

MOBILE TECHNOLOGY FOR PROFESSIONAL DEVELOPMENT AND WELLBEING: THE REFLECTA PROJECT

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Abstract

This paper introduces Reflecta, a mobile learning tool to support the process of reflection for professional development and wellbeing. Reflection is a well-recognised tool for experiential learning [1]. The value of the reflective process is such that it is embedded into professional requirements across certain professions. In the UK, for example, nursing and healthcare professionals must evidence engagement with reflection both during their training and professional practice to maintain their registration. These same professions are faced with a wellbeing crisis. Sickness absence has been described as an 'unsustainable pressure on the health and care system in England' [2] with mental health consistently the most reported cause [3].

In light of these issues, there is a missed opportunity to see reflection activity as a form of self-care as opposed to focusing exclusively on professional learning and development [4]. This is particularly important given the natural tendency to focus on the negative [5], which may be encouraged by existing models of reflection. In providing a tool that promotes a positive approach to the reflective process, Reflecta encourages users to focus on more positive aspects of their practice and in doing so, engage with self-care.

The affordances of mobile learning lend themselves well to supporting learning in the professional context, providing a readily portable means of engagement, storing and accessing information and connecting with wider networks [6]. Key features of the Reflecta technology include reminders, a guided approach to positive reflection and enabling the storage and sharing of data to support professional requirements. A tool for reflection that is readily and easily accessible also provides opportunities for mindful moments of engagement with reflection as part of healthcare professionals' day-to-day activities. This has been linked to positive outcomes both for the wellbeing of practitioners and patient care [7].

The paper reports on the development of the Reflecta tool and points to the opportunities that mobile technology can provide in supporting learning and wellbeing.

Keywords: Mobile learning, reflection, professional development, wellbeing.

1 INTRODUCTION

This paper introduces Reflecta, a mobile learning tool to support the process of reflection for professional learning and wellbeing.

Reflecta is at an early stage; a minimal viable prototype (MVP) is currently under development. This paper outlines the rationale for the project, drawing upon empirical and theoretical literature from education and computing. It establishes the role of reflection in experiential learning, particularly in relation to professional development, and highlights the opportunities afforded by reflective activity for the promotion of wellbeing. Mobile technology in the form of the mobile-optimised Reflecta web application is discussed as an apt solution for supporting engagement with reflection in complex professional contexts. Key features of the Reflecta technology are outlined in terms of their role in supporting reflection for learning and wellbeing.

2 THE ROLE OF REFLECTION IN LEARNING AND WELLBEING

Reflection is the act of revisiting an experience, and often occurs naturally: unprompted, humans will engage with reflection as the brain seeks to learn from experience. This revisiting of experience and engaging with it in the present, known as retrieval, has a valuable cognitive function in learning because it assists the brain both in remembering and making meaning [8]

Educationalists have long recognised the value of reflection as a means of extending and capturing individualised learning. Recognition of the value of the reflective process is such that it is embedded into

professional requirements across a number of disciplines. In the UK, for example, nursing and healthcare professionals must evidence engagement with reflection both during their training and as part of their professional practice to maintain their registration. Reflection is also highly relevant to work-based learning and vocational training where 'knowledge is co-produced in all sorts of venues and in all sorts of ways' [9, p. 20].

Reflection plays a fundamental role in experiential learning. Experiential learning theory, attributed to John Dewey [10] and later popularized by Kolb [1], [11], [12], sees authentic and active experience as a powerful tool for learning. However, experiential learning may be difficult to support. Notably, Kirshner, Sweller and Clark [13] are highly critical of approaches to learning that 'appear to assume that knowledge can best be acquired through experience based on the procedures of the discipline' [13, p. 75]. Well-formed rebuttals to Kirshner et al.'s work aside (e.g., Hmelo-Silver, Duncan and Chinn [14]), the point made by the authors highlights considerations for those implementing experiential learning. These include the sometimes cognitively overwhelming nature of situated learning and the importance of clear direction and instruction to support the learning process.

Even advocates of experiential learning acknowledge that it is entirely possible to engage with an experience and not learn from it [15]; an often-cited quote is 'regrettably "the last thing one learns from is experience" [...] experience is what you have to halt, check, negate, in order to get knowledge' [16, p. 17]. In experiential learning, it is the conscious and intentional act of revisiting the experience that provides the basis for learning [1]. There is some evidence in literature that reflection is a process that can be learned. Factors that have been linked to supporting the process include the provision of safe spaces, support and time allocation [17]. Providing a structure for reflection, then, through the use of a reflective model or framework provides opportunities for learners to engage more productively with what may otherwise be challenging or abstract concepts.

3 REFLECTION FOR WELLBEING

At its core, the Reflecta project is about operationalising learning as an opportunity to promote wellbeing. While reflective activity is well documented as a tool for supporting and capturing learning, there is a missed opportunity to view it as a form of self-care [4]. In providing a tool that promotes a positive approach to the reflective process, Reflecta encourages users to focus on more positive aspects of their practice and in doing so, engage with self-care.

Using the healthcare sector as an example, poor mental health is consistently the most reported cause of sickness absence [3], creating an 'unsustainable pressure' on the health and care system in England' [2]. Encouraging healthcare trainees and practitioners to engage positively with their sometimes challenging experiences may serve to operationalise required reflective activity to support their wellbeing as well as their learning¹.

An approach to reflection that is predicated on positive psychology offers an alternative to existing models of reflection, which, without guidance, may encourage learners to adopt a deficit approach which emphasises problem solving. This may be in part due to a natural human tendency to focus on the negative [5]. There is also a suggestion that learners sometimes employ a gamified approach to reflection in order to evidence learning [18]. The ethos of the Reflecta project aligns with the concept of positive education in which wellbeing is seen as integral to the learning process.

4 WHY MOBILE TECHNOLOGY?

The affordances of mobile learning lend themselves well to supporting learning in the professional context, providing a readily portable means of engagement, storing and accessing information and connecting with wider networks [6].

Even as an emerging technology more than a decade ago, pedagogists noted the affordances of mobile devices as a way to support learning that was authentic, collaborative and personalised [19]. More recently, the ubiquity of mobile phones has seen their increased use as part of professional healthcare activity in a range of applications, e.g., communication, photography of wounds and skin conditions, drugs calculations, timing of procedures and accessing information [20]. This is also a trend identifiable in other professional domains. Police officers in the UK, for example, now routinely use mobile devices

¹It should be noted that the Reflecta project does not propose that reflecting differently will offer a panacea to the sometimes insurmountable contextual and structural factors that impact on individuals' wellbeing within workplaces or institutions of learning.

instead of traditional paper notebooks in order to provide remote live access to key policing information systems [21]. The availability of such devices therefore provides opportunities for them also to be used for the purposes of reflection for learning. A tool for reflection that is readily and easily accessible also provides opportunities for mindful moments of engagement with reflection as part of healthcare professionals' day-to-day activities. This has been linked to positive outcomes both for the wellbeing of practitioners and patient care [7].

Other projects have seen the potential of the affordances of mobile technology to support reflective practice and learning. This is perhaps best framed in work conducted in Australia on the 'iReflect' project [22]. Recognising the place and value of reflection in relation to work-integrated learning (WIL), the project team used a participatory action research approach to examine how a mobile app might respond to a need to scaffold and support learners in their reflective activities in work-based environments. Importantly, iReflect has provided empirical confirmation for an appetite for a mobile app to support the process of reflection and insight into functionality preferences.

While the Reflecta project emerged from a desire to operationalise learning as an opportunity to promote wellbeing rather than WIL, the iReflect project has been exceptionally helpful in confirming the usefulness of mobile devices for the purpose of reflection. It has also provided use cases which have aligned to the planned development of the Reflecta project. Indeed, many of the features envisioned in the Reflecta project, based upon our reading of the literature and engagement with healthcare professionals are analogous to the findings of the iReflect team.

The Reflecta project is now at the stage of developing an MVP for the purposes of user testing into the interface and functionality. As a prototype undergoing agile development, functionality outlined in this paper may be subject to change. Table 1 outlines the features that form the basis for the MVP.

Table 1. List of functions for Reflecta MVP with rationale/description

<i>Function/Feature</i>	<i>Rationale/Description</i>
F1. Registration and login/logout	Privacy requirements necessitate the inclusion of a registration process and the ability to login and logout securely
F2. Dashboard	Options for user engagement: Starting a reflective process, accessing reflection history, settings and logout
F3. Scaffolded reflective activity (including prompt for mindful breathing)	Optional timed mindful breathing activity A series of prompts based on a model of positive reflection 7
F4. Focus page	Drawing on answers to the reflective process, this page highlights an aspect of their reflection to promote positive framing of the experience
F5. Archive page	Enables users to access and export previous reflections

The authors remain cognisant of the fact that various factors may negatively influence adoption of the Reflecta tool including users' resistance to change [23]. With this in mind, central to the development process is an approach based on Nielsen's usability heuristics [24] and Krug's 'don't make me think' approach to usability [25] in order to provide frictionless access to functionality and increase the likelihood of user adoption. Key features of the Reflecta technology have been designed to support a positive approach to reflective activity while acknowledging the context in which individuals will make use of the technology. These include:

- The use of reminders to encourage regular engagement with the reflective process (user configurable in order to reduce the likelihood of notification fatigue)
- A guided approach to positive reflection via simple and accessible prompts and questions
- User choice in terms of how they engage with the reflective process: for example, either for rapid, on-the-fly capture of reflection insights or longer, more considered reflections
- Enabling the storage and sharing of data to support learning activity and professional requirements and possible revisiting of reflections via other devices, such as laptop or desktop computers

4.1 Other considerations for MVP development

The starting point for development was to adopt a mobile optimised web application as opposed to a native mobile app. In doing so, the intention is to avoid the need for users to download and install a new app on their devices (thus avoiding ‘app fatigue’) and, more importantly from a usability perspective to devise a platform that is device agnostic. That is, users may access the Reflecta tool either via their mobile device (thus taking advantage of the portability benefits) or via an alternative device, such as a laptop. Providing users with this opportunity to engage with the platform on a larger more sophisticated device will make for greater flexibility in how they use their reflections in other contexts. The Reflecta user interface (UI) will automatically adapt based on the size of the screen being used, using responsive web design (RWD) techniques.

A further conscious decision was taken to build the MVP using a code-based rather than no-code approach. No-code affords ‘the opportunity to build software with a minimal need for manual coding and enhancing the involvement of non-programmers in software development’ [26] but risks vendor lock-in. In the context of this project, using code also facilitates the preservation of Intellectual Property (IP) and portability of the functionality for longer-term sustainability, maintainability, and potential for commercial development.

5 CONCLUSION

As a structure for supporting reflection, the Reflecta project proposes the novel integration of positive psychology with reflection for learning in professional contexts. As a tool, then, Reflecta integrates features that are currently found across disparate platforms: those for reflection for wellbeing and those that are used for reflection for learning.

Finally, it should be noted that the Reflecta tool and embedded new model for reflection are not intended to replace existing ways of reflecting or suggest a superior approach. The development of the tool is intended to promote a conversation around the application of technology to support positive education.

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