

Exploring the importance of intentional learning goals on work-integrated learning placement

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This study examines initial teacher education (ITE) student's utilisation of intentional learning goals from critical reflection as they enter and participate in a work-integrated learning (WIL) placement at a regional Australian university. Fourteen ITE students were interviewed on two occasions during a three-week placement in a rural or remote area to elicit greater understanding of the use of critical reflection in practice. Thematic analysis of student responses led to findings on the usefulness of devising learning goals for practice and how the application of critical reflection can be encouraged. These findings emphasise how students grapple with connecting university assignments and activities as meaningful for practice. It also highlights the benefits to professional learning when learning goals are employed. The findings of this study suggest the need for a shared understanding of the importance of critical reflection by workplace educators, WIL supervisors and ITE students.

Keywords: Critical reflection, learning goals, initial teacher education (ITE), work-integrated learning

Critical reflection is a vital aspect for professional educators whether experienced teachers, recently graduated teachers, or students participating in initial teacher education (ITE). Through critical reflection, ITE students employ strategies to make meaning from experiences, connect theory and practice and plan for future development opportunities (Ryan, 2012). Embedding critical reflection into curriculum is an important step in preparing students to be reflective professionals who can recognise and plan for their own professional learning needs (Australian Institute for Teaching and School Leadership [AITSL], 2011). Work-integrated learning (WIL) is an integral part of teacher education as it enables students to apply theory and practice and facilitates learning through processes of critical reflection. WIL is a pedagogy that supports students in transferring their university learning to the workplace and leverages these opportunities for critical learning of self, careers and expertise through purposely designed reflective tasks (Lucas, 2017).

To date, research on critical reflection in ITE through WIL activities has focussed on how to support students in developing their ability to meaningfully reflect on practical experiences (Cornish & Jenkins, 2012; Ryan, 2012; Whipp, 2003). Critical reflection is a process that can be taught to students yet requires careful scaffolding and strategic interventions (Coulson & Harvey, 2013). Critical reflection is a cycle that starts with reflection on an experience and closes with the development of learning goals to improve future practice (Ash & Clayton, 2009). What is often overlooked in this space, is the utility of forming those learning goals and examining their usefulness as students transition into a new experience and critical reflection cycle. Learning goals are specific professional development actions students devise as a priority for future learning opportunities. Such learning opportunities, those after the conception of learning goals, are often not part of the reflective cycle being taught in curriculum. Instead, the application of these formulated goals is left for students to take up outside their studies. There are many instances of units in curriculum where the links between activities and learning

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outcomes is critical. However, how students action learning goals, and whether they are useful for practice, remains an area still under explored.

WIL placements serve as an optimal time for closing the loop on critical reflection, to test learning or implement devised learning goals. Understanding how students value and implement intentional learning goals is important as ITE students do not always see the value of critical reflection for their future teaching practice (Cornish & Jenkins, 2012). This study aims to explore the extent to which ITE students use or draw on their their intentional learning goals while on placement. Specifically it asks: Do ITE students use critical reflection in practice? And, how do ITE students use learning goals in their practice? What is the impact of applying critical reflection on ITE students' practice? By investigating these questions, the study explores the benefits and barriers to developing intentional learning goals prior to placement and whether they are useful for learning professional development. Given the importance of industry and university stakeholders for supporting critical reflection (Lucas, 2017), this study also reflects on the role of stakeholders for supporting, developing and applying goals on placement.

In order to investigate the application of learning goals, this study adopts Ash and Clayton's (2009) 'Describe, Examine, Articulate Learning' (DEAL) critical reflection model. The DEAL model highlights three stages of critical reflection: description of experiences in a detailed manner, examination of these experiences with consideration of specific goals and finally, articulation of learning including goal setting. ITE students on a three-week placement in rural and remote locations were interviewed on two occasions and asked if they had used their critical reflection in practice, how they applied their learning goals, and the impact of this application on their professional development. In order to explore these insights, this paper first examines the literature, highlighting the future focussed nature of critical reflection. Next, the empirical research is presented, and implications discussed. The paper concludes with recommendations for how ITE students can be better supported to complete the loop of critical reflection through an engaged partnership between university educators and workplace supervisors.

LITERATURE REVIEW

Reflection and Critical Reflection

The concept of reflective thinking was first considered by Dewey (1933) who suggested that reflection was centred on making meaning from experiences to elicit a deeper understanding of the relationships and connections amongst ideas. Dewey (1933) asserted the need for action, stating, learning from experience requires the "...active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends" (p. 6). Dewey's notion of connecting experiences, ideas and action emphasises the future focussed nature of reflection. Later, the concept of reflection was theorised by Schön (1983) who suggested that reflection transpires both in and on action, with acting upon reflection being a key aspect of both. In reflective processes and writing, reflection is descriptive in nature, which supports us to find answers to an uncertain situation (Clarà, 2015). It assists to seek meaning within existing perspectives resulting in deeper examination (Jones, 2018). In sum, reflection is described as a process of thinking about experiences in order to help "...bridge the actual experience and the learning derived from that experience" (Harrison & Lee, 2011, p. 201).

Building on the foundational ideas offered by Dewey and Schön, Mezirow (1991) considered it essential that for reflection to be transformative for learning, there needs to be a process of deeper *critical* reflection. This criticality includes examining one's practice in connection with ethical, social, and

political consequences (Larrivee, 2008). Brookfield (1995) highlighted that for reflection to be considered critical, it must draw attention to the social and political dynamics that frame and guide our actions. Therefore, critical forms of reflection must consider other ideas, theories, experiences and social contexts to promote transformative practice. Dunne (2019), for example, found that through an emphasis of graduate attributes and theoretical knowledge, reflection was able to become more critical. Cornish and Jenkins (2012) agreed, explaining that the application of theory allows deeper reflection that transforms professional knowledge. Dunne, Cornish, and Jenkin's emphasis on reflective practice involving consideration of social expectations and theory, is central to critical reflection. In addition to consideration and connection with theory and expectations, Harrison and Lee (2011) emphasised the future-focussed nature of critical reflection, with the intention for purposeful action. Connecting reflection with social consequences and theoretical knowledge as well as a focus on future action moves reflection from description orientated, to more directed critical reflection.

Critical reflection has long been viewed as an important element of the ITE curriculum. This concept was first explored by Smyth (1989) who identified that critical reflection supported ITE students to situate teaching within broader social, political, and cultural contexts. Critical reflection was seen to encourage ITE students to 'think like a teacher' (Dinkelman, 1997, p. 35). Embedding critical reflection into ITE has been shown to encourage higher-order thinking (Yost et al., 2000), support the development of teaching philosophies (Blake & Hanley, 1998) and to challenge student teachers to consider how they might do something differently (Smyth, 1989). Critical reflection in ITE is also an effective tool for developing professionally relevant skills, such as analysing and finding solutions to issues in schools. Bates et al. (2009), for example, discovered that following the year-long implementation of critical reflection, ITE students noted the benefits for their future professional development, acknowledging the potential of critical reflection to develop students' professional competencies. Bates et al. (2009) also noted the role of critical reflection in connecting theory and practice, encouraging ITE students to make stronger links between what they learn at university and what they do in the classroom. Critical reflection has been seen to facilitate change in ITE students' practice and promote transformative learning that prepares them as future teachers (Liu & Ball, 2019). More recently, critical reflection has been highlighted as a core skill ITE students will need in their future profession, with the Australian Professional Standards for Teachers (APST) requiring teachers to self-reflect on their practice and develop professional learning goals (AITSL, 2011). These concepts illustrate the beneficial role of critical reflection in developing ITE students' professional capabilities through engaging in higher levels of thinking that connect theory and practice to transform their learning.

Given the benefits of critical reflection within ITE, over the last two decades, research has also been concerned with how to implement critical reflection in ITE curriculum. Much of this work centres on providing a framework to support students' developing critical reflection capacities (Whipp, 2003; Yost et al., 2000). Constructivist methods, such as dialogic and action research approaches, have been endorsed, as well as writing as a tool for making connections between theory and practice (Yost et al., 2000). Providing explicit scaffolding has been shown to be important for transforming learning, particularly at the higher levels of reflection (Whipp, 2003), to develop successful reflective practice (Cornish & Jenkins, 2012; Yost et al., 2000). Because ITE students do not always see the purpose of critical reflection as a skill they will need as teachers (Cornish & Jenkins, 2012), it is vital that educators support ITE students in developing critically reflective skills through structured and scaffolded curriculum to promote transformative learning.

Critical Reflection and Work-Integrated Learning

WIL is an umbrella term for a range of approaches that integrate theory and practice (Patrick et al., 2008). For the purpose of this paper, WIL is defined as:

An educational approach that uses relevant work-based experiences to allow students to integrate theory with the meaningful practice of work as an intentional component of the curriculum. Defining elements of this educational approach require that students engage in authentic and meaningful work-related tasks, and must involve three stakeholders; the student, the university, and the workplace/community. (International Journal of Work Integrated Learning, 2020, para. 2)

Reflection has been found to be an important aspect of WIL and related work-based activities, such as service learning and placements, connecting practice to course content at university (Bringle & Hatcher, 1999; Ebrall et al., 2008; Lucas, 2017; Lucas & Tan, 2014). Studies have found that critical reflection allows this connection to occur (Lucas, 2017; Wingrove & Turner, 2015). For example, Ebrall et al. (2008) observed that critical reflection has value for deepening students' WIL experiences. Maire (2010) stated that the effectiveness of practical experiences relies on critically reflecting on the experience. These establish the importance of critical reflection in WIL as it allows students to learn from practical experiences by connecting theory with practice and facilitates this process.

Further, critical reflection allows students to better understand the contributions of self, the workplace and university by bringing these concepts together (Lucas, 2017). Lucas (2017) stated that this integration provides a better learning experience for the student by enhancing "one's ability to understand and manage future events" (p. 264). Critical reflection in WIL supports students to shape future decision making and actions, by connecting ideas, personal development, and theoretical knowledge (Dunne, 2019). These concepts underpin the vital role of critical reflection in WIL, promoting the connection of theory and experience as key in developing students' professional capabilities and focus on future action.

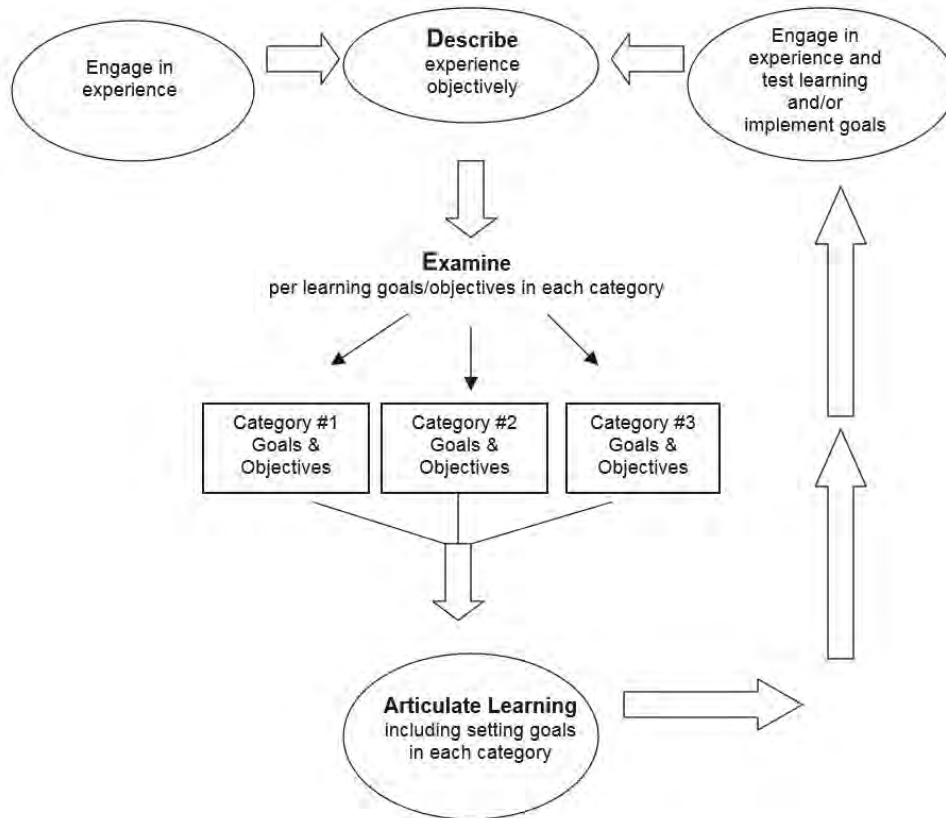
While the influence and role of critical reflection on placements has long been explored (Dinkelman, 1997; Rodriguez & Sjoström, 1998), it was not until more recently that the connection between critical reflection and ITE placements was more deeply examined. Watts and Lawson (2009) suggested that placement and practical opportunities empower ITE students to critically reflect at a higher level. Additionally, critical reflection on placement was seen by ITE students as an opportunity to improve practice (McCabe et al., 2009) and enhance development (Ryan, 2012). Jones (2018) supported this notion that WIL placements offer a challenging experience from which critical reflection can promote transformative professional learning for ITE students. However, while studies have discussed the impact of reflecting *on* or *after* practical experiences, little is known about what ITE students then do with this critical reflection to improve their subsequent practice.

A Framework for Critical Reflection

While there are several useful frameworks for implementing critical reflection in curriculum, this study draws on the practical, cyclical critical reflection framework proposed in Ash and Clayton's (2009) DEAL model (Figure 1). This model offers a simple, accessible approach that outlines the stages of critical reflection in order to scaffold students who are new to learning this process. It is also cyclical and iterative, suggesting that reflection builds on experience and continues as a process through the next experience and the next, to facilitate learning. The DEAL model outlines three steps of critical

reflection, with the first being to describe the experience. This description provides a foundation for meaning making by considering relevant details of the experience. The second step consists of students examining the experience in relation to learning objectives, for example the APST with regard to ITE (AITSL, 2011). The final step involves students articulating learning to provide deeper understanding and inform future action.

FIGURE 1: Schematic overview of the DEAL model for critical reflection.



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While the model depicts the implementation of these goals on future placements there is little evidence of this model applied specifically to teacher education. This study adopts the DEAL model of critical reflection as the theoretical lens through which data is collected and evaluated. The cyclical nature of the model is useful for the present study. ITE student data will be analysed with regard to the uptake of critical reflection goals that were identified.

METHODOLOGY

The context for this study was the University of Wollongong’s ITE program for Primary Education which requires students to complete a number of WIL placements across the four years of study. Students in their second year complete a three-week professional experience placement in a primary school. The second year pedagogy subject contains two parts: attending a local primary school, where the subject content is actually taught and where ITE students have opportunity to observe, apply and receive feedback on teaching a lesson and a three week placement a primary school local to their postal code. Prior to commencing the placement, students completed a formal critical reflection assignment

in the subject where they reflect on their teaching practice. WIL reports from placements in previous subjects, their supervising teachers and peer feedback are reflected on in this assignment to formulate intentional learning goals.

In part one of the subject, the topic of critical reflection was covered at length in lectures and tutorials. The formal critical reflection assignment was structured in pairs and the students were asked to create a series of lessons that were underpinned by metacognition that could be applied as one whole day of teaching. From this day plan, each student in the pair taught one of the hour-long lessons, while the other student recorded their teaching. The supervising teacher and the student recording also conducted a formal observation completing a written observation based on the Australian Professional Standards of Teaching (APST) using a rubric created by the Subject Coordinator that was built from the seven professional teaching standards for graduate teachers. Each ITE took their artefacts; the video of themselves teaching; and the two written reports, as well as past experiences and prior knowledge of theories to identify their own strengths and weaknesses. The students then created a professional plan for continued development that grew from areas of specific detail that the supervising teacher, peer and their self reflection on the video. The students were asked to discuss specific areas of their pedagogy and/or APST expectations, the plan to improve the identified areas and how they would measure any growth on their upcoming three week WIL placement in schools. In this way, the students moved through the DEAL stages of describe, examine and articulate learning and submitted their professional development plan the week prior to commencing placement. This allowed students an opportunity to use their plan in part 2 for their upcoming professional WIL.

A total of 30 students in the second year cohort decided to embark on a rural and/or remote placement, of that group 14 ITE students volunteered to participate in the study. The design of the research was qualitative in nature, adopting a case study approach to provide richly detailed data (Kervin et al., 2006). Once students were on their placements, the researchers carried out one-on-one interviews to elicit understanding of the participants' different experiences relating to critical reflection learning goals. Semi-structured interviews were employed (Hatch, 2002), guided by the research questions. The study sought and received ethics approval from the University of Wollongong's Human Research Ethics Committee (Ref no. 2011/401). Two 15-minute interviews were held with each of the ITE students, one halfway through their three-week placement and one after students had completed their third and final week of the WIL experience. Interviews were comprised of open-ended questions based on students' use of their critical reflection goals and were conducted over the phone. The participants' critical reflection assignments that were completed before the placement took place were also used as an additional data collection method.

With the written consent of participants, all 28 interviews were recorded and transcribed to allow for an in-depth thematic analysis. Thematic analysis focuses on the perspectives and experiences of participants, promoting higher interpretation of the data to produce themes (Vaismoradi & Snelgrove, 2019). Transcripts were analysed to identify emerging themes and categories using open coding, an approach by which ideas and concepts are developed from the data rather than imposed upon it, emphasising student perspectives (Blair, 2015). In order to enhance the credibility and rigour of the findings, member checks and analyst triangulation were completed by all three researchers (Yanow & Schwartz-Shea, 2015). In addition, responses provided by ITE students during the interviews were triangulated with their critical reflection assignment.

FINDINGS

The findings of this study revealed various ways students grappled with applying or were able to apply their learning goals on WIL placement. Aligning with Ash and Clayton's (2009) DEAL model, completing the loop of critical reflection was found to be influenced by a number of factors, clustered around several common key areas: intentional use of learning goals, barriers to applying learning goals from critical reflection, benefits of applying learning goals from critical reflection, and enacting learning goals.

Limited Initial Use of Learning Goals

Analysis revealed that within the first week of placement, none of the 14 ITE students had explicitly referred to their professional learning goals identified through critical reflection. This was due to several identified barriers such as a lack of time and a perceived disconnect between university and practice, which are expanded on below. However, while nine of the students had not looked at their goals nor thought about them, five students stated that they had thought about their goals during the first week of placement without explicitly referring to their critical reflection. This was evident when Student G stated, "I haven't, but it's actually been at the back of my mind. I just haven't looked at it." This was further evidenced when Student F stated, "...it's already ingrained in my practice" so, "I don't look back on it because I've already got it."

In contrast, analysis of the post interviews revealed that by the conclusion of their professional experience placement the number of ITE students who had explicitly referred to and had intentionally applied their goals had risen from zero to 11. The discussion about these goals in the first interview may have 'refreshed' students memory of these goals and reminded them to action them. For example, Student A had previously forgotten about their planned goals but upon revisiting their reflection, they, "had a look and I set four main goals...I feel I definitely focussed more on this particular prac (practicum)." Similarly, Student E stated, "Going back and looking at it just actually made me think, 'Oh that's right,' and then I was able to actually implement them the past week." The goals that students set for themselves could have been something detailed, such as becoming more proficient in locating teaching outcomes in the national curriculum or more general, like improving their teacher voice in the classroom. The remaining three students had still not used their intentional learning goals in any capacity during their placement. For these students, their in-class experience took place after the subject content had been completed and these students seemed to fail to make the connection between university assessment and WIL placement experience.

Barriers to Applying Learning Goals from Critical Reflection

ITE students disclosed various barriers that prevented them from applying their identified learning goals from critical reflection while on placement. The most apparent of these barriers was the *perceived disconnect* between what is done at university and what students do in practice. This was evident when students stated that they had simply forgotten they had completed their critical reflection assignment, with Student A stating, "Because I've completely forgotten about that actually." Similarly, Student G stated, "then I've just forgotten about it completely and I'm in school mode." The perceived disconnect between university and practice was further highlighted by Student N when they stated, "I guess I kind of separate assignments, which I think of is like theory, and that like when I'm actually teaching." Student E further supported this notion of disconnecting university learning and practice stating:

because the thought of it as simply like an assignment that you just had to do, get your mark, try to pass, kind of thing rather than not taking it seriously as actually this is going to help me become a better teacher.

These findings illustrate that even though these students were taught over several lessons to use their goals on placement, the students' perception of university and practice as separate activities was a barrier in applying critical reflection learning goals on WIL placement.

It also became evident that poor time management, a professional skill, is a barrier for ITE students in applying their learning goals from critical reflection, with Student K stating, "To be honest, no, I haven't really had any time yet." This was reinforced by Student F's statement, "Honestly, just haven't really had the time" when asked why they had not used their goals from their critical reflection plan. While the activities and learning process clearly stated and showed the students how to use their intentional learning goals on their placement, 50% of the ITE students noted that there was no time for these goals due to their focus being more on the day-to-day requirements of placement, such as lesson planning. This was evident when Student C said, "You're so caught up with the lessons you have to prepare and not necessarily the broader picture" which also shows that the students were not making a mindful connection between theory from their university learning and their practice in the classroom. In fact, Student G made a similar statement in saying, "Because when you go into the classroom, there's so many things that you're thinking about and focusing on, that I sort of forget that my improvement is something I should be thinking about." This demonstrates that the time it takes ITE students to prepare for the daily requirements of practice, prevents them considering and working on their intentional learning goals as identified through their critical reflection. As such, the use of a reflective journal may have assisted students in addressing their learning goals on placement, prioritising the need for continuous reflection.

The final barrier that became evident is ITE students' perception that their critical reflection lacked relevance and enough depth to apply their learning goals in practice. Analysis of the data suggested a mismatch between the context for which the goals were written and that in which the goals were applied. Student J stated, "My school only has six kids, so it's not really like a super behavioural thing, like they're all pretty good" when discussing their goal to work on behaviour management. This was echoed by Student D who stated, "everything we've learnt doesn't apply to the context that my school is in." By the time of the post interviews, feedback and grades, for the critical reflection assignment students completed at university, had been recently released. As a result of this, students expressed that they felt they could not use their goals from critical reflection as they were not detailed enough nor worthy of use. This was evident when Student K stated, "I don't think I actually made a very detailed enough plan. It wasn't something that I felt that I could really use. It was more just advice to myself, that I already knew." This was echoed by Student J who discussed a similar barrier in applying their goals saying, "I guess my goals were a little bit, kind of broad, so maybe I could have broken them down a little bit more." This perception from students on the quality of their reflection as a barrier in applying their goals, highlights the key role of connecting university and practice. It also indicates the importance of students receiving timely feedback on their goals and being taught the skills of reflection as a key component of what they are doing in practice.

Benefits of Applying Learning Goals from Critical Reflection

A number of benefits of applying goals from critical reflection became apparent. The first of these was the role of ITE students' goals in providing a focus for their PEx placement. When detailing why the

critical reflection plan had helped, Student G stated, “because I think that it made me pinpoint what I needed to improve... I think that made me focus and then set more achievable goals and improved my teaching.” This concept was reiterated by Student F who indicated that their learning goals, “were the themes that I want to improve. And so that was what my teacher and I focused on while I was out there and was able to learn the skills and strategies to improve those.” This highlights the importance of ITE students critically reflecting and planning goals prior to their WIL experiences as they provide a focus for improving practice.

The second benefit of applying planned learning goals was connected to an improvement of practice. This was evident in Student A’s statement that once they had applied their goals from critical reflection, “I think a lot of my teacher feedback, you know, was definitely more positive ... I had less things that needed to be worked on that she had mentioned, and I do just feel it as well.” Similarly, Student E also reported that once they had applied their planned goals, feedback from their supervising teacher was more positive regarding their improved practice stating, “even my teacher was saying to me that she saw so much growth within this past week compared to the first two weeks...definitely more confident.” Student J also recognised the benefit of improved practice stating, “I think the ways that I taught definitely got [sic] improved” after they had applied their goals. These findings demonstrate that intentionally applying their planned learning goals from critical reflection allowed students to improve their practice.

ITE students also benefited in terms of their professional development from applying their critical reflection goals, with many detailing their ability to think and act ‘more like a teacher’ (Dinkelman, 1997). Student H made it apparent that having their planned learning goals better prepared them for professional conversation with their supervising teacher and other teachers. These professional conversations with colleagues are requirement 6.3 of the APST (AITSL, 2011) – “I had some knowledge when I was talking to her and it wasn't like I was coming in completely blind to it... just have that knowledge when I discuss it with teachers as well.” This was echoed by Student F who stated, “but just to know your goals because once you know those, you can talk about them to all the teachers around you and just go from there.” Additionally, Student L’s statement that applying goals “...made me think of different ways to approach situations” demonstrates an improvement in their professional ability to think like a teacher. These findings highlight the notion that applying planned learning goals from critical reflection supports ITE students’ professional development.

Flexibility for Enacting Learning Goals

A greater analysis into students who enacted their planned learning goals pointed to two key areas that enabled them to work on their goals from critical reflection – informality and flexibility. First, a key theme emerged around the informal application of planned learning goals. While critical reflection may have been perceived as a formal process by ITE students, many used informal methods when enacting their goals. For example, Student M stated, “...just made little notes just from what I said throughout it... I've just simplified it so I could, so I didn't really have to sift through it.” Student G echoed this informal application of their goals stating, “I sort of had it all written. And I've got that stuck in the front of my folder.” These findings demonstrate that students who are enacting their intentional learning goals change their formal critical reflection into a more easily accessible, manageable but equally important format.

The second area that enabled ITE students to enact their planned learning goals was the flexible application of their goals to suit the context. Of the ITE students who successfully applied their planned

learning goals, a number referred to the need for their goals to be adaptable. This was evident in Student K's statement, "I think I've been trying to implement some of the goals that I have, just like without specifically following it." Student I echoed this notion stating, "Yeah, I was probably implementing the sort of the things I wrote but just not specifically I guess." This highlights that while students had identified specific strategies they would use to address their goals in practice they had found that they were addressing their goals more flexibly in relation to the content. For example, rather than specifically referring to their critical reflection assignment, Student I stated that they adapted their approach to addressing their goals each day as a result of their practice. In addition to this, Student L highlighted the need for their goals to be flexible so that they could be enacted in any context, "Relating how your critical reflection can be changed into that kind of area that you're going into would be a massive thing." These statements emphasise the need for intentional planned goals from critical reflection and the application of these goals to be flexible so that they can be enacted in a variety of contexts.

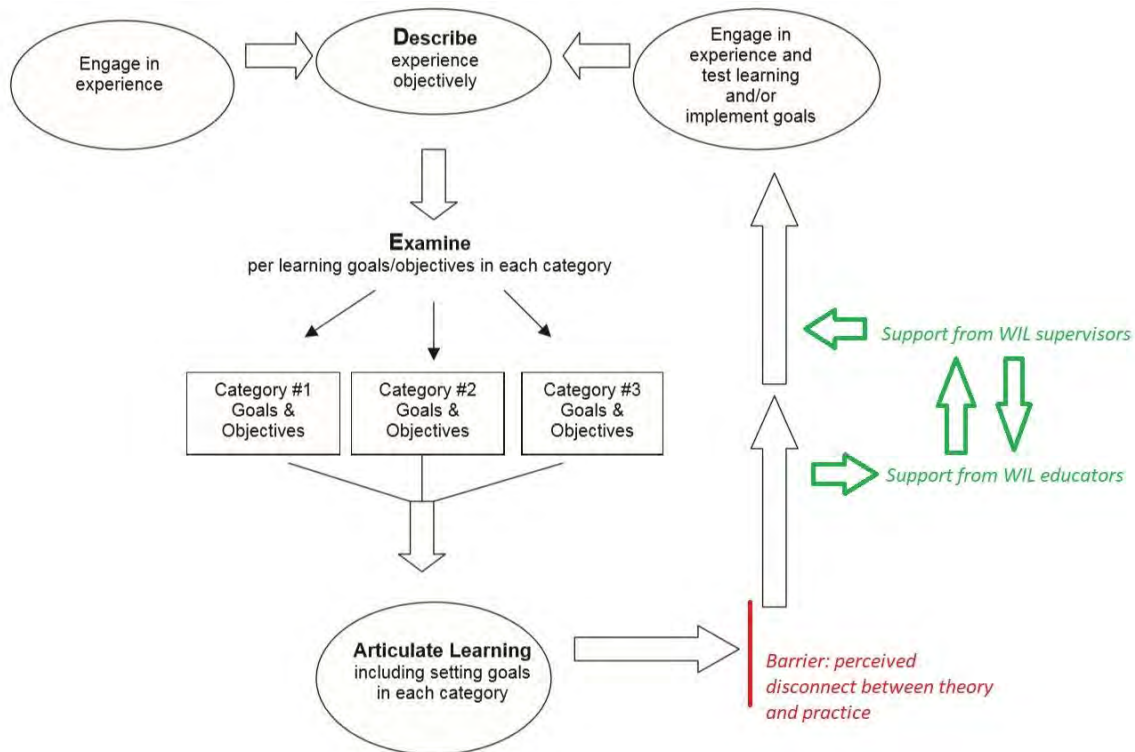
DISCUSSION

The findings of this study demonstrate mixed results, with ITE students initially disconnecting a university assignment from what they do in practice. This disconnection meant that students initially struggled with or overlooked the purpose of applying their critical reflection whilst on WIL placement. Potentially, this structure of the unit could be further examined however, there is also an issue of student concentration, memory, and understanding the importance of critical reflection in their career that starts with their WIL placements. Over time, and perhaps with prompting by the researcher's questions in the first interview, ITE students did refer to their learning goals from critical reflection and many began to take steps to operationalise their own professional development. Given that previous research has noted it can take up to twelve months for students to see the value of critical reflection for their professional development (Bates et al., 2009), it is not surprising that the ITE students in this study did initially struggle with applying critical reflection on a three-week placement. These findings suggest that there is more work to be done to clarify the meaning behind devising learning goals but also in the ways that university and industry stakeholders support students to enact their professional development plans. Figure 2 below illustrates the point of contention on Ash and Clayton's (2009) DEAL model – where the barrier lays in the perceived disconnect for enacting goals. The figure also highlights the importance of stakeholder support for closing the loop in critical reflection.

Usefulness of Learning Goals Set Prior to Work-Integrated Learning Experiences

Examining WIL experiences with a focus on future action is a key aspect of critical reflection (Harrison & Lee, 2011), with goal setting being a vital aspect of future development. The findings of this study suggest that goals developed through critical reflection prior to practical placement can be useful for ITE students. Findings suggest that students' practice and professional capabilities improved with the use of planned learning goals as they provided a focus for development while participating in the WIL experience. This transformative learning is encouraged by the use of critical reflection, promoting change in ITE students' practice that prepares them as future teachers (Liu & Ball, 2019). Setting formal goals during critical reflection on past experiences is an effective method for supporting learning as it establishes a foundation for focussed professional development in future WIL experiences. Examining past experiences and articulating learning in order to set future goals, aligns with the professional expectations of the discipline (Ash & Clayton, 2009). Although a small number of students were unable to apply their goals on placement, those who were able to apply their goals reported positive impacts. This suggests planned learning goals are useful tools for learning on WIL placement.

FIGURE 2: Revised schematic overview of the DEAL model for critical reflection.



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Encouraging Initial Teacher Education Students to Set Learning Goals Through Critical Reflection

Although the value of setting and applying goals was reinforced in this study, the findings also suggest that ITE students do not always see the purpose of critical reflection within their practice and future as professional educators (Cornish & Jenkins, 2012). In line with this concept, we found that ITE students placed greater importance on the daily requirements of placement, contributing little time to applying their planned learning goals. This creates a barrier for ITE students in accomplishing critical reflection, as the loop is left incomplete with students failing to move beyond setting goals to implementation (Ash & Clayton, 2009). While critical reflection has the potential to improve learning and development by bringing together tertiary educators, students and workplace supervisors (Lucas, 2017), it can be derived from the findings that ITE students require encouragement and support to understand and value these connections. For this reason, it is pivotal that ITE students are encouraged by WIL educators and their supervisors on placement to set and apply their critical reflection goals on their WIL experiences. It is also the responsibility of these professionals to continue to scaffold and assess once the WIL experience has completed so that students actually use their personal professional development plan.

Supporting the Link Between University and Placement

Reflecting on the cyclical nature of Ash and Clayton's (2009) DEAL model of critical reflection, we found that there are a number of elements that impact students moving from setting goals to

implementing those goals in WIL experiences. Our findings show that without the active engagement of the WIL educator providing dialogue and opportunity around the goals, ITE students perceived there to be a disconnection between reflective processes in university and practice. This perceived disconnection was a barrier in students' ability to implement their planned learning goals with the perception that a lack of depth in their critical reflection prevented them from applying their goals. This demonstrates ITE students' inability to understand the potential benefits of applying their goals in practice regardless of the grade they received for their critical reflection assignment. However, WIL educators are vital in scaffolding reflective practice (Yost et al., 2000), with this role being a crucial influence on students' ability to close the loop of critical reflection. In order to successfully implement their planned learning goals from critical reflection, the findings show that students may require support from WIL educators to bridge the perceived disconnect between university and practical placement.

ITE students' workplace supervisors, in this case, supervising teachers, are another vital influencer on students' ability to move from setting goals to implementing them in practice. Supervising teachers were found to have a profound impact on ITE students' WIL experience, including providing direction on how ITE students can address their set goals and feedback on their goal application. Although the notion of connecting theory and practice is central in critical reflection and WIL (Bates et al., 2009; Lucas, 2017; Patrick et al., 2008), ITE students still face barriers in applying their goals from critical reflection. If WIL educators facilitate the connection from theory to practice, it is vital that supervising teachers enable the uptake of this connection when ITE students are in their classrooms. Support from supervising teachers can assist ITE students in overcoming barriers to applying their critical reflection goals by further bridging the perceived disconnect between university and practice.

Critical Reflection and Learning Goals – Informal Format

While critical reflection is often embedded in formal dialogic and written formats (Yost et al., 2000), it is valuable to consider how goals set through critical reflection may be presented more informally to allow easier application on WIL experiences. The findings show that ITE students who successfully implemented their goals recognised the benefit of taking their formal critical reflection and presenting it in a more informal format. For example, ITE students analysed their formal critical reflection assignments to identify their key goals, writing these goals on Post-it notes[®] to display in a more accessible format, such as a diary. Displaying their intentional learning goals in a diary or folder indicates that future students may benefit from the use of reflective journals to support the application of their learning goals. This demonstrates that the format in which goals are presented influences ITE students' ability to move beyond setting goals to implementing them on WIL experiences (Ash & Clayton, 2009). To the point, the format in which goals from critical reflection are presented influences ITE students' ability to apply them in practice, with informal methods proving beneficial as enablers of goal application. These formats may have been successful enablers as they allowed reflective practice to align with the individual contexts of each student (Harvey et al., 2019).

Flexibility

This study has found that goals that are set through critical reflection need to be flexible in order to allow successful application in practice. ITE students noted that having goals which could be adapted to any context enabled them to implement their goals on placement. The findings indicate that ITE students with more narrow goals ascribed the school context as the reason for having not applied their goals in practice. This notion is particularly important for ITE students participating in rural and

remote placement as there is a need to prepare ITE students for diverse contexts of rural and remote areas (van Rensburg et al., 2015). Students also need timely and relevant feedback on their goals prior to placement, to ensure they are written with flexibility and with necessary depth to make them meaningful. ITE students must be prepared to adapt their critical reflection goals to the context of the WIL experience, with appropriate and flexible goals to enable their application (Jin et al., 2013). Therefore, the types of goals set by ITE students impacts on their ability to complete the loop of critical reflection, moving from articulating and setting goals to implementing them in practice (Ash & Clayton, 2009). Goals that are set through critical reflection prior to WIL experiences must be flexible to allow for their successful uptake by students in practice.

IMPLICATIONS

The findings of this study indicate that when planned learning goals are utilised this can result in a positive impact on ITE student's practice, therefore, it is recommended that ITE students are encouraged to plan goals through critical reflection prior to commencing professional placement. To avoid these learning goals being broad, educators should support students to write intentional goals that are actionable and relevant. Students need assistance to write relevant goals to the teaching context that they are about to be immersed in. Further implications is determining how we teach students to write goals about the placements of which they do not know the context (the classroom, the children, the supervising teacher, the workplace culture, the community, etc). Additionally, it is suggested that ITE students consider the flexibility and appropriateness of their goals when planning to ensure they can be applied to the diverse contexts of WIL placements in ITE. It is also suggested that ITE students require support from initial teacher educators and their supervising teacher to reconceive placement as a professional development space, with critical reflection including intentional goals being part of this.

The implications of our findings suggest that in order for ITE students to successfully apply critical reflection in practice, initial teacher educators and supervising teachers must work in partnership. It is recommended that initial teacher educators support the connection between theory and practice by encouraging the involvement of supervising teachers, while supervising teachers are advised to become aware of ITE students' goals and support their application of them while on placement. More broadly and given the importance of this, it is recommended that WIL educators and workplace supervisors across all disciplines work in partnership to communicate the importance of setting and applying goals through critical reflection for student learning and professional development.

CONCLUSION

This study set out to explore the utilisation of critical reflection and planned goals by ITE students on practical placement and the impact of this application. It found that initially applying learning goals is not the focus for many students as they learn to orient themselves to the WIL context. Further, students may not easily connect university-based assignments to what they do in practice or as useful for their learning on placement. However, for those who were able to apply their learning goals, they claimed positive implications for their professional development. This study highlighted several barriers and benefits of teaching students' critical reflection and its usefulness when taken up on placements. It found that for goal application to be successful a number of enablers must be considered including the influence of WIL educators, workplace supervisors, types of goals set, and the intentional implementation of these goals. Building on the work of Ash and Clayton (2009) in the DEAL model, this study reinforces this work but also expands on the importance of and influences on closing the loop of critical reflection.

In order for critical reflection to successfully connect theory and practice, WIL educators, workplace supervisors and ITE students must collectively value the importance of critical reflection and understand its place in WIL experiences. This starts with ensuring the content of course units and the assessment processes are connected in a way that make it possible for students to reflect on their set intentional learning goals. While articulating professional goals through critical reflection is effective, to allow their application in practice ITE students require the shared support of their university educators and workplace. Partnership between universities and placement settings ensures that WIL experiences are reconceptualised as a place of professional growth for ITE students. While this research was limited to one subject at one institution, it provides important insights into how ITE students can be supported to intentionally apply their critical reflection in WIL experiences. Future research could explore alternative disciplines, students in varying year groups or institutions across nations.

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