connell, 2010; O'Connell & Dyment, 2013) is a barrier to students' engagement in deep reflection. Assigning reflective activities without making students aware of the purpose behind this activity and the expected outcome will undoubtedly fail to fulfill the wished-for objective, that of developing students' reflective thinking. Students cannot perceive precisely what is awaited from them unless they have an accurate insight into the expectations as well as the objective behind journaling (O'Connell & Dyment, 2013, p. 74). According to Richardson and Matlby (1995),

> Student apprehension with regard to the expression of 'feelings' and assessment of their diary may inhibit the reflective process and hinder the development of the qualities and skills required for reflection. A clear understanding of the purpose and aim of the exercise, combined with the provision of a 'safe' and appropriate environment in which to practice, may overcome some of these concerns. (p. 241)

Based on the above, raising students' awareness of the main objective behind journaling activity and what is expected from them, along with providing a propitious climate conducive to learning, are contributing factors to the development of higher order reflection.

3.2.3 Paucity of training

The paucity of training (Dyment & O'Connell, 2010; Miller, 2020; O'Connell & Dyment, 2013; Sultana et al., 2020) is a potential barrier to the development of students' reflective thinking and results in producing poor quality reflection. To remedy students' lack of skills (Jaeger, 2013; Miller, 2020), providing them with training is recommended to help them acquire the key reflective skills essential in the process of engaging in profound reflection. As such, the effective implementation of reflective activities necessitates providing adequate training by teaching the know-how and mechanisms of reflection along with raising awareness of its hierarchical levels and typologies. Mastering these elements is sine qua non to producing quality reflection. Training optimizes the intended outcomes merely because "the students will come to journal writing with varying degrees of experience" (O'Connell & Dyment, 2013, p. 75). It includes having guidance, templates, and directions (O'Connell & Dyment, 2010). Given that students display different levels of reflective thinking prior to the implementation of journaling, training makes them aware of the different aspects and specificities of reflection and provides an opportunity for them to effectively learn how to reflect. As such, assigning journal writing activities with neither training nor structure is definitely fruitless. To this end, several researchers focus on the importance of providing students with the necessary training and structure to help them build their reflective skills. For instance, Varner and Peck (2003, p. 61) suggest providing examples that serve as a template for writing the journals or as a stimulus for students thinking. Also, Carrington and Selva (2010, p. 49) and Pavlovich (2007, p. 293) note that providing clear guidelines is important for students to engage in reflection.

3.2.4 Lack of Feedback and Negative Response

Lack of feedback and negative response (Dyment & O'Connell, 2010; O'Connell & Dyment, 2013) are crucial limiting factors that may have negative repercussions on students' reflection. First, teachers' negative responses and non-constructive critiques can affect students' motivation and interest in reflecting. In place of scaffolding, the critique has the reverse effect of blocking students' inner inspection (Harris, 2008, p. 322). Additionally, it can engender negative emotional states in students, namely anxiety, frustration, discouragement, stress, demoralization, and disappointment. According to Wortha et al. (2019, p. 1), emotions are a key factor in learning. From this perspective, negative emotions can block this willingness, motivation, and interest to learn and engage in a reflective activity and hence negatively impact students' reflective performance. Second, lack of feedback is a potential factor that can affect the development of students' reflective thinking and the production of quality reflection. Constructive feedback helps students gain an outside perspective, provides them with insights into how they performed the activity and permits them to become aware of their strengths and weaknesses. Hence, it helps students learn, work on their weaknesses, and ultimately improve their future reflective performance. As a result, providing constructive feedback and positive response play a significant role in the quality of students' future journals.

3.2.5 Reader or audience

Reader or audience (Boud, 2001; Dyment & O'Connell, 2010; O'Connell & Dyment, 2013) is an important factor that may interfere with the development of reflective thinking through journal writing. Reflection entails a willingness to consider, introspect, and look inward with no fear (Harris, 2008, p. 322). Epp (2008) and O'Connell and Dyment (2010, 2013) link the process of reflecting profoundly and frankly to students' trustworthy relationship with the reader. From this perspective, confidentiality (Miller, 2020) and trustworthiness of the reader or audience (O'Connell & Dyment, 2010, 2013) play an important role in engaging in deep reflection merely because the content of journals is personal. If students do not feel confident and secure in disclosing their personal experiences, they will be reluctant to engage deeply and honestly in the reflective process, and they will end up producing superficial reflection. Therefore, the effective engagement in reflection is based on establishing a safe relationship between the students and the reader (Harris, 2008, p. 322), as students need to be confident and perceive the trustworthiness of their journal

reader (Hubbs & Brand, 2005, p. 64). According to Kok and Chabeli (2002, p. 41), to establish an environment that facilitates reflective thinking and learning, it is necessary to keep students' journals confidential and anonymous and build a trustful relationship prior to assigning reflective journals activity and inform them about the journal reader.

3.2.6 Over assigning reflective journals

Over assigning reflective journals (Dyment & O'Connell, 2003a; O'Connell & Dyment, 2013) is an inhibiting factor that can affect students' engagement in reflective thinking. Reflective journals can be used as a teaching, learning, and assessment tool. Therefore, it can be concurrently assigned in different courses for different educational purposes. However, assigning too many journal activities or assignments across different courses can increase students' cognitive workload. Therefore, journaling activity can have the reverse effect of hindering reflection and learning instead of enhancing them. Additionally, the overuse of journaling makes learners perceive it as an ordinary assignment without genuineness and innovation (O'Connell & Dyment, 2013, p. 36). In this case, this pedagogical tool is devalorized and loses its potential advantages.

3.2.7 Grading and assessing reflective journals

Grading and assessment (Dyment & O'Connell, 2010; Woodward, 1998) can constitute a potential barrier to the development of reflective thinking. Assessing students' journals engenders a huge polemic and constitutes a debatable issue since many academics and researchers exhibit conflicting viewpoints. Assessing students' journals has negative as well as positive sides. Being aware of both sides is essential in making the right decision regarding assessing or not the journals. The negative side of assessing students' journals was discussed by several researchers. For instance, Creme (2005, p. 295) notes that journal assessment may weaken its qualities. As such, it is improbable that assessment driven students develop reflective skills (Wong, 2016, p. 2) as their main interest will be centered on the grade, not on the development of reflective thinking. O'Connell and Dyment (2013) highlight the negative drawbacks of assessing students' journals on both depth and quality of reflection, namely writing for the purpose of meeting the assessment criteria and writing so as to please the journal reader. First, assessment driven students direct their efforts to meet the criteria of evaluation and concentrate less on exhibiting their higher order reasoning abilities (O'Connell & Dyment, 2013, pp. 44-45). Simply put, fulfilling the assessment criteria becomes the top priority of these students and makes them write for the grade instead of engaging in an in-depth reflection. Second, writing for the purpose of pleasing the teacher may hinder the development of students' reflective skills. Journals can be used as an assessment tool, that is, a formal writing assignment. In this case, instead of developing their reflective skills, students complete journals to please their professor (Boulet et al., 2017; Creme, 2005) and obtain good grades (Kember et al., 2006). Students may fail to benefit from this activity since it is considered a formal academic assignment and a means to get good marks to succeed instead of a stimulating tool that permits the improvement of reflective skills and the use of advanced, logical reasoning. Consequently, this drive to get good grades has negative repercussions on the genuine nature of reflective journaling and the fundamental aim of reflection as they become mainly strategic and a means to an end.

However, despite the aforementioned negative sides, other researchers hold supporting perspectives and highlight the positive sides of assessing students' journals. For instance, Creme (2005) perceives formal assessment of reflective journals as a way to trigger students thinking and reward their efforts. A view congruent with that of Dunlap (2006, p. 24), who supports grading reflective journals to value students' time and effort. Additionally, given that students are, to a great degree, assessment driven, the assessment will encourage them to earnestly consider journal writing (Kember et al., 2006, p. 341). In short, assessing students' journals depends on the pedagogical purpose that this activity intends to serve in the course. However, its assessment remains a good option to stimulate students' interest and value their effort and time dedicated to this activity.

3.2.8 Classroom environment

The classroom environment (Phan, 2008) is an influencing factor that can hinder the development process of students' reflective thinking. There is a relationship between reflective thinking and classroom climate (Phan, 2008, p. 579). Not only does it facilitate students' engagement in reflective thinking (Seibert & Daudelin, 1999; Phan, 2008), but it also helps them unlock their reflective potential. Similarly, Rogers (2001, p. 43) asserts that contextual factors are vital in the reflective process. For instance, creating a positive environment amenable to honing students' reflective skills feeds into their engagement in advanced levels of reflection. Phan (2008, p. 579) notes that an agreeable classroom environment triggers learners' engagement in reflective thinking. Conversely, a negative classroom climate can be a limiting factor that impedes students' development of this skill. To this end, creating a favorable and supportive environment that is mainly non-judgmental in which learners can voice their original thoughts is required to promote their intellectual abilities (Kok & Chabeli, 2002, p. 39). To set the ground for an auspicious environment conducive to the promotion of deep reflection through journal writing, it is essential to provide appropriate opportunities for students to reflect (Hatton & Smith, 1995) simply because "students are motivated to use higher level thinking when they see a need to do so" (Martin, 2005, p. 70). Moreover, it is important to adopt a student-centered approach, valorize students' active learning, boost their thinking and questioning skills, and encourage experiential and autonomous learning.

The classroom environment includes an important parameter which is the teacher-student relationship. This relationship can be either a motivating force that sparks learners' interest to learn and think in a complex fashion and lights the fire of questioning things in them or the opposite. A negative teacher-student relationship can, therefore, put out this eagerness to learn and question things. As such, it is a potential barrier to the development of students' reflective thinking through journal writing. Essentially, the teacher's role is not limited to imparting knowledge; it shifts to a learning facilitator or a mentor who helps students build their reflective skills (Sultana et al., 2020, p. 12). Generally, in academic settings, the teacher is the journal reader. Reflective journals are personal accounts of students' learning experiences in which they delve deeply into their thoughts and feelings. A negative relationship between the teacher and the student may affect their interest, motivation, and engagement in this introspection process, hence resulting in exhibiting poor reflective performance.

4. Conclusion and Implications
To sum up, students' effective engagement in reflective thinking relies on a set of intervening factors that influence this development process through journal writing. The main contribution of this paper is to provide a comprehensive synthesis of both the intrinsic and extrinsic inhibiting factors to this developmental process existing in the literature. Given the increasing use of this instructional tool in diverse disciplines to improve students' reflective potential, academics and educators need to be conscious and have a clear vision of all these potential barriers that can hinder the enhancement of reflective thinking. The intent was to offer practical insights for a successful implementation of reflective journal writing.

To optimize reflective journals' potential and help students achieve higher order reflection, it is necessary to encourage care and double efforts in the design and implementation process to successfully achieve the hoped-for outcomes. It should be noted that all these intrinsic and extrinsic barriers operate synergically in creating conditions that can impinge on this development process. Designing and infusing reflective activities is therefore not an easy task. It should be thoughtfully realized, taking into account all these constraining factors to restrict to the maximum their influence. Also, it necessitates knowing the student as a learner and as a person, adopting diverse reflective strategies (e.g., verbal and written, among others) to meet the needs of all learners, and using engaging, reflective opportunities to stimulate students' reflective thinking (e.g., reflective journals, portfolios, and reflective discussions, among others), and creating favorable environmental conditions (e.g., positive teacher-student relationship) to maximize the development of reflective thinking through journal writing. Given the importance of reflective journal writing in enhancing quality reflection, further research is needed to empirically investigate how these limiting factors affect the development of students' reflective skills. Also, future studies are required to explore these limiting factors from students' and academics' perspectives.

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