On being open-minded, wholehearted, and responsible: a review and synthesis exploring factors enabling practitioner development in reflective practice

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ABSTRACT

Although reflective practice is valued in learning and professional development, there are a wide range of contrasting definitions making it difficult to firstly understand what reflection is and subsequently how to apply this concept in specific working contexts. This study aims to bridge this gap in the literature by enquiring into and seeking an understanding of the factors that enable the process of reflection by synthesising insights from a variety of publications across professional contexts. The analytical process involved initial coding and focussed coding, supplemented by constant comparison and memo writing. Article text was fragmented, sorted, and integrated to develop a thematic structure that was used to organise and integrate the subsequent narrative. Analysis resulted in 3 higher order themes: triggers for reflection, conducive contextual and attitudinal factors, and epistemology. The resulting article represents the product of an enquiry seeking to understanding the factors that enable the process of reflection.

Introduction

The process of reflection is increasingly valued in learning and professional contexts, yet, whilst it is a widely used term stemming from the original work of Dewey (1933), Schon (1983), Boud et al. (1985), and Mezirow (1991), the variety of definitions can make a consistent conceptual understanding difficult to achieve (Ryan, 2012). As such, multiple definitions have been created, indicating a need to conceptually synthesise the existing literature and understand the common themes between divergent strands of enquiry (Duffy, 2007; Marshall, 2019; Nguyen et al., 2014). By identifying shared constructs there is the potential to facilitate the application of reflective practice for practitioners.

Analysing the most influential definitions of reflection of 15 of the most cited authors on reflection from 2008 to 2012, Nguyen et al. (2014) characterised reflection as attentive, critical, exploratory, and iterative; with the process beginning with thoughts and actions that are bounded by a conceptual frame (Nguyen et al.,

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2014). Thus, rather than simply solving a problem, a reflective person examines the way they understand an experience or problem and what this means in terms of the self (Nguyen et al., 2014), in an attempt to become more explicitly aware of the assumptions which may underly their interpretation of the experience. As reflection aims to develop new ways of understanding experiences, change is viewed as an additional characteristic of the reflective process which may impact on practice (Nguyen et al., 2014). Indeed, a concept analysis of 49 published articles on reflective practice resulted in four critical attributes of reflective practice (the fourth one being indicative of change): examination of practice, reflexivity, an active and deliberate constructive process, and process of transformation (Duffy, 2007).

Common themes between these authors seem to indicate reflection is a deliberate act of enquiry, requiring openness and willingness to actively engage; this suggests an internally driven motivation commits the individual to exploring and critiquing cognitive operations in this way. Others have conceptualised reflection as a process of making meaning from experience over time (Palacios et al., 2021); thus, implying reflection is a longitudinal process requiring persistence and continuous engagement. Drawing these points together, if reflection is to be critical and transformative, necessitating a degree of discomfort (Robinson, 2021), then an individual may need to be ready, open, and willing to persist in a continuous deliberate act of enquiry when faced with uncertainty (Sadlon, 2018).

With greater applications of reflective practice within the training and professional development of practitioners, greater clarity around the concept of reflection would be beneficial. To operationalise these concepts further the current study aimed to draw out concepts of reflection from the existing literature to understand the process of reflection and factors enabling it.

Methods

General approach

To formally synthesise the body of literature, this study utilised a selection of analytical methods, some of which are attributed to grounded theory. Whilst the current study is not a grounded theory study, methods derived from grounded theory have been suggested to be effective when developing a meta-study (Ronkainen et al., 2021) and when rigorously synthesising a body of literature (Wolfswinkel et al., 2013). By analysing textual excerpts via initial coding, focussed coding, constant comparison, and memo writing (Charmaz, 2014; Glaser & Strauss, 2017; Wolfswinkel et al., 2013), articles on reflection were fragmented, sorted, and integrated to develop an understanding of the process of reflection. The current study developed an existing NVivo database investigating the concept of reflection (Marshall, 2019). This was based on a search of electronic databases (PubMed, psychinfo, SPORT Discus and Scopus) using the following search terms: reflect* and process; and restricted to the title of publication. There were no restrictions on the date of publication and 21 unique sources were identified and coded. For the current study, a follow-up literature search explored PubMed, PsycArticles and Scopus using

the search terms summarised in Table 1. Again, there were no restrictions on the date of publication. The search resulted in 813 articles; 75 were identified as relevant. Upon reading each of these full texts, the lead researcher either highlighted relevant sections or excluded articles (n = 69) in line with the inclusion/exclusion criteria (Table 2). Reasons for exclusion included not exploring or identifying a process of reflection (n = 19); a predominantly quantitative approach used (n = 4); not contributing to understanding factors that enable reflection (n = 46). This resulted in 6 articles to be integrated into the existing database. In total 27 articles were included in the final synthesis. Each article was uploaded into NVivo 12 (QSR International Pty Ltd, 2019) with highlighted subsections used as the focus of initial coding.

Presentation of results

Each subsection includes quotations from the original text. The analysis synthesised knowledge across the following professional domains: counselling (n = 1), education (n = 16), sport (n = 5), military (n = 1), medical (n = 4). Textual extracts included citations, page numbers and, where present, citations to any secondary authors' work. Findings are combined with the discussion to ensure transparency of how theory informed the resulting explication of the process of reflection. The themes are presented in Table 3 and the reader is referred to the data supplement for an overview of the included literature and an outline of the textual data used to construct each theme (see data availability statement).

Table 1. Search terms used to identify relevant literature to include in the current study.

Database	Search terms
PsycArticles	reflect* AND Process
	reflect* AND method
	reflect* AND approach
PubMed	((((((reflection[Title]) OR reflecting[Title]) OR Reflect[Title]) OR reflective[Title]) AND process[Title]) NOT 'reflection on'[Title] NOT 'reflecting on'[Title]
	((((((reflection[Title]) OR reflecting[Title]) OR Reflect[Title]) OR reflective[Title]) AND method[Title]) NOT 'reflection on'[Title] NOT 'reflecting on'[Title]
	((((((reflection[Title]) OR reflecting[Title]) OR Reflect[Title]) OR reflective[Title]) AND approach[Title]) NOT 'reflection on'[Title] NOT 'reflecting on'[Title]
Scopus	(TITLE (reflect*) AND TITLE (process) AND TITLE (method) AND NOT TITLE ('reflection on')) AND DOCTYPE (ar OR re)

Table 2. Inclusion and exclusion criteria for the search exploring the process of reflection.

Inclusion criteria	Exclusion criteria
Reflection, reflective practice, or reflective learning are identified as the primary topics or areas of focus within the methods of the study	Reflection, reflective practice, or reflective learning are not the primary topics or areas of focus
The article explores the process of reflection and/or used a specific method to illicit participant reflections	The article does not explicitly explore the process of reflection and does not overtly articulate a specific method used to illicit participant reflections
Peer reviewed and published articles with data reported in English	Quantitative research Data not reported in English

Table 3. Themes developed from a review of the literature.

Higher order themes	Themes
Triggers for reflection	Lack of knowledge
	Proactive enquiry – formalised routines
	Reactive enquiry – experience as a trigger
	Emotive responses and unease
Conducive contextual and attitudinal factors	A conducive learning environment: self-directed, autonomous, and confidential
	A conducive attitude: open-minded, wholehearted, and responsible
Epistemology	Epistemology – mediating engagement and the quality of reflection
	Dualistic assumptions and relative views
	Tolerating uncertainty

Results and discussion

Three main themes are presented: triggers of reflection, conducive contextual and attitudinal factors, and epistemology.

Triggers of reflection

Terms describing triggers of reflection were collated from the literature and summarised in Table 4; these are italicised in the following narrative and commence with the following sub-theme.

Table 4. Terms used in the literature to describe the triggers of reflection.

Terms used to describe the triggers of reflection	Source
Problems	(Chiu, 2006; Dewey, 1933; Neufeldt et al., 1996)
Professional dilemmas	(Cropley et al., 2012; Dewey, 1933)
Issues of concern	(Crathern, 2001; Gilbert & Trudel, 2001; Nelson & Cushion, 2006)
Perplexing experience	(Dewey, 1933; Rogers, 2001)
'Surprise such as an unpleasant or pleasant moment'	(Hong & Choi, 2011, p. 689)
Unexpected results	(Bar-On, 2007; Hong & Choi, 2011)
Unusual actions	(Hong & Choi, 2011)
'A puzzling, troubling or interesting phenomenon'	(Jay & Johnson, 2002, p. 75)
'A situation beyond the individuals typical experience'	(Rogers, 2001, p. 42)
Experiences that are complex, uncertain, unstable, unique or involve value conflict	(Rogers, 2001; Schon, 1983)
Difficulty in understanding	(Mezirow, 1991; Rogers, 2001)
'A state of doubt, hesitation, or mental difficulty'	(Dewey, 1933; Rogers, 2001, p. 42)
Poor practice	(Asselin et al., 2013)
Changes in routine	(Asselin et al., 2013)
Formalised routines for reflecting	(Asselin et al., 2013)
Concern of not knowing	(Asselin et al., 2013)
Questions	(De Cossart et al., 2012)
Emotions and feelings	(Asselin et al., 2013; Cropley et al., 2012)
New information	(Neufeldt et al., 1996)
Confusion	(Neufeldt et al., 1996; Schon, 1983)
Being stuck	(Neufeldt et al., 1996)
A sense of unease	(Grant et al., 2007)
Experience	(Van Seggelen–Damen et al., 2017)
Feedback	(Van Seggelen–Damen et al., 2017)
Peer and self-assessment	(Roberts, 2008; Van Seggelen–Damen et al., 2017)
Autobiographies and personal narratives	(McDonald & Kahn, 2014)
'Discomfort or lack of information'	(Thorpe, 2004, p. 329)
Curiosity	(Thorpe, 2004)

Lack of knowledge

Although the triggers of reflection are complex and overlapping, reasons for engaging with reflection were associated with an overarching trigger: a lack of knowledge. This overarching trigger is identified in the following excerpt representing practitioner doubts or *concern of not knowing* a correct procedure:

> For others, it [the trigger of reflection] was the continuing threat of what could have happened or the concern of not knowing the correct procedure (Asselin et al., 2013, p. 910)

Indeed, Dewey (1933, pp. 58–59) noted that reflective inference assumes a 'lack of understanding', or 'a partial absence of meaning'. Other reported triggers for reflection included situations involving *difficulty in understanding* (Mezirow, 1991; Rogers, 2001) which often constituted 'a situation beyond the individual's typical experience' (Rogers, 2001, p. 42), again implicating a sense of not knowing underpinning the triggers to reflection:

> it was initiated by a sense of unease in the learner when they realized that their knowledge was incomplete or inaccurate (Grant et al., 2007, p. 2)

Thus, an intrinsic conflict or disjuncture between professional expectations around answers to problems that *should* be known, and an honest appraisal of this, seemed to motivate reflection to proactively remediate any perceived gaps in knowledge and competency.

Proactive enquiry – formalised routines

For the purposes of this paper, pro-active reflection is defined as a deliberate and pro-active attempt to direct enquiry in the absence of any externally triggering event. This is distinct from reflection in and on action (Schön, 1987) as the focus of proactive reflective enquiry is identified proactively by the individual rather than being associated with direct lived experience. Proactively triggered reflection often begins with *formalised routines*. For example, nurse's reflection on their practice was triggered by routines for reflecting on a day's clinical work:

> For a number of nurses, the trigger event was simply the nurses' own formalized routines for reflecting back on the day's clinical situations, e.g., writing in a daily journal or routinely reflecting back while driving home (Asselin et al., 2013, p. 910)

As a proactive method of enquiry, *self-assessment* can aid the process:

> techniques such as peer and self-assessment help to facilitate reflective abilities (Roberts, 2008, p. 6)

Additionally, writing about one's experience through *autobiographies and personal narratives* provided a potential source of personal data to evaluate the impact of experiences:

> Autobiographies and other personal narratives are rich sources of data through which to examine the impact certain experiences play in people's lives (McDonald & Kahn, 2014, p. 6)

Thus, practitioners proactively use planned activities to help them reflect on their work. They may also use informal opportunities to engage in implicit modes of proactive reflection. Such different approaches seemed to support the notion that practitioners

might be '*encouraged to develop their own approaches to reflection that suit both their own learning needs and the context of their practice*' (Cropley et al., 2012, p. 26; Knowles et al., 2006). Some triggers were more reactive to individuals' professional experiences.

Reactive enquiry – experience as a trigger

Reactive reflection is defined as reflection in response to an externally triggering event. Reactive triggers of reflection broadly arise from *experience* (Van Seggelen–Damen et al., 2017); these derive from events in a person's environment within which they are immersed. Triggering events may be perplexing (Dewey, 1933; Moon, 2013), unexpected, or novel (i.e. *new information*); and conflict with existing knowledge and expectations, thus, requiring closer examination to develop coherence (Hong & Choi, 2011; Schon, 1983).

Other reactive triggers for reflection involve *changes in routine* (Asselin et al., 2013); difficult or critical tasks (Kinchin et al., 2008); *professional dilemmas* (Cropley et al., 2012; Dewey, 1933); *issues of concern* (Crathern, 2001; Gilbert & Trudel, 2001; Nelson & Cushion, 2006); or *problems* for which there were no simple solutions (Chiu, 2006; De Cossart et al., 2012; Dewey, 1933; Neufeldt et al., 1996). Triggers seem to be inter-related with a sense of not knowing, potentially explaining the overlapping nature of these triggers.

Emotive responses and unease

Aligned with a sense of not knowing, were tangible and abstract experiences which were emotive or represented a sense of unease. For example, *confusion* (Neufeldt et al., 1996; Schon, 1983), or dissonance associated with a *puzzling* phenomenon (Jay & Johnson, 2002) evoking a sense of being *stuck*. Often, a reactive experience of *surprise* (Hong & Choi, 2011, p. 689), particularly when experiencing *unexpected results* (Bar-On, 2007; Hong & Choi, 2011) or witnessing *unusual actions* (Hong & Choi, 2011), triggered reflection. Such reactive experiences appeared *complex, uncertain, unstable, unique, or involved value conflict* (Rogers, 2001; Schon, 1983) resulting in '*a state of doubt, hesitation or mental difficulty*' (Dewey, 1933; Rogers, 2001, p. 42). Thus, an awareness of not knowing could trigger an emotive response, and then a reflective process:

> Awareness initiates the process of reflection when an individual acknowledges a discomfort or lack of information in explaining something (Thorpe, 2004, p. 329)

Perhaps it was unsurprising that a sense of disconcertedness was evident when individuals acknowledged that personal solutions to a problem might be inadequate, thus, triggering reflection to pursue more effective solutions:

> it is often only where teachers perceive that their personal solutions to classroom 'problems' are inadequate that they will be moved to search for means by which they can change (Muir & Beswick, 2007, p. 78)

Such direct *emotions* seemed to indicate that an experience was discordant with expectations, triggering a break in one's ongoing routine (Johnston & Fells, 2017). Indeed, within the cognitive evolutionary model of surprise, unexpected events precede the affective experience of surprise; with such events being inconsistent

with one's framework of understanding, or disconfirming expectations (Reisenzein et al., 2019). Consequently, an emotional experience or feeling of surprise indicates an opportunity to re-examine one's understanding. As Boud stated: '*emotion tells you where the learning is to be had*' (Crathern, 2001, p. 164). Thus, emotions can act as catalysts during reflection (Cropley et al., 2012), enabling careful deliberate thought. Indeed, if every experience went as planned, conforming to expectations, then there would be no need to reflect (Schon, 1983). Consequently, reactive reflection tended to be triggered by experiences presenting new or unexpected information (Neufeldt et al., 1996) often accompanied by an emotional response; whereas proactive forms of reflection were autonomously led, requiring one to deliberately self-direct and delimit the object of enquiry. Such deliberateness in reflection seemed to stem from conducive contextual and individual factors around reflection.

Conducive contextual and attitudinal factors

Certain conditions, both in the way learners approach reflection and within their environment, seemed important in the reflective process.

A conducive learning environment: self-directed, autonomous, and confidential

Reflective practices seemed to benefit from certain conditions within the learning environment:

> If the environment is right then it becomes a matter of time, allowing the learner sufficient opportunities to practice reflection both in and on-action and practice again (Burt & Morgan, 2014, p. 477)

Proactively developing an environment that is conducive to reflection can arise by supporting teachers:

> Other conditions are more closely related to the organizational setting: for example, the opportunity, time, and support teachers are given (Goulet et al., 2016, p. 145)

Thus, there is a need for a conducive environment which includes an appropriate balance of challenge and support (Rogers, 2001) to encourage open group discussions (Stanley et al., 2018). In formal learning environments it seemed helpful to develop topics that are appropriately challenging for a group of learners (Moallem et al., 2019), aiding autonomy:

> One way for faculty to accomplish this is to establish an environment rich with factors that support reflection. Such factors may include autonomy, effective feedback, connection to peers, access to faculty, and appropriate challenges (Rogers, 2001, p. 51; Seibert & Daudelin, 1999)

Self-directed reflection seemed to benefit from an environment supporting autonomy with learners as active agents in learning rather than consumers of information (Mezirow, 1991; Rogers, 2001). This can be attained through choice:

> Participants valued the voluntary nature of the group. This is a variation on programs that require participation (Harrison, 2016, p. 681)

Benefits of reflection can also be attained indirectly, emphasising the nuances of what participation means in reflective groups:

> Some described attending the group multiple times without talking or presenting a case, but finding value in listening to colleagues process their challenges (Harrison, 2016, p. 681)

Additionally, practitioners often engage autonomously in less formal, less structured modes of reflection:

> The participants suggested that their methods of 'evaluation' were always less formal, less structured, and often not recorded (Cropley et al., 2012, p. 17)

Offering a variety of opportunities (Schon, 1983) and allowing individual choice can enable engagement in the reflective process; written, and recorded reflection can have the benefit of being open to subsequent evaluation, pushing learning boundaries, as greater complexity and dissonance can trigger the reflective process. This can enable practitioners to build upon their ideas over time, facilitating a detail of enquiry that can be difficult to attain or access using less formal and/or implicit modes.

To encourage honest and open dialogues reflection requires a protected confidential environment:

> The exploration of the self that reflection involves requires a relatively protected environment in which one is not continually preoccupied by defending oneself from the scrutiny of others (Boud, 2001, p. 15)

This is because honest reflection can place participants in vulnerable positions:

> To be effective in promoting learning, journal writing necessitates that students be honest and open in their entries. This type of disclosure places students in a vulnerable position (Thorpe, 2004, p. 340)

Thus, confidentiality and a sense of freedom to think openly through dialogue can better ensure a positive learning experience (Gallagher et al., 2017). Consequently, journal writing benefits from being private, as scrutiny by others can constrain free expression:

> Keeping journals private, away from the eyes of others, can be a useful principle to adopt in courses. It means that writing may not be as constrained as it would be if it were revealed to others (Boud, 2001, p. 16)

Therefore, encouraging private written reflection as a canvas for creative and overt expression means personal autonomy remains respected and the reflections remain unconstrained.

A conducive attitude: open-minded, wholehearted, and responsible

Alongside contextual factors creating opportunities to reflect, acting on a sense of perplexity may also relate to one's attitude towards reflection, such as being open-minded, wholehearted, and responsible (Dewey, 1933), perhaps representing a core state from which reflection is triggered and facilitated. Further, the reflective practitioner

weighs up the relative value of evidence whilst remaining open to other perspectives (Fook et al., 2006); which has been linked to open-mindedness (Gordon, 2017; Hong & Choi, 2011; Ostorga, 2006); as has being responsive and inquisitive:

> Open mindedness, according to Dewey, entails the ability to entertain new ideas, consider problems that may arise, examine alternatives solutions, and be inquisitive (Gordon, 2017, p. 22)

This is particularly relevant to professional practice where practitioners need to possess an open stance to interpret the contextually bound nature of their work (Ostorga, 2006). Consequently, practitioners can benefit from cultivating an open and questioning stance:

> in order to engage in the reflective process fully practitioners must be open with themselves and questioning (Cropley et al., 2012, p. 24)

Therefore, reflective practices, such as reflective journal writing, require personal honesty and openness to be effective:

> To be effective in promoting learning, journal writing necessitates that students be honest and open in their entries (Thorpe, 2004, p. 340)

Openness to sharing one's inner thoughts is important for effective collaborative reflection (Goulet et al., 2016), which can be cultivated from insight into a concept or experience i.e. reflecting carefully and individually prior to sharing one's ideas. Additionally, open-mindedness encourages the surfacing and questioning of assumptions:

> This openness to critically view the problem from different angles and to examine assumptions required at least the open-mindedness of the independent knower (Ostorga, 2006, p. 17)

Thus, reflective thinking requires an attitude of wholeheartedness (Dewey, 1933; Jay & Johnson, 2002; Ostorga, 2006), that is, being genuinely enthusiastic about discovering a solution to a problem (Gordon, 2017). Practitioners who are responsible and wholehearted are likely to persist with a task even when barriers are present:

> With their responsibility and whole-heartedness, designers are more likely to overcome barriers during a design process, to be engrossed in a design task (Hong & Choi, 2011, p. 696)

Thus, an attitude of responsibility is also viewed as a requirement for reflective thinking (Jay & Johnson, 2002; Ostorga, 2006). Being responsible refers to engaging in a careful consideration of the consequences of one's actions (Farrell, 2012). This may be pertinent when reflecting with others; indeed, openness between individuals is important for reflective conversations to be effective (Goudreau et al., 2015), and this requires practitioners to be responsible through respectfully understanding the impact of personal barriers and differences:

> no one can be forced to be open, and there are personal differences that limit how open one chooses to be (Moldjord & Hybertsen, 2015, p. 296)

Such personal differences seemed to determine the extent individuals may engage with reflection as a valid way to develop knowledge. Indeed, thinking dispositions, such as being actively open-minded, directly affect reflective analytic cognitive style and rational

thinking ability (Viator et al., 2020). Here, active open-mindedness considers the importance of questioning favoured intuitions (Browne et al., 2014), and openness to experience is associated with the capacity to enlarge and examine experiences (McCrae, 1993). Collectively, the cited literature indicates a connection between active open-mindedness and the tendency to engage in reflective thinking, almost like a central value-based construct from which the reflective process may stem from. This aligns with the theoretical notion that reflection is a state of mind and an active process of engagement with an object of enquiry (Ben-Ari & Enosh, 2011).

Attitudinal characteristics that align with the nature and demands of reflection, may encourage a deeper, more persistent examination of experientially derived knowledge (Duffy, 2007; Nguyen et al., 2014). This deeper engagement, coupled with awareness of the process of reflection, might also facilitate analysis of how experiences are understood, and what this means in terms of the self (Nguyen et al., 2014), potentially encouraging a more critical stance towards their experiences. Thus, it is likely that core dispositions, such as being actively open-minded, wholehearted, and responsible, provide a psychological context in which deliberate reflection on one's experiences, assumptions and cognitive frames is perceived as valuable, thus, encouraging engagement with the process.

Epistemology

Epistemology – mediating engagement and the quality of reflection

Epistemological worldviews have been associated with the capacity to engage in reflective thought (Ostorga, 2006; Schraw & Olafson, 2003). Together with a conducive attitude, these beliefs may affect one's orientation to learning and explain the likelihood to reflect (Entwistle & Peterson, 2004; McDonald & Kahn, 2014; Ostorga, 2006; Piggott, 2012; Stodter & Cushion, 2017). Contextual knowing is posited as the most complex epistemic stance, whereby the individual perceives truth as being context-bound and socially mediated (Baxter Magolda, 1992); through this, the often-complex reality of practice becomes a matter for enquiry, rather than the reproduction of facts. Thus, epistemology can affect engagement with reflection; for example, if an individual perceives knowledge to be provisional and relative, they may use evidence to reason between alternatives, making them open to different perspectives (Entwistle & Peterson, 2004; Stodter & Cushion, 2017). This openness to alternative perspectives and quests for knowledge can trigger the reflective process:

> There are multiple solutions to problems therefore deep analysis and reflective thought are the ways to find the possible solutions (Ostorga, 2006, p. 8)

From an epistemological perspective, this shifts the drive for knowledge from dualistic assumptions, where individuals perceive knowledge as right versus wrong, towards a more relative view.

Dualistic assumptions and relative views

It is possible that individuals with absolute, dualistic beliefs about knowledge may be less likely to reflect:

> the absolute knower is less likely to reflect deeply because the act of thinking is a process of finding and accepting the right course of action (Ostorga, 2006, p. 8)

From absolute positions, the quest for knowledge seems driven by a belief in a singular truth that the correct answer exists, which one can reach quite directly. Indeed, such individuals might prefer to engage in replicative or strategic learning rather than enquiry-based approaches (Entwistle & Peterson, 2004; Piggott, 2012; Stodter & Cushion, 2017); thus, in the sport context, coaches with dualistic views of knowledge approach learning as a simple reproduction of accepted norms (Entwistle & Peterson, 2004; Piggott, 2012; Stodter & Cushion, 2017). This aligns with the concept of an absolute knower:

> The person who is an absolute knower, the first category in the taxonomy, seeks to learn by receiving knowledge of what is right from authorities (teachers or experts) (Ostorga, 2006, p. 7)

Learning frequently involves a developmental trajectory, wherein the learner evolves as their understanding and knowledge expands. As with developmental processes, earlier learning can involve a narrowed focus – akin to a dichotomous thinking style (Beck, 1963; Oshio, 2009), and later learning expanding and integrating a more fluid, reflective one. Indeed, the quality of reflection changes with maturity and the refinement of epistemic stances, indicate these are intertwined (Ostorga, 2006); perhaps driven by an evolving conducive attitude. However, education designed around the delivery of facts and knowledge to learners may inadvertently reinforce a singular view of inherent assumptions:

> The model of technical rationality (i.e., the theories and facts) that serves as the foundation for most fields of study can be nicely packaged and delivered and as a result, inappropriately feed students' assumptions that technical rationality is enough or all there is (Rogers, 2001, p. 50)

Contrastingly, relativist beliefs assume knowledge is context-bound, with multiple opposing views being equally valid depending on the situation (Ostorga, 2006).

Tolerating uncertainty

A relative position can prompt individuals to perceive the right answer as a moving target:

> the implication is that the expert holds the 'right answer'. However, as experts often fail to agree, the 'right answer' is a moving target for the student to identify (Kinchin et al., 2008, p. 101)

This dynamic framework can enable disagreements to coexist and learners to seek their own answer, perhaps implicating value in the meandering, uncertain, ill-defined route that reflection can take. It is likely that a practitioner with relative views about knowledge can adapt and experiment with ideas, enacting them according to current environmental constraints, tolerating ambiguity, perhaps facilitated by a conducive attitude.

Additionally, from an epistemological perspective, an individual who meaningfully engages with reflection might acknowledge individualised experiences as valid sources of knowledge:

> You must however have an awareness to the potential for learning, acknowledging personal experiences as valid learning (Crathern, 2001, p. 165)

Overall, perhaps it can be assumed reflectiveness is '*grounded on specific epistemic stances*' with personal qualities predisposing one to engage with reflective thinking; as an individual's epistemic views refine over time, increasingly embracing relative assumptions through open-mindedness, there seems to be an improvement in the quality of reflection (Ostorga, 2006, p. 19).

Strengths and limitations

The findings of this review provide a synthesis from a broad range of theoretical perspectives of literature from differing professions enabling a rich consideration of triggers for reflection. Nevertheless, the data was limited to the text extracted from the articles sourced from the four databases included in the searches. Thus, it is recognised this study may not be exhaustive of all existing literature explicating the process of reflection and, indeed, there is scope for additional ideas to inform, enlarge, challenge, or refine this study's analysis. However, it is believed that this study synthesises an adequate range of articles making a meaningful contribution by elucidating understanding around the factors that enable reflection for practitioners. Future empirical and experimental research could extend understanding by confirming or negating the current study's synthesis.

Practical implications

Several applications could be supported in the training of practitioners in reflective practices and their ongoing professional development:

Identify and reflect on critical moments, especially as reactive modes of reflection will involve an event, an initial interpretation, and potentially, an emotional response.

As emotions and unease can help identify meaningful opportunities for learning that are aligned to direct lived experiences, they warrant validation. Insights derived through emotions may align with the understanding and/or resolution of real-world problems, enhancing practitioner competency.

Centre reflective thinking on a problem or puzzling scenario that is either constructed by the facilitator or is elicited by the participants' lived experience.

When facilitating reflection, consider if participants' ways of knowing are conducive to perceiving reflection as a valid way of developing knowledge. An open stance towards critiques of reflection can validate alternative perspectives whilst potentially facilitating learner development in reflective practice

Help learners and facilitators understand how they, and others, approach requests to participate in reflective practices. To increase the likelihood of openness and willingness in participation or non-participation, educators should critically and openly consider voluntary or involuntary approaches to reflective practice tasks with their learners.

Offer a variety of modes to engage with reflective thinking to help align the needs/wants of the group with the needs of the task. These modes could include written, verbal, visual/artistic, role play, individual or group work. Post-session verbal and/or written reflection can further develop learning and understanding, as can assessed or non-assessed reflective assignments.

Encourage individuals to engage in personal journaling as a canvas for creative, honest and personal expression. Privacy can facilitate an arena free from scrutiny and judgment.

Where safe and confidential spaces are possible, facilitate the development of a conducive attitude by encouraging the sharing of insights generated through journaling, and invite other perspectives to support the triggering of new ways of thinking and alternative perspectives.

Conclusion

Reflection can be proactive or reactive with the former being driven by one's innate curiosity to understand a concept, and the latter being triggered by a perplexing or puzzling experience. Both types of reflection are driven by a lack of knowledge. Our emotional response to events can identify potentially meaningful lines of enquiry enabling insight to remediate this lack of understanding. The likelihood of an individual reflecting depends on an attitude that is conducive to reflection. This requires three intrapersonal conditions: openness, wholeheartedness, and responsibility. Furthermore, one's epistemological view may determine tolerance of uncertainty and engagement with reflection, providing an opportunity for conceptual re-alignment and more effective, critical, and balanced decision making in professional practice.

Data availability statement

Disclosure statement

Notes on contributors

T. Marshall is a PhD researcher, Fellow of the Higher Education Academy and visiting lecturer at the University of Hertfordshire where he enjoys supporting students in their learning journey within the landscape of higher education. As a lecturer he has worked both in the higher and further education contexts. His research aims to understand the process of reflection and the impact that reflective practice can have on the learning and development of sport coaches.

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