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Experiential Learning Projects as Assessment in Initial Teacher Education

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Abstract: In a rapidly changing global environment, Initial Teacher Educators (ITE) have a responsibility to role-model contemporary teaching approaches, which develop graduates who think creatively and flexibly in educational workplaces. An important aspect of this work is supporting pre-service teachers (PSTs) to understand how to design assessments which facilitate a deep understanding of student learning. This learning can be achieved through the implementation of assessments which model contemporary practices and enrich student learning in ITE courses. This paper discusses new ways to consider the purpose of assessment by focusing on Experiential Learning (EL) as a form of assessment in ITE. This semi-systematic literature review encapsulates the intersecting areas of assessment, EL and ITE. Our resulting recommendation is the use of EL Projects to engage PSTs with meaningful and authentic assessments. This would encourage the development of skilled, knowledgeable and innovative thinkers who respond confidently to unanticipated and impactful educational changes.

Introduction

Assessment is a critical aspect of understanding student learning progress, so it is understandable that it can be a significant influence on many forms of learning (Lalor et al., 2015). According to Joughin, assessment “is to make judgements about students’ work, inferring from this what they have the capacity to do in the assessed domain, and thus what they know, value, or are capable of doing” (2009, p. 16). In Initial Teacher Education (ITE), assessments can be used to support professional growth and as a determinant to measure knowledge, skills and competencies required by the teaching profession (Aspden, 2017). In the wider context of higher education (HE), assessment certifies graduates to practise in their discipline, demonstrates accountability of appropriate course standards, and can improve approaches to learning (Bloxham, 2008). Due to administrative demands of HE and the challenges in designing assessment to improve student learning, most assessment practice has traditionally focussed on satisfying accountability and certification (Chetcuti & Buhaglar, 2014). Recently, there have been gradual shifts towards assessments that encourage student-centred and lifelong learning. Expert teacher practitioners are increasingly incorporating flexible and technology-enhanced methods of delivery to support learner-centred philosophies (Author 1 & Author 2, 2017). Correspondingly, these new pedagogical approaches require a reconsideration of how assessment can best be implemented to also support meaningful student-centred and lifelong learning.

The current economic climate requires HE graduates to be competitive and to satisfy job market demands for work-ready skills and knowledge (Allen & Peach, 2011). While

employers may value technical and disciplinary knowledge, many professional competencies such as, communication, collaboration, leadership, problem-solving, cultural awareness, ethics and the willingness to learn – are also highly desired graduate attributes (Quinn & Shurville, 2009; Zegwaard et al., 2003). The contemporary workforce encompasses “escalating globalisation, rapid changes in technology” and increasing instability, graduates need to possess high self-efficacy (i.e. beliefs in their capability) to successfully manage their career choices within a constantly fluctuating job market (Spanjaard et al., 2018, p. 164). In the education context, self-efficacy and pedagogical competence are paramount to teacher graduates entering the workforce (Russell-Bowie, 2013). Many student teachers equate their coursework with theory and may not feel adequately prepared to work in schools (Allen & Peach, 2011; Parkes & Rawlings, 2019). Author 1 proposes that curriculum needs to reflect teaching and learning that is based on real-life contexts (2014). This will provide opportunities for students in ITE to develop both disciplinary knowledge and professional competencies required to be successful in educational settings.

Experiential learning is a philosophy of education that integrates theory with practice, and views learning as a process resulting from the transformation of experience (Kolb, 1984). Dewey (1938) conceptualised experience as a lens to analyse interactions between individuals and their environment. He theorised that experience was a linking process between action and thought, body and mind, doing and knowing, and practice and theory (Beard, 2018). Valued competencies and skills, such as, problem-solving, teamwork, reflexivity and creative and critical thinking, can be cultivated through engaging in experiences within authentic contexts (Author 1, 2020). The question is however, how can educators appropriately assess these critical skills? It is proposed that the approach to assessment of experiential learning needs to be in concert with its underlying principles, by engaging students in real-world problems and contexts to facilitate their development of skills and competencies (Walton & Rusznyak, 2016). ITE programs need to consider how assessment can encapsulate experiential learning and establish clear links between theory and practice. The challenge then becomes finding the balance between making assessments meaningful and useful to the learning process, while also addressing the wider higher education expectations and purposes of such measures.

This paper presents a semi-systematic review of the literature from intersecting areas of assessment, experiential learning and ITE. A gap in scholarly knowledge is identified and, on this basis, we offer research recommendations on how innovative forms of assessment can inform pedagogy and curriculum in teacher education.

Methodology

The study is framed by the following research question: How can authentic pedagogical and curriculum development support new ways of thinking about the purpose of assessment in Initial Teacher Education? This question is explored through a semi-systematic literature review. This methodological approach to literature is intended for topics that draw on research in diverse areas, and focuses on understanding the state of knowledge on a topic, identifying gaps in research and to develop agendas for future research (Snyder, 2019).

Scholarly literature relevant to the research question was retrieved utilising the ProQuest academic database for its comprehensive coverage of diverse disciplines that may be related to the topic. The search inclusion criteria consisted of peer-reviewed journal articles, conference proceedings and books within the intersecting research areas of assessment, experiential learning, ITE and the wider HE context. Material published prior to year 2000 were excluded to ensure currency in the review, with the exception of seminal

works (e.g., Kolb, 1984) as identified through further analysis. A total of 7146 articles were retrieved using the following six keyword search groupings:

- “Assessment” and “Purpose” and “Higher education”
- “Assessment” and “Initial teacher education”
- “Experiential learning” and “Assessment”
- “Experiential learning” and “Initial teacher education”
- “Experiential learning” and “Initial teacher education” and “Assessment”
- “Experiential learning” and “Higher education”

Abstracts were scanned and literature with less relevance to the research question were excluded. As search results prioritised the most relevant articles (i.e., articles with the greatest match to the search keywords were presented first), the scanning process continued until at least 30 consecutive articles were determined to be irrelevant to the research topic. This typically entailed scanning the first 100-200 articles retrieved by each search. Based on the scanning process, 63 articles were identified for further analysis (Snyder, 2019).

Endnote-X9 and NVivo-12 were utilised for management and analysis of data (Smithers, 2018). Articles were imported into EndNote-X9 and annotated, prior to exporting to NVivo-12. Thematic analysis was conducted to identify ideas and integrate concepts (Creswell, 2012). In NVivo-12, top-level nodes of “Experiential Learning” and “Assessment” were established a priori, to represent the main areas relating to the research topic. Codes (implemented as second-level nodes) were created and refined using an inductive and comparative process to represent the initial themes identified within each article (Merriam, 2009). These initial themes were then subsumed and abstracted into broader themes to address the research question (Creswell, 2012). The results of this analysis are discussed in the next section beginning with the role of assessment and experiential learning in HE and ITE. A discussion of current approaches to experiential learning as assessment ensues, followed by recommendations for ITE. The article concludes with implications for future research into how assessment can inform curriculum to promote pedagogical skills and workforce competencies in authentic education contexts.

The Role of Assessment

Assessment in HE is widely recognised as having three broad roles: of-learning, for-learning, and as-learning (Bloxham, 2008; Brunker et al., 2019; Joughin, 2009). *Assessments-of-learning* are typically enacted as summative assessments (usually conducted at the completion of course or study units) for certification and accountability purposes (Aspden, 2017). Certification seeks to judge and distinguish between different levels of student achievement in relation to course requirements (Bloxham, 2008), while accountability and quality assurance aim to demonstrate and maintain appropriate standards and codes of practice within HE courses (Joughin, 2009). Through focussing on comparability and consistency across individuals, assessments-of-learning emphasise reliability and defensibility (Boud, 2009), and usually have implications on student grades, certification and sometimes the evaluation of curriculum (O’Toole, 2007).

In contrast, *assessments-for-learning* (or formative assessments) are typically enacted during the learning process. Although summative assessments can play a major role in recognising achievement and complying with HE requirements, formative assessments serve to improve student learning (Brunker et al., 2019). These assessments seek to engage students in the process of learning through facilitating student-created responses, encouraging clarification and sharing of learning goals, promoting feedback and developing student capacity for self-evaluation (Chen et al., 2017; Joughin, 2009). In this sense, although the

intentions and purposes of formative and summative assessments appear distinct, formative assessments can have a prominent function in the identification of student strengths and weaknesses to inform their learning development and growth for summative assessment purposes.

Assessments can encourage the capacity for lifelong learning (Bloxham, 2008). *Assessment-as-learning* is of particular importance in ITE, whereby the learning and assessment experienced by the ‘student’ or ‘pre-service’ teacher (PST) can shape their own pedagogical approach (Parkes & Rawlings, 2019). According to Brunker et al., assessment holds a dual role “as pedagogy and as curriculum” in teacher education (2019, p. 90). Through engagement in curriculum that models teaching, learning and assessment processes, student teachers can develop skills, knowledge and competence for future engagement in their own teaching and assessment practices. In other words, PSTs can cultivate pedagogical and lifelong skills for assessment through their own experiences of being assessed. In an era where there may be administrative emphasis on reducing costs while increasing class sizes, it is crucial that ITE programs prioritise assessment “as a meaningful contributor to teaching and learning” and to produce teaching graduates who are lifelong learners (Msiza et al., 2020, p. 54).

Attaining a balance between the various types of assessments can be difficult in HE settings as a result of course and accreditation requirements. There is a tendency to prioritise assessment-of-learning at a cost to other forms of learning as it is challenging to design strategies that address all types and purposes of assessment (Bloxham, 2008). Bloxham provides the example that, while peer-evaluations and classroom-based assessments can promote student learning and lifelong capacity (e.g., communication and group work skills), it can be problematic to conduct individual assessments for student grading purposes. As universities seek to find ways to reconcile their accountability mandates and implement grading policies that do not undermine the intentions of student and lifelong learning, the transformation of assessment practices can take time (DeLuca et al., 2016). The conflicting purposes of assessment are particularly challenging in ITE given the dual role of assessment for PSTs. The challenge in ITE lies in making use of assessment methods that combine assessment-of-learning with assessment-for and as-learning (Bloxham, 2008).

In HE, to ensure that assessment is both meaningful and purposeful, opportunities to embed different types of assessment are required. Eddy & Lawrence, (2013) suggest that there needs to be a paradigm shift away from traditional and static forms of assessment, particularly if developing forms of learning such as lifelong learning. Well-designed assessments require students to adopt a deep approach to learning (Joughin, 2009). Authentic assessment can provide a student-centred and dynamic approach that supports both the process and outcome of student learning (Eddy & Lawrence, 2013). It recognises that individuals may differ in their learning needs, interests and goals, and provides opportunities for selection of activities, methods or media that are more relevant and meaningful to the individual (Dorn, 2002). Authentic assessment shifts the construction of knowledge to the student and evaluates how knowledge has been applied in practice through student-created products, which are connected to course content and learning goals (Eddy & Lawrence, 2013).

Authentic learning can enable engagement in “genuine learning problems or tasks that foster the opportunity for [students] to make connections between new material and prior knowledge” (Author 1, 2014, p. 57). Similarly, authentic assessment seeks to evaluate student learning through intellectually challenging tasks with similar resources, conditions and constraints available to workplace professionals (Walton & Rusznyak, 2016, p. 90). In contrast to traditional assessments which focus on knowledge recall and repurpose, authentic assessment prioritises the application of skills and knowledge through diverse, real-world,

discipline-specific and problem-solving tasks such as performance, writing, case studies, debates and portfolios (Eddy & Lawrence, 2013). Given the dual role of assessment for student teachers, it is particularly vital that ITE curricula implement authentic assessment to “explicitly and implicitly teach about the profession” (Brunker, 2019, p. 95). Authentic assessment tasks should provide PSTs with a range of challenging activities that help them to construct personal meaning, reflect on their practice, and justify their actions and decisions that typically arise when teaching in real-world contexts (Walton & Rusznyak, 2016). As such, authentic assessment provides opportunities for students to develop and evaluate their skills and competences through engagement in real-world problems.

The Role of Experiential Learning

Experiential learning (EL) is a philosophy of education that views experience as fundamental to learning. When new ideas and experiences are linked to previous experiences learning occurs, and hence experience is “the foundation *of*, and the stimulus *for*, learning” (Beard, 2018, p. 2). Kolb similarly suggests that learning is “the process whereby knowledge is created through the transformation of experience” (1984, p. 41). The facilitation of learning through experience does not simply involve teaching through telling or presenting, but to utilise specific thinking, sensing, doing and belonging experiences in students’ environments to enable learning to take place in their inner private worlds (Beard, 2018). Experiential education immerses students in experiences and encourages reflection about these experiences. Empowering students to develop metacognitive strategies and actively engage in and manage their own learning requires student-centred approaches and shared intellectual control (Author 1, 2014, 2017). Such learning can be transformative and can encourage new knowledge, skills and competencies that learning through theory or practice cannot achieve in isolation (Qualters, 2010).

The origins of EL exist in both Western and Eastern philosophies. Beard (2018) suggests that the Confucian proverb “I hear I forget, I see I remember, I do I understand” provided a foundation for later conceptions of EL. If students learn best through “doing”, then “doing” could be interpreted (in Western cultures) as experiencing through feeling, sensing, understanding and immersing oneself in a practice (Beard, 2018). The process of reflection on the experience of “doing” allows for learning to occur (Smith & Betts, 2000). Similarly, 18th century Genevan philosopher Rousseau posited that learning needed to be predominantly experiential and practical (Ozar, 2015). Like Rousseau, 20th century philosopher and educational reformer Dewey (1938) was critical of traditional forms of education and advocated learning through experience. However, unlike Rousseau who believed that the teacher should play a predominant and directive role in the child’s experiences, Dewey advocated a new form of democratic schooling whereby the teacher is more likened to a facilitator of the child’s experiences within the child’s social environment (Ozar, 2015). Dewey presented the notion that experience is a process that connects action and thought, and that experiences do not happen in isolation but are linked to previous and future experiences (Beard, 2018). In addition to Dewey, EL theory is also founded on the work of notable 20th century scholars such as Lewin, Piaget, James, Jung and Kolb. Based on Dewey’s work, Lewin conceptualised the Lewinian Learning Cycle, a cyclical feedback process consisting of four components: concrete experience, observations and reflections, formation of abstract concepts and generalisations, and testing implications of concepts in new situations. This learning framework was further refined by Kolb (1984) who developed the influential Experiential Learning Theory (ELT), which considers learning as a process where knowledge is constructed through grasping and transforming experience. The model

that stems from this presents EL as a cyclical process with four learning modes: concrete experience (CE), reflective observation (RO), abstract conceptualisation (AC) and active experimentation (AE) (Kolb, 1984). Concrete or immediate experiences form the basis for reflection and observation. “These reflections are assimilated and distilled into *abstract concepts* from which new implications for action can be drawn. These implications can be *actively tested* and serve as guides in creating new experiences” (Kolb & Kolb, 2009, p. 298-299).

Kolb & Kolb (2009) suggest that the learning process is more accurately represented as an EL spiral, where each iteration of the cycle encourages broader and deeper experiences that can be transferred to other contexts. It is widely understood that people learn in diverse ways and have varying learning preferences and unique experiences. Kolb describes a learning style as the unique ways that individuals spiral through the learning cycle based on their preference for the four different learning modes. Correspondingly, nine learning styles are identified to help explain why certain learning activities are interesting for some students compared to others, and understand how teaching can align with individuals’ capabilities and preferences (Cain, 2007). Although Kolb’s model has been noted as lacking in comprehensive research with diverse populations and its seeming oversight of factors relating to emotion and individual differences (as cited in Beard, 2018), it has been widely utilised for its pedagogical approach (De Zan et al., 2015; Misyak et al., 2016; Akhtar & Hussain, 2019).

Reflection plays a fundamental role in learning. Learning begins with an experience, and through this experience, students construct their understanding through metacognitive processes which further broadens and enriches their learning (Kolb & Kolb, 2009). Reflection is critical to this process as it can help students identify what they have learnt, address gaps in their learning and connect their new experiences to existing knowledge to inform their future practice (Lalor et al., 2015; O’Toole, 2007; Schön, 1983). In teacher education, reflection-on-action (thinking back on one’s actions) and reflection-in-action (thinking while executing actions) are vital to developing knowledge, skills and attributes required for teachers to work in educational settings (Lalor et al., 2015; Schön, 1983).

Assessment can be utilised as a learning tool to help students cultivate their reflective practice, to build upon their existing skills and knowledge (O’Toole, 2007). Traditional methods of assessment in teacher education do not typically provide adequate opportunities for students to incorporate reflection into their learning (Lalor et al., 2015). Quinn and Shurville (2009) suggest that assessment of EL experiences can pose challenges as it can be problematic to obtain or evaluate personal experiences of individual learners. Furthermore, such assessment can present complexities as students’ self-esteem are often intertwined with their personal experiences. However, professional competencies can often be assessed through both the products and processes of learning. For example, portfolios can enable PSTs to showcase, monitor and reflect on their learning over a time period, while also providing a means of authentically assessing their preparedness for the profession and evaluating the teacher program for accreditation purposes (Stolle et al., 2005; Triplett et al., 2008). Reflective journaling, which can scaffold critical and structured reflection, provides opportunities for assessment of student constructed knowledge (Mpofu & Maphalana, 2018; Southcott, 2004). Student-created wikis can be used to demonstrate artifacts of their learning over time, while also enabling assessment of the final product by multiple evaluators (Eddy & Lawrence, 2013). Finally, pre- and post-experience surveys can help identify misconceptions, insights, attitudinal changes and new ideas resulting from students’ learning experiences (Qualters, 2010).

Ultimately, teacher education programs need to provide authentic assessments that mirror real-life workplace contexts to enable students to construct knowledge and cultivate their reflective capabilities, while engaging them in applying their knowledge gained from

coursework towards their professional practice (Lalor et al., 2015). Understanding how ITE programs can effectively implement EL as assessment requires a consideration of the benefits and limitations of its current approaches.

Current Approaches to Experiential Learning as Assessment

There are four commonly utilised approaches to EL as assessment in HE, the most prevalent being work-based learning or professional experience. Field trips and study abroad programs can also promote the development of professional competencies, while portfolios and the integration of EL within HE settings are also increasingly reported. The subsections below consider each of these approaches within the broader HE context, followed by a discussion of the benefits and challenges associated with their implementation and assessment within ITE.

Work-Based Learning

Work-based learning (and its related forms including ‘internships’, ‘work placements’, ‘service-based learning’ and ‘professional experience’) generally provide students with direct experience in a work setting that is usually related to their career intentions. Three types of stakeholders are typically involved: the student, the external organisation, and the HE provider. The HE provider places students within external organisations, and students are encouraged to apply knowledge and theory to real-world practice while being supervised and guided by their workplace professionals (Brooks & Simpson, 2014). Students can immerse themselves in the everyday functioning of the organisation, learn to take initiatives, practise good judgement and foster collaboration with their co-workers (Kosnik et al., 2013). Work-based learning enables HE providers and students to meet “employers’ demands for work-ready graduates [who are] able to hit the floor running” (Allen & Peach, 2011, p. 1).

Despite having many advantages, multiple challenges can occur in such placements. They can be difficult to organise, particularly for smaller or remote program providers that do not have extensive access to host organisations (Kosnik et al., 2013). Some professions may not have explicit criteria to assess student learning, and assessment of internships may be left to the student and workplace supervisor, resulting in inconsistent quality and standards of learning between students (O’Toole, 2007). O’Toole suggests that learning objectives should be explicit and negotiated collaboratively between stakeholders prior to placements. While internships can help develop many professional and personal attributes required of work-ready graduates, Kosnik et al. (2013) argue that quality of learning can be less than optimal because students often encounter challenges in analysing and reflecting on their experiences. If students do not experience the reflective observation and abstract conceptualisation learning stages as identified by Kolb (1984), their learning cycles can be incomplete. Smith and Betts (2000) similarly assert that quality of learning is dependent on the process of reflection, and therefore students need to be supported through systematic and guided reflections of their workplace experiences.

Within the ITE context, the practicum (also often referred to as ‘school placement’ or ‘professional experience’) represents the classic approach in integrating practical experience with theoretical knowledge (Benitt, 2019). The practicum is a component of teacher education whereby PSTs spend a period at an educational setting to observe more experienced teachers and to gain teaching experiences. It allows student teachers to apply

knowledge gained during coursework towards their teaching practice, develop teaching skills under the mentorship of their supervising teachers, and cultivate personal values and attitudes through holistic experiences in real-life contexts (Aspden, 2017; Cain, 2007; Lalor et al., 2016). Summative assessments can also be conducted during practicums to determine whether PSTs have demonstrated the skills and competencies required for certification (Chetcuti & Buhagiar, 2014).

The assessment of practicums can be complex and multi-faceted (Aspden, 2017). Unlike other professions, the practicum assessment is usually conducted against external criteria established by governing bodies. Accreditation organisations such as the Australian Institute of Teaching and School Leadership (AITSL) aim to articulate the expectations of effective teaching, through standards to clarify the “knowledge, practice and professional engagement required across teachers’ careers” and to inform the “development of professional learning goals” (AITSL, 2018 p. 3). These standards are typically used by supervising teachers in schools to guide and mentor student teachers and to assess their practicum experience. In response to previous concerns of disparities between the assessment expectations of students, supervising teachers and the ITE provider (Allen & Peach, 2011), these frameworks are intended to present a “common understanding and language for discourse” between all stakeholders (AITSL, 2018, p. 3).

Despite the intentions of accreditation standards, research indicates considerable limitations in their application for practicum assessments. In a case study of four practicums in the New Zealand early childhood context, Aspden (2017) observed that assessments were heavily dependent on the experience, beliefs and knowledge of the individual assessor and the relationships between stakeholders. There was a lack of shared agreement and transparency on the evaluation criteria, leading to student teachers seeking to shape their practice based on their interpretations of assessors’ expectations. In an examination of ITE programs in United Kingdom and New Zealand, Coll et al. (2002) also highlighted that practicum assessments relied on the professional judgement of assessors, despite the detailed teaching standards established by governing bodies. This is further complicated by the fact that accredited standards can be subject to change due to shifts in government policies. Iredale (2012) and Zegwaard et al. (2003) argue that these professional assessment frameworks tend to emphasise technical competencies which are more easily measurable. A focus on ‘rigour’ can inadvertently overshadow the development of skills (such as tacit knowing and artistry), which can be transferrable to different teaching contexts. The authors contend that assessments should be broad-based and situated, and consider the complex dynamics of the classroom. Correspondingly, practicums are highly individualised in reality and the difficulties of their assessment relate to the holistic context in which learning takes place (Aspden, 2017; Coll et al., 2002).

Practicums provide opportunities for student teachers to develop their teaching knowledge and skills under the mentorship of the supervising teacher, but various challenges can be encountered within these contexts. Supervising teachers hold a dual role whereby they need to provide formative feedback to support the pedagogical growth of PSTs, while also acting as examiners in assessing their performance (Chetcuti & Buhagiar, 2014). The “embedded feedforward and judgmental roles” of supervising teachers can be problematic given they are “both a supporter and judge at the same time” (Chetcuti and Buhagiar, 2014, p. 40). Furthermore, the mentorship approach provided by supervising teachers may not be aligned with student teachers’ learning needs. In a case study of five mentor-trainee groups in secondary music education, Cain (2007) reveals that some supervising teachers prefer to mentor through apprenticeship styles of role-modelling and advice, while others prefer to facilitate learning through reflection and analysis. Through the lens of Kolb’s ELT, Cain explains that some mentors may prefer to teach through concrete experience and active

experimentation, while others relate better to reflective observation and abstract conceptualisation. Differences between the teaching and learning styles of mentor and mentee can result in incompatibility of mentoring expectations within such partnerships (Cain, 2007). Finally, although ITE programs encourage reflection, Iredale (2012) indicates that many students may not have an adequate range of strategies to reflect on their practice unless they are guided by their mentors. Kosnik et al. (2013) suggest that assessment tools such as journaling may not be authentic if students merely report or document without further analysis and reflection of their learning experiences. Considered collectively, the practicum and its assessment can provide valuable ways to bridge the theory-practice gap, but contextual factors can influence the quality of learning experienced by student teachers.

Field Trips and Study Abroad Programs

In higher education, EL can often be implemented through field trips or study abroad programs. Like work-based learning, these alternatives can enable students to develop valuable skills that are transferrable to the workplace. Field trips typically take the form of relatively short expeditions out of the classroom for students to observe real-world situations. For example, Spanjaard et al. (2018) describe a class excursion to a shopping centre whereby marketing students posed as mystery shoppers to observe consumer behaviour. Through evaluation of their experiences, discussion and peer feedback, students gained further understanding of consumer behaviour from retailer and consumer perspectives. Study abroad programs comprise of international travel for a limited time to enable students to explore different cultures and world views (Brooks & Simpson, 2014). For example, some marketing students in Spanjaard et al.'s (2018) research undertook a short-term Vietnam mobility program designed for marketing students to reconcile their learning throughout their degree and to reflect on the service sector within an international context. These programs allow students to experience authentic situations, understand multiple perspectives and apply their learnt skills to a range of new situations within a short timeframe. Considered collectively, although study abroad programs and field trips may not be available to all students, they can facilitate the development of workforce skills such as communication and social interaction, teamwork, personal management, self-esteem, creativity and decision-making, and promote a positive impact on students' personal and professional growth (Brooks & Simpson, 2014).

Although not as prevalent as practicums, field trips and study abroad programs have also been implemented as experiential learning and assessment within teacher education. Southcott (2004) provides an example of a European tour optionally undertaken by postgraduate student teachers to further their understanding of various music pedagogies. Students were assessed through their structured reflective journals, which required critical thinking skills to describe their experiences, interpret their significance and evaluate their value on their growth as music educators. These experiences enabled students to actively engage in their learning in authentic and holistic ways. However, study abroad programs can be costly for students and inadvertently exclude those who cannot afford the experience. Further, travel restrictions and world health concerns are also factors for consideration. Video-conferencing can provide a more cost-efficient and viable way to experience real-world situations. In Benitt's (2009) study, PSTs cooperatively designed tasks and exercises with a school teacher, and through video-conferencing, observed their ideas being implemented in the classroom. They did not engage in classroom interaction, but were given the opportunity to critically reflect on their observations afterwards. Their experiences and reflections enabled them to be actively involved in a community of practice and gain skills in certain aspects of teaching without being overwhelmed by its complexity. Despite its

benefits, Benitt reports that these virtual school trips were limited by technical problems and the considerable effort and commitment required of the school teacher and all stakeholders. Accordingly, the experiences and assessments afforded by trips and programs can enable authentic experience of teaching situations and the development of lifelong and pedagogical skills, but considerations for implementation include costs, travel restrictions, technical constraints and workload for stakeholders involved.

Integration of EL Assessment within HE Settings

With the growing demand for competent graduates with “workforce-ready” skillsets, EL elements and authentic assessments are increasingly brought inside the HE setting and integrated into curriculum. In Retallick and Steiner’s (2009) research, agriculture students experienced EL using learning agreements, progress visits, end-of-experience symposium and formal evaluation for agriculture students. Their assessments (which include weekly journaling, presentation and submission of a portfolio) provided the opportunity to acquire technical, planning and communication skills required to transition to the work setting. Quinn and Shurville (2009) provide various examples of how EL and its assessment has been integrated at an Australian university. Students are provided with central online modules on how to learn from experience (and to develop transferrable skills for other settings) and assessed through e-portfolios comprising of self-evaluation and critical reflection. Engineering students are supplied an informal physical learning space (equipped with resources for EL activities) and assessed through reflection, journaling and e-portfolios. Despite these benefits experienced, Quinn and Shurville argue that the scaling-up of EL requires many barriers to be overcome. Academic staff and students will require training and access to new educational technologies to support EL activities and authentic assessment, such as Web 2.0 platforms and multimedia tools. They will also require appropriate technical equipment and support. Many academics may need further training and support to understand that EL integration is worth the effort, and ultimately this adjustment to their existing practice can demand a significant outlay of costs and time.

HE courses have also utilised Kolb’s ELT to guide their curriculum design for learning and assessment. In a nutrition course within a service-learning component, students were required to complete their training with a community partner (Misyak et al., 2016). The reflection component of Kolb’s model facilitated their assessments which incorporated both formative and summative methods such as class discussion, reflective essay, poster presentation and community partner evaluation. This enabled timely feedback to the teacher educator and students to make progress while learning outside the classroom. Akhtar and Hussain (2019) report that an existing Business course enhanced with ELT principles was effective in enhancing students’ oral and written communication skills. These students participated in EL activities such as role playing, group discussion, presentation, debating and reflective writing. Within ITE, Russell-Bowie (2013) describes the integration of each component of Kolb’s ELT into the music module of a primary arts education unit. Students’ concrete experiences were facilitated through a lecture, textbook material, online quiz, and videos demonstrating competent teaching of music lessons. They experienced reflective observation using journaling, abstract conceptualisation through their preparation of a music program, and active experimentation with the writing of an arts program based on their practical and theoretical knowledge. As a result of ELT integration, 97% of these student teachers reported an increase in their confidence and competence for teaching music. Although this approach can facilitate skill development for students, it requires the expertise and time of academic staff in re-designing these programs (Quinn & Shurville, 2009).

Furthermore, students' involvement in EL activities can be relatively short as they may have limited opportunities to immerse themselves in all stages of Kolb's ELT cycle.

Portfolios

Portfolios can provide a longer-term learner-centred approach to the authentic assessment of experiential learning in ITE. Students can use portfolios as an instructional tool to support their reflections on learning, demonstrate their understanding of teaching competencies in authentic ways and assist in their preparedness for employment (Stolle et al., 2005). Portfolios also provide a means for assessing teaching competencies and evaluating and improving teacher education programs (Qualters, 2010). In Eddy and Lawrence's (2013) study, wiki-based portfolios enabled students to store their teaching artifacts and reflections over the course of their degree, and provided the means for individual assessment of their competencies throughout the course. In a redesign of the assessment of a teacher education module, portfolios were introduced to enhance student teacher's knowledge about delivering assessment (Lalor et al., 2015). With its focus on real-life scenarios and reflective practice, Lalor et al. conclude that portfolios represent a useful form of constructivist assessment in developing teaching competencies and transforming attitudes, but can be arduous to build and some students can be overwhelmed by its complexity. Stolle et al. (2005) report that some PSTs did not find portfolios sufficiently appropriate for demonstrating their skills and regarded the assessment of portfolios as daunting due to the personal and sensitive nature of portfolio content. From the teacher educator perspective, portfolios can also be time-consuming to assess and reflective practice needs to be taught incrementally (Stolle et al., 2005).

Recently, the Teaching Performance Assessment (TPA) was introduced as a set of program standards to ensure rigour in teaching assessment and quality in Australia. Over the final year of their course, students are required to develop a portfolio which provide "evidence of their teaching across the cycle of planning, teaching, assessing and reflecting" (AITSL, 2018). While practicums continue to be assessed by supervising teachers, TPAs are typically evaluated by teacher educators. In a case study exploring the viewpoints of final year students and TPA assessors, Buchanan et al. (2020) indicated that TPAs are "broadly beneficial" for ITE programs, but also raised concerns regarding its potential to under-problematise "deeper, attitudinal learning outcomes" (p. 74). The authors add that as TPAs are a mandatory component of the ITE program, its high-stakes nature could distort results, with some PSTs reporting that TPAs displaced authentic teaching to some extent. Furthermore, the nature of TPAs (albeit multifaceted) did not holistically capture the complexities of teaching, learning and reflection, with some assessments conducted without sufficient knowledge and understanding of the teaching context.

Considered collectively, EL and its assessment in ITE presents benefits and limitations. Practicums can bridge the theory-practice gap by enabling teachers to apply their knowledge gained during ITE towards real-life and holistic teaching contexts. However, the highly contextualised and individualised nature of practicums can result in challenges in their implementation and the holistic assessment of teacher competencies. Field trips and study abroad programs can provide authentic teaching experiences and develop personal and professional skills, but their participation can be limited by costs and stakeholder workload. Although the integration of EL and authentic assessments into HE settings can help teachers to develop their confidence and pedagogical skills, their constraints can include relatively short timeframes of student immersion and the availability of appropriate technology and academic expertise. Portfolios can support reflective practice and authentic ways of assessing

teaching competencies, but they can be time-consuming to create and evaluate, and its high-stakes nature can distract PSTs from the efforts of their teaching. Taking these concerns into consideration, the next section discusses a less utilised approach to EL and its assessment that can complement existing practices within the ITE curriculum.

Experiential Learning Projects as Assessment

Experiential learning projects (ELPs) aim to embed practical experience into the content and structure of a course through assigning students to work in teams to complete real-life projects within their HE setting for a specified timeframe (Kosnik et al., 2013). Although ELPs are typically coordinated and assessed by the faculty, ELPs often focus on partnership or consultation with external organisations within the classroom setting (Muskulka et al., 2011). Students can apply their theoretical knowledge in authentic situations, while learning teamwork skills and seeing the outcome of their efforts within a relatively short timeframe (Spanjaard et al., 2018). Compared to placements at client organisations, ELPs can often provide students with greater autonomy and responsibility, and faculty staff can use class activities (such as lectures, reading and reflective journaling) to support and guide students systematically through all stages of their EL cycle, resulting in potentially higher quality of learning across students (Kosnik et al., 2013). As students' project participation and performance are explicitly linked to their course marks, assessments of ELPs can often be more oriented towards student learning, and its assessment by the same teacher educator can ensure greater consistency (compared to placements) in the evaluation of student outcomes and efforts (Kosnik et al., 2013). Discussed below are various studies of ELPs in HE, followed by a consideration of their use in ITE.

Although ELPs are not a commonly utilised form of EL, the literature points to some evidence of its use, particularly in Business Education. Kosnik et al. (2013) provides two examples of ELPs with Business students. In a Sports Management course, students were assigned to sell game tickets for a hockey league. Over one semester, students (n=60) applied their knowledge gained through lectures, presentations and reading materials to create sales strategies, identify target markets and promote events that mirrored those of the hockey league's sales staff. Assessment was based on students' attainment of their sales goals. In Kosnik et al.'s second example, students (n=27) in a Strategic Management course engaged in five weeks of 'traditional' class activities prior to undertaking a consulting project for a local organisation. Students were formatively assessed on their practice presentations through peer feedback, and evaluated at the end through their reports and presentations for the client. Kosnik et al. (2013) observed both ELPs to be effective in their facilitation of academic and professional competencies, with a majority of students indicating that the practical components were the most beneficial part of their course. However, the authors also report that student learning can be constrained by their limited exposure to real-life contexts, and ELPs require the expertise of experienced faculty members to carefully design appropriate projects and to deliberately integrate EL components into class materials.

In a research example where students (n=133) were required to manage and host an event at a formal venue, they were assigned dual roles of event organiser and targeted customer, enabling a more holistic experience of their participation (Spanjaard et al., 2018). It was unclear how the assessment enhanced their experience, but results indicated that 81% of students valued the learning that came with collaboration with their business partners. In another example students (n=40) were grouped in teams to provide consultancy for a local business where students were peer-evaluated during the project, and their primary assessments were conducted at the end of the project through integrated self-, peer- and

stakeholder assessments (Muskulka et al. 2011). Through active engagement in activities requiring planning evaluation, working group reports and stakeholder presentations, the ELP was reported as a “valuable and rewarding educational experience” for students (Muskulka et al., 2011, p, 10). Although the authors report that students were able to experience all components of the EL (Kolb, 1984), it would be valuable to further understand if and how assessments supported this learning cycle.

An ELP was employed in a Sociology course to understand poverty from both scholarly and community perspectives (Waity & Crowe, 2019). Students (n=22) collaborated with children in an impoverished community to learn about their lived experiences and worked with a community partner to produce an end-of-semester exhibit of their participatory photo mapping project. Although students communicated their understanding during class discussions, they did not consistently and fully demonstrate their learning outcomes during assessment. Waity and Crowe suggest that the assessment methods of reflection papers and final assignments did not allow students to fully articulate their knowledge of the concepts. This highlights the importance of designing assessments that are authentic and holistic, to meet the many purposes required of assessment in HE.

Within the ITE context, research on ELPs in facilitating the assessment of experiential learning has been limited. Eddy and Lawrence (2013) describe a group project involving the use of wikis to create a professional development website for the community college sector. The project enabled students to link their knowledge gained (through lectures, reading and interviews) to practice. Students received progressive feedback from peers, and their products were evaluated at project conclusion by their teacher educator and the wider community. The authors contend that student-centred learning and the robustness of assessments can be enhanced through authentic assessments practices and linking real-life learning to the classroom context. In another study, six student teachers in Hong Kong worked collaboratively to develop online English grammar resources for the teaching community (Lee, 2019). During this six-month project, PSTs undertook evaluations of grammar textbooks, designed and presented lesson plans and instructional materials for peer feedback and revision, implemented their refined designs in local schools and disseminated the project outcomes to other teachers. Lee suggests that the integration of all four modes of Kolb’s ELT learning cycle was valuable to the professional development of student teachers. Participants reported that their project experience enhanced their pedagogical and content knowledge, as well as core competencies such as communication, problem-solving and co-operation skills. However, it was unclear how assessments were implemented to support experiential learning. The above studies form the beginnings of scholarly literature on the use of ELPs within the ITE context. Given the advantages of the ELP approach, it is important to further understand its benefits and limitations in facilitating the assessment of experiential learning in teacher education.

Conclusion

Through a discussion of assessment and experiential learning in HE, and a consideration of current approaches to EL, this article has identified an imperative for further research into how assessments can holistically support student teachers to develop workforce skills and competencies in authentic education contexts. ELPs, when supported by authentic assessments, can potentially provide a complementary EL approach for the ITE curriculum. Compared to the practicum, teacher educators can deliberately integrate structured learning experiences into the project to facilitate a complete learning experience in all aspects of the EL cycle. They can also provide explicit guidance of student learning, particularly of

structured reflection to enable the abstraction of pedagogical concepts for further experimentation. ELPs require less reliance on partnerships with schools and external organisations, and reduce potential incompatibilities in mentor-trainee expectations. Its teamwork nature can develop important collaboration and communication skills and student learning outcomes are not dependent upon the individual constraints of practicum contexts. Explicit learning criteria and assessments conducted by the same teacher educator or team of educators can also reduce the likelihood of inconsistent evaluations and subjectivity between supervising teachers in and across practicums. Travel restrictions and world health concerns were noted as potential limiting factors with field trips and travel abroad programs, in addition to travel costs for students and workload for stakeholders. Compared to the integration of EL aspects into existing modules, ELPs can provide greater opportunities for students to immerse themselves in all stages of the EL cycle. Carefully structured ELP activities and assessments can satisfy teaching program standards while enhancing student learning without the high-stakes, complex, sensitive and time-consuming nature of the portfolio. Collectively, a deliberate approach towards using ELPs as assessment can encourage students to apply their knowledge to real-world contexts while also reducing some of the challenges that can be encountered in other EL approaches.

This literature review also suggests that various limitations of ELPs need to be considered. PSTs will typically be exposed to school-based contexts for a shorter timeframe compared to practicums. As with supervising teachers, the teacher educator will need to consider how they balance their dual roles of being both mentor and examiner. Students may be unfamiliar with learner-centred assessment approaches that employ diverse activities requiring holistic skills such as critical thinking, creativity, reflection, problem-solving, communication and teamwork (Brunker et al., 2019). Furthermore, the deliberate design of ELP activities and assessments require the time and expertise of skilled academic staff. Staff will need to be provided training in understanding the benefits and limitations of this approach, and both staff and students will require access and support to appropriate educational technologies and technical equipment. In summary, barriers to changes in teaching and learning practices will need to be overcome with appropriate support. Further research is required to identify how ELPs can be designed to minimise these factors while maximising the benefits offered by EL and authentic assessments.

For assessment to be both meaningful and purposeful it must encompass elements that acknowledge skills and knowledge development as both a process and product. Only then can educators develop appropriate student learning outcomes and life-long learning behaviours, while still meeting necessary accountability and certification requirements. The tacit knowledge and artistry required in teaching and learning cannot be captured or reduced to a set of tick boxes or limited summative assessment tasks. This connection between the process and product illuminates one of the exciting possibilities of ELPs and authentic assessments. The unique nature of ELPs lowers the possibility of students using Artificial Intelligence or contract cheating services when preparing assessment tasks. The EL process requires an individual experience to be the basis for reflection, abstract conceptualisation and then experimentation (Kolb, 1984). The process of developing and presenting an associated assessment task is therefore an individual process with an original product. This makes it very challenging for an Artificial Intelligence tool, or a person other than the enrolled student, to write a convincing submission. The application of ELPs to higher education more broadly offers an impactful way to move forward in our development and expansion of assessment practices while engaging with and responding to, technological change.

As teacher educators, continual refinement of practice in the profession must be demonstrated and role modelled to PSTs. This begins with understanding how authentic pedagogical and curriculum development can support new ways of thinking about the

purpose of assessment in ITE. This critical approach to contemporary education means that PSTs will not only fulfil employability expectations, workforce skills and competencies, but will be innovators of change who think in creative and flexible ways.

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