Literature review

Introduction

Reflection is used in multiple professional and educational settings ranging from nursing, medicine, engineering, social sciences, and sport sciences to teaching. Within all of these fields people report benefits from reflection (Roberts & Faull 2013; Ashby, 2006; Cunningham & Moore, 2014; Ferriera, Keliher & Blomfield, 2013; Kori, Mäeots & Pedaste, 2014; Chretien et al., 2012). People find they realise why they work in that particular field, find ways of improving practice, increase job satisfaction, learn from mistakes as well as being less afraid of making them. The literature on reflection is growing and there are many reported benefits. One thing that should be made clear from the start, however, is that the benefits tend to be reported in forms of case studies, interviews, and other qualitative measures. The benefits reported also tend to be subjective with outcomes that are difficult to measure quantitatively. For instance, a university lecturer changing her way of asking questions as a result of reflection, might see her students' grades getting better. This might be caused by her changing technique due to reflection, but it could be caused by another factor such the student cohort performing better in general. Without controls, effects cannot be determined to be caused by reflection. Well-constructed quantitative experiments with randomisation and controls are few or limited. A range of such types of experiments would be valuable evidence that reflection carries explicit, measureable or quantitative value.

However, the sheer magnitude of literature spanning qualitative studies reporting benefits, the evident benefits to skills communication in employability, and the philosophical and logical argument behind why reflection works, all come together to form an extremely compelling case for why reflection, when it is done well, works. One of the biggest challenges with reflection is that all too often people believe they are reflecting, when in reality they are doing something else. For instance, while a diary can be reflective, writing down what has happened on a particular day without questioning 'why it has happened' and 'what it means' is not reflective. This is not to say there is no value in keeping a diary or other practices that are often mislabelled as reflective. The challenge is that calling non-reflective practices reflection adds to people's confusion and otherwise healthy scepticism about the reflective process. When non-reflective approaches are taken as reflection it clouds the effects seen from reflective practice and people shape their opinions based on these unclear effects.

This document seeks to make clear the confusion about what reflective practice is, and works through the arguments for why reflection, when done well, benefits the individual. These benefits span both an educational and professional context.

Furthermore, this document serves as an introduction or addition to the online platform – the Reflection Toolkit – developed by the University of Edinburgh's Employability Consultancy to support reflective practice. The platform has content for both reflectors and facilitators of others' reflection and provides advice on how to make reflection critical and impactful whether that is within oneself or in others.

Definition of reflection

For this document and the rest of the website the following definition is adopted:

> ***Critical reflection*** *is the conscious examination of past experiences, thoughts and ways of doing things. Its goal is to surface learning about oneself and a situation, and to bring meaning to it in order to inform the present and the future. Reflection challenges the status quo of practice, thoughts and assumptions and may therefore inform our decisions, actions, attitudes, beliefs and understanding about ourselves.*

Within this document and the Reflection Toolkit, when reflection is mentioned alone and there are no indicators otherwise, critical reflection is what is meant.

Contents

The historical development of reflection

Reflection is closely related with effective ways of learning (e.g. Dewey, 1933; Mezirow, 1991), and has therefore been a frequent element of the adult education debate (Brookfield, 1995). While reflection is tied closely with intentional learning in an educational setting, it is likewise essential in the world of professional practice (Loughran, 2002) with Donald Schön highlighting the importance of experience as a tool for updating professional theories and through reflection using them to improve practice (1983). While reflection is often not treated as such, it has strong philosophical underpinnings that explores knowledge, action, and mastery in the workplace (Kinsella, 2009).

If you are mainly reading this review for evidence supporting the benefits of reflection, you can skip this section. Here, different conceptions of reflection are explored, as Van Manen says: *'The concept of reflection is challenging and may refer to a complex array of cognitively different and philosophically distinct methods and attitudes'.* The aim of this section is make some of those conceptions clear.

The literature highlights some overarching approaches to reflection (Bradley, 2013; Grossman, 2009), which for ease can be summarised as two main conceptions:

- reflection on experience – using experiences as a foundation for learning and updating personal understanding of existing theories; and
- reflection as metacognition – particularly focusing on a problem, conception, or an idea.

While these are two ends on a spectrum, most theorists use elements of both. However, part of the confusion in the field comes from realising that reflection is often used slightly different depending on who is speaking (Finlay, 2008). Both approaches to reflection share the idea of improving learning or practice as well as separating themselves from 'just thinking' by requiring the process to be purposeful (Schön, 1983; Mezirow, 1991; Dewey, 1933); what differ between the conceptions is their primary focus.

While there are numerous thinkers and theorists that could be included in this review, for the sake of succinctness the history is kept short. However, if you have questions, comments or a want for further reading, feel free to reach out through the Reflection Toolkit's website.

The foundation
John Dewey (1993) is often credited as the first to use reflection in theoretical literature. He defines reflective thought as an 'active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and further conclusion to which it tends'

(p.9). Reflection is a tool which helps the reflector make sense of and build on an ever expanding body of knowledge. Moreover, by adopting reflective thought the individual 'converts action that is merely appetitive, blind and impulsive into intelligent action' (p.17). Thus the individual's learning and knowledge benefit from conscious thought. As a result, knowledge is in continual development and is shaped by its relationship with experience (e.g. Kinsella, 2007) or conscious critical thought (e.g. Moon, 2004a).

Reflection on experience

In adult education literature the benefit of learning from experience rather than passively through knowledge transfer has long been recognised and Kolb's work formalised the modern conception of experiential learning (e.g. 1984), which has seen a lot of attention in the reflection literature (Boud, Koegh & Walker, 1985; Gibbs, 1988). In his work, Kolb outlines a series of elements contributing to experiential learning. Allowing the student to reflect on their experience is essential for the student to extract meaningful elements and incorporate them into a personal knowledgebase. Without this time to purposefully debrief the experience, the learning is likely not to become conscious or lasting for the student.

While the development of experiential learning happened in the classroom, in the professional world of practitioners Schön (1983) noticed a tendency of what he labelled '*technical rationality*', the idea that practice should strictly follow positivistic notions of natural scientific measurement and method. In response, he argues that personal experience can greatly inform scientifically derived theories to optimise professional practice. Schön's argument is not that theory does not have a place in practice, but rather that theory, which deals with averages and trends, cannot fully capture the specific nature of real-life situations. His solution was that practitioners should continuously update their theoretical understanding based on what they have experienced. Therefore, an individual should initially ground their practice in theory, but then use experiences to re-evaluate their own effectiveness and what these experiences tell them about how to best use the theory in context. This process is what Schön labels as reflection. As Thompson and Thompson (2008) notice, reflection is a tool that allows theory and practice or experience to re-inform one another continuously, rather than being a one-directional pathway from theory to practice.

Taken in unison, establishing and surfacing learning based on conscious examination of an experience, and using experiences as a stepping stone to evaluate theories and one's own effectiveness is one half of what reflection can do.

Reflection as metacognition

Reflection can also be used to examine a person's thoughts, assumptions and approaches. This approach stems from another element of adult education, namely that learning often takes the shape of problem solving (Lindeman, 1945; Knowles, 1984). Therefore, to fully engage with learning a student will have to engage with a problem solving process. In this process the student is meant to take responsibility for their learning rather than being passive recipients of knowledge. Reflection's place in problem solving is best seen in the work of the theorist behind transformational learning theory, Jack Mezirow (1991), while also present in other thinkers (e.g. Eraut, 1994; Loughran, 1996; Reynolds & Vince, 2004). Mezirow suggests that reflection is useful to understand the content and premise of the problem as well as the problem-solving process itself. This is obtained by stepping back and looking at one's thinking process – reflection therefore becomes 'thinking about thinking' and how to do so effectively.

Similarly, Loughran argues that through reflection it is possible to '*untangle a problem, or make more sense of a puzzling situation; reflection involves working toward a better understanding of the problem and ways of solving it*' (1996, p.14). This quote is also evidence that theorists rarely see reflection as either purely tied to experience, or purely as a metacognitive activity. While Loughran has his primary focus on the problem solving nature of reflection, he identifies experience as a potential place for those problems to arise and would indeed argue that solutions can be found in previous experiences.

Using reflection as a metacognitive skill is also present in some of Mezirow's later work. CRA (critical reflection of assumptions, 1998) uses reflection as a way of examining a person's assumptions to ensure that they are informed and not taken for granted. These assumptions can be both general or based in specific practice. The CRA process is extremely valuable as it can ensure that people free themselves from limiting assumptions or do not make decision from flawed ones. Moreover, reflection is seen as a way of challenging systematically imposed ideas, norms, and power structures, which might not be helpful (Freire, 1970, 1973). Using reflection as a way of emancipation from power structures by realising flawed assumptions embedded in society has received a lot of focus particularly form from feminist literature and social science research (e.g. England, 1994; or see Moon, 2004a; Thompson & Thompson, 2008; Bolton, 2010).

The ability to critically place oneself and one's assumptions and attitudes in a structural, cultural, and political context and using this to inform actions is often called *reflexivity* (Bolton, 2010; Thompson & Thompson, 2008) – it is important to note while this is the predominant use of reflexivity, others use it differently (Finley, 2008). Using the term and distinction can be helpful, but

can evidently create more confusion about the concepts. For the purpose of the Reflection Toolkit, it has been chosen not to keep this distinction as, for the lay user, 'reflection' functions well as an umbrella term and is also used by some theorists to capture the elements mainly referred to by reflexivity[1] (e.g. Moon, 2004a).

In summary, reflection on experiences uses reflection to surface and consolidate learning from both positive and negative experiences, whereas reflection as metacognition is a response to the awareness of something not being right (Eraut, 1994) and can be used to optimising problem-solving and other cognitive abilities and to engage with larger systemic challenges.

What can reflection do?

Based on the theoretical background above and using elements from across the spectrum of approaches, Moon (2004a) highlights six different areas where reflection can be helpful:

1. critically reviewing our own behaviour, the behaviour of others, or the product of our behaviour (for instance, a piece of work);
2. building general theories from observing, or being involved in, practical situations;
3. making decisions or resolving uncertainty;
4. considering the process of our own learning, in other words engaging in 'thinking about thinking' or metacognition;
5. engaging in personal or self-development; and
6. empowering or emancipating ourselves as individuals or within our social group.

It is from this literature and theory above that the definition adopted in the Reflection Toolkit is devised – to reiterate:

> *Reflection is the conscious examination of past experiences, thoughts and ways of doing things. Its goal is to surface learning about oneself and a situation, and to bring meaning to it in order to inform the present and the future. Reflection challenges the status quo of practice, thoughts and assumptions and may therefore inform our decisions, actions, attitudes, beliefs and understanding about ourselves.*

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[1] **For the curious reader:** In some disciplines there are a clear difference between reflection and reflexivity. Reflexivity is often seen as a method or approach that require examination of positionality. That is, one can use a *reflexive method* when examining phenomena. The researcher must be aware of their effects on the process and outcomes of the research as 'knowledge cannot be separated from the knower' (Steedman, 1991). The researcher can use the process of *reflection* to examine what knowledge and biases they bring to the task in order to be *reflexive* (Thorpe & Holt, 2008).

Evidence for positive effects of reflection

As mentioned in the introduction, there is a substantial amount of evidence suggesting the subjective value of reflection, however the quantitative research behind the effects is limited although it does exist. The philosophical underpinning and the philosophical arguments for why reflection is valuable are highlighted in the previous section. The following section will engage with a theoretical argument before engaging with the empirical evidence.

Reflection as active learning and consolidation

One of the main reasons why reflection could be beneficial for learning is that to reflect properly the individual has to actively engage with the learning experience, material, or problem. There is plenty of evidence suggesting that an active learning approach, i.e. an approach where students co-construct meaning and learning, compared to passive learning of 'teaching by telling', has benefits for student performance (e.g. Freeman et al., 2014; Prince, 2004).

Reflection forces students to engage with content matter and contextualise it with their own experience, which is why it can allow for better engagement and retention. Moreover, contextualisation is the one of the fundamental aspects of constructivist learning theory (Piaget, 1971). By reflecting students are also compelled to engage with their experiences more than just documenting them. By adopting a continual questioning approach and attempting to find answers, students have to look at their experiences through different lenses. In comparison, merely describing experiences can more readily be done without deep thought as describing does not require students to challenge their own conceptions or assumptions.

Moreover, engaging with reflection requires an individual to engage with an experience and conceptions for longer and often on multiple occasions, which help consolidate and commit the learning to memory. Reengagement with an event on multiple occasions is important not only for the memory of the learned aspects, but also for the ability to transfer the learning to other experiences (e.g. Kang, 2016; Butler, 2010).

Similarly, thorough engagement with the material at hand has been suggested to help transform 'surface learning' into 'deep learning' (Marton & Saljo, 1976). Through a series of experiments around learning outcomes and processes with Swedish university students, Marton and Saljo found that the process a student uses to learn specific content will affect the quality of the learning. Students who engage more deeply with material will learn and retain principle ideas better compared to those who adopt a surface learning of simply trying to uncritically remember anything or everything. What Marton & Saljo describes as a deep learning process bears a lot of resemblance

to reflection in that both critically engage with and evaluate the content being learned to extract the most meaningful ideas.

Therefore, by actively choosing to review experiences and re-engaging with assumptions in a *deep* reflective manner can likely help consolidate discovered learning, allow for the learning to transfer, and build understanding in a constructivist manner.

Empirical evidence of benefits from reflection

As mentioned in the introduction, reflection has been found to have positive effects both in professional practice (e.g. Ferreira, Basseches & Vasco, 2017; Paget, 2001; Knowles et al., 2006) and in an higher educational setting (e.g. Wegner, Turcic II & Hohner, 2015; Feest & Iwugo, 2006).

Reflection is particularly well researched in social and health sciences, such as medicine, nursing, and psychotherapy, and is often included as a required element of practice in these fields (e.g. Chretien et al., 2012; General Medical Council, 2018; Ashby, 2006). Moreover, reflection is also essential and present in teaching and teacher education (e.g. Brookfield, 1995). In these areas, reflection is seen as necessary to make the most of feedback and supervisions, and is essential for self-regulated and life-long learning and thereby attempting to maximise one's impact in one's field (Sergeant et al., 2009; Wald et al., 2012).

In these fields supervision is seen as particularly valuable and many researches argue that supervision or reflection with others has immense value and can support the process in order to gain the effects of reflection (e.g. Moon, 2004a, Thompson & Thompson, 2008). Allowing others into the reflective process will make perspective taking easier and other people can help identify and point out inconsistencies in thinking and practice. Moreover, reflection can be used as a tool to effectively engage with feedback and support the identification of places for development.

However, reflection can also be effective when reflecting with oneself. Within nursing for instance – where reflection has had a place for a long time – there has been a general consensus that reflecting both with others and alone have immense benefits. For example Ashby (2006), who uses herself as case study, reports both an increase in subjective job satisfaction and passion about the field, as well as an increase in one's ability to affect change through reflection without others. Ashby highlights that while she used her own experience, she has seen and heard similar effects from colleagues.

However, even in fields where reflection is as deeply-embedded as nursing, it is recognised that early reflective practice was adopted without empirical evidence or based purely on a few case studies. This is why Paget (2000) decided to systematically ask 72 nurses about their experiences with reflection. Of those, 83 % found reflection to be 'useful' or 'very useful' and 78 % could identify

specific changes they had made to their practice or work environment as a result of reflection, the vast majority of which were lasting changes. The move toward empirical and quantifiable evidence has been pushed in the reflection literature. It is important to note that the responses from this study, while empirical, are subjective, and it is therefore not possible to measure the effect of the changes reported in Paget (2000). However, the positive experiences with reflection will significantly contribute to some of the reported benefits such as job satisfaction. Below different benefits and the literature supporting them will be addressed in turn.

Reflection to support and improve the effects of feedback

As highlighted above, reflection can help to make the most of feedback. Sergeant et al. (2009) interviewed 28 different family physicians in a multisource feedback programme. They found that reflection was instrumental for accepting and actively using the feedback the physicians received. In this case, reflection is used to conceptualise and re-evaluate practice. The authors saw that reflection was particularly useful to make sense of feedback that was inconsistent with the physicians' self-belief. Reflection became a way for the physician to make sense of challenges to their taken-for-granted assumptions of how practice should be and how they need to act within it.

Using reflection to support feedback is seen to be effective in other settings as well. Business School students respond positively to reflection on feedback received on written assignments, even when feedback was constructive (Quinton & Smallbone, 2010). Moreover, teaching students to reflect on how to use the feedback in the future saw increased performance on assignments compared to the control group who wrote down how the feedback made them feel (Duijnhouwer, Prins, & Stokking, 2012).

Thus, using reflection can be applied effectively in both an educational and professional setting to make sense of feedback, and to plan for how to use it effectively by making specific plans and conceptualising it to one's practice.

Academic performance

Reflection has received significant focus and a push in the higher education curriculum (e.g. Rogers, 2001), and is present in many aspects of adult learning, such as experiential learning, which was highlighted in the section on the historical development of reflection. Use of reflection in higher education ranges from social sciences to engineering, and more widely with general feedback approaches as mentioned above.

Further engagement with reflection might be useful. Empirical evidence suggest that effective reflection can predict or contribute to academic performance (e.g. Lew & Schmidt 2011; Wegner et al, 2015). McCrindle & Christensen (1995) found that first year biology students who kept a

reflective diary had a more sophisticated understanding of the material, and performed significantly better in the final examination than students who did not keep a journal.

Similarly, Kori et al. (2014) found that development in reflective qualities were associated with higher performance in both research question formulation and inference formulation in an online learning environment. This suggests that people who become more efficient reflectors see benefits in specific academic skills.

Understanding was also seen to be significantly improved in MSc students in a water and environmental management course (Feest & Iwugo, 2006). Students were asked to produce reflective learning logs and at the end of the course it was found that students had a more complete understanding and improved achievements compared to when reflection was not used. The reflection log was seen as ensuring that students actively engaged with the learning. However, the authors noted that the associated time it took to effectively teach reflection was high, and introducing reflection can be time consuming and must therefore be considered as an investment and not an easy fix.

Similarly, Tsingos-Lucas et al. (2017) found that reflective writing skills could predict academic performance on a series of assessments in a large sample of pharmaceutical students. It is possible that this is a spurious correlation but, taken together with the other studies, a causal relationship is definitely possible. There is therefore evidence to suggest that investing in teaching effective reflection, and allowing designated time for reflection in an academic context, can facilitate learning and allow students to build better levels of understanding and perform better in assessments. Finally, Lew and Schmidt (2011) also highlight reflection is expected to produce academic benefits that will not show up in assessment scores, and therefore only quantifying academic outcomes through marks may limit the benefits we see from reflection in higher education.

Job satisfaction and identification of values

Feeling satisfied with what we do and finding the passion in it is important for overall life happiness (e.g. Unanue et al. 2017). Ashby (2006) highlights how she personally re-found her passion for her field through reflection and experienced a surge in job satisfaction. A lot of it came from abilities such as identifying values, ensuring that she was operating with integrity, as well as feeling that she could positively contribute with changes. Ashby also reports how others in her field have had similar experiences. To further this point, Gardner (2009) reports how workers in health and human services improved their job satisfaction by identifying their values, which led to affirming the meaning the workers got from their jobs.

Moreover, past students who were taught reflection in an environmental teacher programme reported that they still used reflection and it had contributed to them identifying what their intentions were for being in the field, ultimately leading them to finding meaning in their jobs (Ferriera, et al., 2013).

Taken together, this suggests that effective reflection can have long-term effects on a person's well-being if used to ensure that the individual is connecting with what they are doing, and creating meaning from it. If reflection leads the individual to not find meaning in their field, it can encourage them to make appropriate changes.

Create and manage change through informed decisions and excel in professional practice

As mentioned previously, professional nurses found that they had made positive and lasting changes to their practice and work environment as a result of reflection (Ashby, 2006; Paget, 2000). This effect is not limited to nursing. Ability to make changes to practice is similarly found in e.g. teaching (Carrington & Selva, 2010; Wagner, 2006) and psychotherapy (Ferriera et al., 2017). In particular, Cunningham & Moore (2017) highlight how effective reflection led to improved communication between healthcare organisations allowing their provision to become measurably better. Furthermore, reflection can also support managing change that one has no control over. Malthouse, Watts & Roffey-Barentsen (2015) find that reflecting on one's situation allows the individual to positively anticipate and deal with change. Hence, it can be seen across a series of disciplines that reflection can support identification of sub-optimal practice and positively help identify change. Once change is happening, reflection can also be instrumental in conceptualising the change and managing it effectively. Ultimately, reflection can support making informed decisions as seen in Roberts & Faull (2013).

As a result of identifying suboptimal practice, the individual is well placed to think about what good practice looks like. This also follows from effects of reflection highlighted above around identifying intensions and values. Once an individual sits with the relevant knowledge of what excelling looks like, they can start consciously move toward it.

It is important to note that, while a lot of the reflection literature centres on vocations and educational settings, it can also apply to less vocational areas such as academia. For instance, the process of reflection is likely to be familiar to scientists who examines why their experiments work or do not work and will draw on both theory and personal experience to inform future practice. This process easily sits underneath the definition of reflection, however scientists and academics are likely to called this process 'reviewing' or 'processing' or similar. Moreover, any job role will have

certain values, intentions, and ideas of excellence – reflection can be used to identify what that excellence is and how to get there.

Plan professional development and employability

The benefits outlined above, such as the ability to make informed decisions and identify places where practice is suboptimal, can lead to higher self-awareness (Ashby, 2006). From this self-awareness an individual is more likely to effectively plan their professional and personal development (Wagner, 2006). Cunningham & Moore (2017) particularly highlight how being taught reflection allows healthcare practitioners to effectively recognise development opportunities. One interviewee highlighted how they could more easily identify responsibility and impact of their own actions through reflection, and therefore found themselves wanting to improve through personal and professional development.

Reflection allows the individual to identify the value of development, and can bring the self-awareness required to identify values and impact on outcomes. Furthermore, as discussed with experiential learning, reflection is also a way of surfacing and putting words to learning (Kolb, 1984). This means that reflection can support identifying and developing specific skills. This is reported by Wegner et al. (2015), who see how engineering students are able to identify development in 'soft skills' after reflection on a team project.

This ability to be aware of and able to identify and communicate skills and attributes is essential to a person's employability. Employability is identified by Yorke (2004, p. 24) as '*a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy*'. It should be clear from the sections above how reflection can help the identification and communication of attributes. Additionally, reflection is identified by a series of employability frameworks across the higher education sector as being an essential skill to an individual's professional life (e.g. see Moon, 2004b). This importance comes as a person who is willing to learn from their experiences, is able to identify and communicate what they are capable of, and is willing to improve practice, will be an extremely valuable employee. Moreover, the ability to identify values can support an individual in making the right choices in a careers setting.

Challenges around reflection

The sections above have attempted to highlight some of the benefits from reflective practice and the outcomes of reflection. However, while reflection has many benefits, it is also important to

recognise a series of challenges associated with teaching and using reflection and especially how to engage effectively with these. Below are some challenges associated with reflection that are highlighted in the literature.

Different understandings

The main challenge around reflection presented in the historical review is the diversity of understandings. As Loughran says: '*In part, it was this diversity of views and understandings that led me to preface reflective practice with a qualifier of practice—effective—in order to begin to focus attention on the action as well as the outcome of reflection'* (2002, p42). As he correctly captures here, there is substantial diversity in what people call reflection and some practices are not effective. It is easy to disregard the attempts that are not effective as not being reflection. While this is tempting, it might not be fair. Rather people can become uncritical in their reflective process, and end up asking themselves the right questions, but fail to engage with the uncertainties and nuances surrounding the experience, problem, or thoughts.

Mechanical or thoughtless reflection

Both Brookfield (1995), and Boud & Walker (1998) highlight a possible tendency for reflection to be applied too mechanically – in the Facilitators' Toolkit this is highlighted as or 'for the sake of it'. The challenge is that, as the popularity of reflection in higher education and in continuing personal development (CPD) has risen, too often this is done without ensuring that the students or professionals are properly equipped to reflect or that they understand that reflection needs to be purposeful and conscious. Mechanical or thoughtless reflection is often accompanied with a checklist of questions students are required to answer in order to reflect. This creates an association that reflection is merely running through a series of questions and there is no place for creative thinking and full engagement. While having question prompts has a lot of value for starting a reflection and ensuring that an individual engages with helpful elements, it is important to highlight that the questions are a support and not the sole approach to reflection.

One way to engage with this challenge is by ensuring that reflection is not used for the sake of it, that students are properly introduced to the value of the process, and that they are helped to engage with reflection appropriately. It is very important that frameworks, such as reflective models, are presented as helpful tools and not as reflection itself (Finley, 2008).

Concerns around ethics

A large challenge around using reflection in higher education or professional development concerns the ethical implications of requiring individuals to disclose personal experiences in an intellectual/professional setting. If reflection has been required without thinking about its purpose,

students may find themselves feeling they have to trade personal information for course completion or marks. This challenge is particularly present if reflection is compulsory and assessment criteria are not clear, which in the worst cases can coerce students or professionals to uncomfortable levels of disclosure (Boud and Walker, 1998; Quinn, 2000).

While this is a real concern, it is possible to minimise the risk by being very clear about one's assessment criteria – highlighting that students will not get credits for emotional content in its own right, but rather that it is about being critical and analysing experiences and thoughts.

Moreover, Brookfield (1995) talks about potential emotional consequences associated with challenging existing assumptions. It is possible that realising one's assumptions are flawed can be difficult, and it is therefore important that people reflecting, students or professionals, are provided with proper support. This can be accomplished with proper signposting to the correct places for support as well as being mindful about when reflection is required (Finlay, 2008).

Rationalising existing practice

When reflection is done inappropriately or ineffectively, it might be used to rationalise existing practice (Loughran, 2000). This is more likely to be the case if reflection is performed mechanically or thoughtlessly and can therefore be avoided in the same way as ensuring that reflection is not done mechanically (see above).

Using the Reflection Toolkit

Common for the concerns or challenges highlighted above is that they can be targeted and dealt with if reflection is properly introduced and supported (Finlay, 2008). That does not mean, of course, that the challenges will disappear completely. No matter how effectively reflection is facilitated and how much support is provided students or professionals will find different benefit from reflection and find it either natural or hard. What is interesting is that, when done properly, reflection can be taught and people can evolve their reflective abilities (Russell, 2005; Grossman, 2009; Hibbert, 2013, Carson & Fisher, 2006). This will also be evident from the case studies shown in the Reflection Toolkit. The challenges are real and therefore while reflection has significant value to add to a person's development, reflection should be applied thoughtfully. The purpose of the Reflection Toolkit is highlighting how to engage with the challenges to ensure that, when choosing to either facilitate or engage with reflection as an individual, the reflection can be effective. Much has been written about reflection, how to reflect and how to teach it. We – as the creators of the Reflection Toolkit – have drawn on lots of the literature and colleagues' practice around the institution to

provide what we believe is a resource that is and accessible and easy to use. The intent is to support its users to effectively deal with the challenges, and successfully reap some of the benefits that reflection can have. Reflection, when done well, can help improve learning, put words to and extract learning from experience, and increase our impact in our professional and personal lives. That is why we believe you should reflect.

The Reflection Toolkit (www.ed.ac.uk/reflection)

Review written by Tobias Thejll-Madsen, Employability Consultancy, University of Edinburgh, 2018.

www.ed.ac.uk/employability

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