

Positioning critical reflection within cooperative education: A transactional model

PATRICIA LUCAS¹

Auckland University of Technology, Auckland, New Zealand

Proponents of cooperative and work-integrated education embed critical reflection in their programs to enhance the likelihood of an experience resulting in meaningful learning for students. Theoretically framed guidelines in the literature on how to determine and facilitate critical reflection in practice remains very limited, highlighting the importance of developing ways of improving stakeholders understanding and practice of critical reflection within these complex learning arrangements. Data analysis of a qualitative case study exploring critical reflection in a specific cooperative education context enabled the development and design of a transactional model to illustrate the positioning and functionality of critical reflection. The theoretical underpinnings for this model are derived from John Dewey's educational writings. To date no published diagrammatic representations have been found to assist with the development and enhancement of our understanding of the complex dynamics and interplay of factors that influence and contribute to the practice of critical reflection, and the consequences of these transactions. (*Asia-Pacific Journal of Cooperative Education, 2017(3), 257-268*)

Keywords: Critical reflection, work-integrated learning, transaction, qualitative research, cooperative education, transactional model

Critical reflection is strongly advocated as being an integral part of cooperative education, a form of work-integrated learning (WIL). Indeed, critical reflection is embedded in a range of higher education workplace based learning programs including clinically based education, teaching practicums, business internships and agricultural fieldwork, to name but a few. Seminal authors in the field of education, and their contemporaries, have highlighted the qualities of critical reflection within their writing. The qualities of critical reflection are presented and argued within the writings on experiential learning (Dewey, 1938; Kolb, 1984/2015), development of professionalism (Schön, 2009/1983), linking theory and practice (Argyris & Schön, 1974; Billett, 2009; Billett & Choy, 2011; Dewey, 1938), development of reflective thinking (Dewey, 1997/1910) and life long learning (Billett & Choy, 2011; Dewey, 1938). Critical reflection is believed to enhance the likelihood of experience leading to learning, can assist with the creation of new knowledge, and potentially have an impact on future behaviors and practices of individuals, and their communities.

Many authors concur that critical reflection is ordained to be a higher level of cognition (Cowan, 2014; Harvey, Coulson, Mackaway, & Winchester-Seeto, 2010; Lucas & Fleming, 2012; Smith, 2011). Accordingly, they contend that this form of reflection is complicated and quite often challenging for the learner to practice, and the teacher to facilitate (Hatton & Smith, 1994; Smith, 2011). In addition, within the context of cooperative and work-integrated education, there is the role the work-place supervisor or mentor might play in facilitating critical reflection. Although there are countless reflective strategies available (Fleming & Martin, 2007; Harvey et al., 2010) theoretically framed guidelines in the literature on how to determine, facilitate and assess critical reflection in practice remain very limited (Harvey, Coulson, & McMaugh, 2016). This disparity, in particular the facilitation of critically reflective practices, prompts the writing of this paper. The aim of this paper is to provide an insight into the development of a theoretically based, functional model positioning critical reflection within a cooperative education framework that also has relevance to other forms of WIL.

¹ Corresponding author: Patricia Lucas, patricia.lucas@aut.ac.nz

The transactional model of critical reflection presented in this paper is both dynamic and progressive in its interpretation, and is pragmatically orientated to enhance understandings of the critical reflection processes and practice for all three stakeholders (student, university, workplace) within this specific learning context. A strength of the model lies in its theoretical underpinnings that help overcome some of the limitations of critical reflection by enabling the development of a broader and deeper understanding of how it can be utilized by all stakeholders. Furthermore, this model actively responds to Harvey et al. (2010) and Harvey et al.'s (2016) invitation to develop models, with sound theoretical foundations, for encouraging improved understandings of the role reflection plays in cooperative and work-integrated education curricula.

COOPERATIVE EDUCATION – A COMPLEX LEARNING ARRANGEMENT

Cooperative education programs are represented as complex learning arrangements reliant upon the demonstration of collaboration and alignment between the student, workplace and university (Fleming, 2015). Therefore, these programs are designed and implemented in such a way that the students are proactively encouraged and managed to become advanced independent learners within this particular learning arrangement (Cooper, Orrell, & Bowden, 2010). The curriculum, especially the nature of the “content” to be learnt through cooperative education, is determined by the student, based upon the context of the specific workplace environment, and their personal (usually career driven) and academic goals. Educational literature presents three broad perspectives to understanding curriculum orientation that are utilized by educational systems to support student learning. These three curriculum orientations include *transmission*, *transaction* and *transformation*, with each taking into account specific learning contexts and a range of educational practices (Miller & Seller, 1990; Van Gyn & Grove-White, 2011) and expected learning outcomes (Harvey et al., 2010).

Cooperative education practices, specifically those imbued with experiential learning and critical reflection concepts are situated within the transactional and transformative curriculum orientations where the student is positioned as the driver of the learning within a partnership or in alignment with educators located both within the university and industry (Van Gyn & Grove-White, 2011). Transactional orientations are learning processes where the student is actively engaged. This perspective aligns with an epistemology of constructivism; a view of learning where the learner constructs new knowledge informed by earlier experiences (Dewey, 1938). Therefore, high value is placed on past and present experiences to support the construction of new knowledge that is meaningful and personalized to the individual learner. However, becoming more knowledgeable is only a part of the overall experience, as it also includes emotions, aesthetics and ethics (Elkjaer, 2009). Transformative orientations, also referred to as being emancipatory, embrace the social, political, ethical and moral dimensions of learning relying on the capacity of the learners to become autonomous, independent thinkers and agents for social change. In contrast to transactional and transformative orientations, transmission orientation positions the student in a passive role as the recipient of knowledge from the educator, who systematically attempts to transfer it (Van Gyn & Grove-White, 2011; Zepke, Nugent, & Leach, 2011). Cooperative education endeavors to move the student beyond transmission to becoming more self-determined life-long learners, who are prepared for a future of work, and life, that by its very nature, is unpredictable and difficult to plan for.

Experiential learning philosophies dating back to the work of John Dewey predominately in the early 1900s, and developed further by educators such as Kolb and Schön, underpin much of the foundational theory for cooperative education and other work-integrated education approaches. The Deweyan influence on the model presented in this paper stems from his education philosophy where he made the following key points:

- “The environment... is whatever conditions interact with personal needs, desires, purposes, and capacities to create the experience which is had” (Dewey, 1938, p. 44)
- “The two principles of interaction and continuity are not separated from each other. They intercept and unite. They are... the longitudinal and lateral aspects of the experience” (Dewey, 1938, p. 44)
- “All human experience is ultimately social: that it involves contact and communication” (Dewey, 1938, p. 38)

These three quotes from Dewey illuminate the notions of education as an ongoing social experience having longevity, breadth and depth, and is reliant on the interactions and communication of the individual within the learning environment. A key challenge for students with learning through experience, is knowing *what to learn* and *how to learn*, as there is no set curriculum, and what is available to be learnt may be unpredictable or even difficult for the student to see or identify as a learning moment or event.

It is well recognized by cooperative education proponents that critical reflection plays an integral role in enhancing the likelihood of an experience leading to learning (Eames & Coll, 2010; Fleming & Martin, 2007; Harvey et al., 2010; Lucas & Fleming, 2012; Martin & Fleming, 2006; Raelin, Glick, McLaughlin, Porter, & Stellar, 2008; Van Gyn, 1996). Accordingly, there are many ways to employ critical reflection within a cooperative education program, such as reflective journals, e-portfolio content, reflective writing within reports or essays and reflective conversations with supervisors or in student groups. The practice of critical reflection within the context of a cooperative education program has the capacity to enhance several aspects of the students learning experience. These aspects might include all or many of the following:

- bringing together students’ workplace and university learning
- contributing to greater depth of understanding and learning
- establishing opportunities to explore a deeper understanding of a particular workplace experience
- allowing for freedom to explore and experiment with ideas and knowledge
- the active construction of one’s ‘new’ knowledge,
- developing attitudes that value personal and intellectual growth,
- and having the potential to impact on future practices and learning.

THE PURPOSE OF A MODEL

There exists a degree of confusion around the terms model and framework (Rolfe, Jasper, & Freshwater, 2011). Taking the lead from Rolfe et al (2011), the term model referred to in this paper denotes the philosophy and theoretically defensible assumptions that support a specific approach to reflection. This is akin to the use of the term methodology when explaining ones’ research approach. Whereas a framework, similar to methods in research, is a specific set of steps or phases used to provide guidance and support for reflection. Complex concepts, underpinned by specific theory can be presented in a visual format to help make it become more accessible and comprehensible to the teacher and learner. It can provide a platform for

on going explanations, discussions and deliberation. Much like a road map or mind map, a visual model can guide the reader from one place to another with a tangible, actual overall picture, and if possible many of the finer details. Although a map can be easy to follow it is best supported by a clearly delivered description or written explanation.

The value of a learning model, as presented in this paper, is to afford all stakeholders (student, academic, industry) with an opportunity to clearly visualize a theoretical and practical conceptualization of critical reflection, in order to enhance how they can apply it in practice. This is especially important when the theoretical concept is perceived to be complex, and challenging for students to understand how it might be used most effectively. Teachers and students alike can benefit from being able to use a visual representation particularly if difficult or complex sets of relationships, as seen with cooperative education, are to be manipulated and understood. If a person is able to manipulate these complex ideas through visualization it may lead to greater possibility of understanding and retaining information, and an increased capacity to examine individual components of a complex arrangement. Utilizing a model for this type of understanding encourages and promotes a deeper approach to learning through reflective practices.

To date there is a paucity of research in the field of cooperative education, with a focus on understanding students' experiences of practicing critical reflection, particularly in the context of sport cooperative education. This paper draws upon the findings of a research study broadly focused on exploring how sport cooperative education students experience the process of critical reflection (Lucas, 2015). A conceptual model emerged from this research and was developed to illustrate how critical reflection can be positioned within a cooperative education program. This model may assist cooperative education facilitators with student preparation prior to their work placement, in that the model provides a visual means for increasing students' understanding of how critical reflection can enhance their cooperative education learning experience (Tennant, McMullen, & Kaczynski, 2010). The focus of this paper is to present and explain a model, positioning critical reflection as a learning tool in a complex learning environment, such as cooperative education.

RESEARCH DESIGN

The highly contextualized nature of this research was well suited to a qualitative case study methodology. This approach is commonly used in work integrated learning, as well as, in many other areas of education research. The strategic value of the case study lies in its ability to highlight what can be learnt from a single case (Schram, 2006), while readers are invited to draw inferences that may be applicable to their own situation (Lincoln & Guba, 1990). The boundaries for this intrinsic case study (Stake, 1995) are situated around one cohort of third year tertiary sport students who had recently completed and passed all assessments contributing towards their year-long cooperative education program. To enhance trustworthiness of this case study multiple sources of data were collected. These took the form of cooperative education documents, a questionnaire, interviews and student reflective journal entries. Ethics approval was sought and gained from the relevant ethics committees. To protect all identities all data was numerically coded.

The cooperative education program completion interview data and their respectively aligned academic year-long reflective journal entry data were reconstructed to form six unique research narratives. Utilizing John Dewey's (1938) education theories, in particular his philosophies related to experience and reflective thinking, each of the six research narratives

were subjected to thematic analysis. This type of analysis is consistent with most forms of qualitative research where engagement in some form of thematic coding occurs (Braun & Clarke, 2006, 2013). From the thematic analysis of the data from within, between and across each narrative, several interconnected and interactional themes, related to critical reflection as a learning strategy within cooperative education, emerged. The model presented in this paper was shaped and formed as the data analysis phase of the research progressed.

THE TRANSACTIONAL MODEL OF CRITICAL REFLECTION

Informed by Dewey's (1997/1910, 1938) theory of experience and education, analysis of the research narratives produced four overarching themes with several subthemes. These overarching themes included; learning environment, learning experiences, learning self and utility of critical reflection as a learning strategy. It is within the latter theme where the subtheme, the place of critical reflection in cooperative education, is situated. Together these themes support the tripartite learning process that lies at the heart of cooperative education thus providing a foundation from which this model of critical reflection was developed.

To date, no published diagrammatic representations have been found to assist with the development or enhancement of our understandings of the complex dynamics and interplay of factors that may contribute towards the positioning and understanding of critical reflection within the cooperative education context. The transactional model of critical reflection (shown in Figure 1), although structurally simple, provides a starting platform for further educational dialogue. This will progress the understanding of critical reflection in complex learning environments and consequently, show how it might be better taught, learnt, assessed and researched. It also provides a platform for understanding and demonstrating the versatility of critical reflection in drawing together the multiple dimensions of the cooperative education experience that is continual, cumulative and progressive.

This model highlights the place of critical reflection within a cooperative education program generic structure as it brings together and interrelates each of the three key contributors, that is, the student, workplace and university, within the learning arrangement. The interrelated nature of this model aligns with the collaborative nature of cooperative education where the student, university and workplace interact with each other for mutual benefit (Cooper et al., 2010). In this model each contributor is dynamic in his, her or its own right; however, within this educational arrangement transaction through interaction and collaboration occurring between each contributor. The overlapping areas between each contributor represent dynamic transactional drivers of critical reflection within a cooperative education program structure. The student-workplace interaction (E) provides opportunities for experiences to occur forming the basis of verbal or written critical reflection, such as a presentation, reflective journal or reflective element within a report or e-portfolio. Interactions between the university and student (A) includes the implementation of specific pedagogical approaches to actively encourage critical reflection, as well as the provision of academic supervision for guidance and support with reflective practices, and other academic requirements. Lastly, the university-workplace interaction (TP) depicts how theoretical knowledge from the university when applied to workplace activities, and vice versa, generates and perpetuates opportunities for critical reflection.

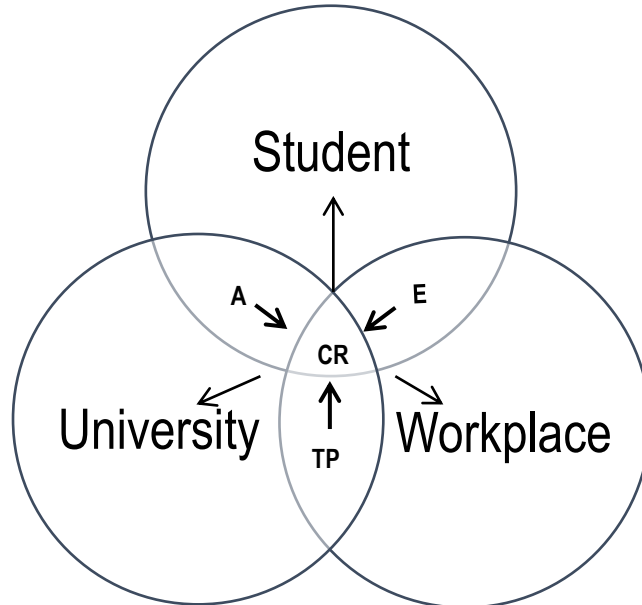


FIGURE 1: A transactional model of critical reflection (CR) within a cooperative education program structure where E = experience, TP = theory and practice, A = assessments/pedagogy/academic supervision (Lucas, 2015)

This multidimensional transactional model is interpreted from two orientations: firstly, by identifying factors that influence critical reflection (inwardly pointing arrows) and, secondly, by recognizing the influence critical reflection may have on each learning community (workplace and university) and the individual learner (outwardly pointing arrows). Examining this model from the transactional areas (E, A, and TP) towards the centre (CR) suggests these interactions may influence students' perceptions, practice and engagement with critical reflection. The practice of critical reflection brings together each of the key contributors, enabling students to better understand the workplace, self and university within the context of cooperative education. The orientation viewed from the centrally positioned critical reflection towards each contributor (student, workplace and university) highlights the consequences and actions resultant from engaging in critical reflection. Critical reflection may bring about changes in *student* perceptions and understandings to enable planning of future actions. New ways of thinking and being, stimulated through critical reflection, enabled active student participation with the *workplace* community with the potential for the student to initiate or influence change in workplace practices and culture. The practice of critical reflection contributes towards development of the *university* graduate profile and may enhance the university's reputation for developing students who are not only work and career ready but also future ready (Fleming & Haigh, 2017), for the industry and beyond.

The arrangement of this model is supported by quotes that represent widespread themes evident within the data. The quotes exemplifying the interactive areas depicted as the intersecting spaces between the three stakeholders in the model. The intersecting spaces are represented as primary drivers of student critical reflections. The following quotes illustrate how the *student workplace interaction* (see E in Figure 1) encouraged student engagement and

development of critical reflection, while reciprocally enhancing professional development of the student.

It's just professionally...you can't stop getting better because as soon as you do that your environment changes and you stay the same...you have to be constantly changing and moving with the environment, and if you stop, the environment is going to keep going and you're going to get left behind. So you always have to keep learning in the professional world, always have to keep developing and critical reflection, I think, is a great tool to do that. (Interview 7)

I feel like I can act more professionally in that sort of setting now than I did at the start of the year. And I felt that came from the reflection. (Interview 3)

The second set of quotes express the *student university interaction* (see A in Figure 1) where the students recognized critical reflection as a type of thinking to be developed through engaging in the cooperative education program. This type of thinking required effort and practice to enable learning to occur in a place that is not always seen as a traditional classroom. The student suggests the efforts and/or willingness to engage in reflective thinking can lead to the recognition and acknowledgment of learning opportunities, and foster the prospect of self-improvement.

I would lose opportunity to learn how to think. And because it's such a high order of thinking, critical reflection, you would miss out on that...you're learning all this stuff in the industry and there's so much learning going on, but if you don't reflect on them and capture them and pinpoint them down like I said before – if you don't grab them and grapple with them and talk about them, then it's just past, it's just like, oh, that happened and didn't really think about it, whereas it could have been something that you learnt about and made you into a better person. (Interview 7)

I had to make myself think and come up with the resolutions myself, which actually makes it a lot easier in the future because you've widened your scope to do things. This is what happened probably halfway through and I realised that it's really working and so I continuously improved my performance from that. (Interview 2)

The next quotes are taken from student reflective journals and demonstrate the *university workplace interaction* (see TP in Figure 1). The integration of theory (university) and practice (workplace) is illustrated through these passages. Challenging and novel workplace situations propelled the students to critically reflect by drawing upon university theory in order to understand the workplace dynamics being experienced or as a way to meaningfully contribute to workplace activities.

...this is a male-dominated organisation and me crying gave them power and showed my feminine side (possibly) on reflection from leadership lectures... Leadership has had a great impact on my life and I am trying to put some of the theories into practice to achieve my learning outcomes... It has really helped me to understand that it is okay to be feminine and it is okay to care about the organisation, and to communicate clearly about how you feel and what can be done to improve it in the future... (Journal 5)

I was able to assist a Year 6 teacher with Teaching Games for Understanding (TGfU) games...This was a really positive experience and the kids seemed to enjoy the games...It was great to see a teacher trying the new TGfU concept in her class and we have discussed the possibility of more of these types of sessions. (Journal 6)

This model is representative of how critical reflection can facilitate and enhance cooperative education or experiential learning where there is both 'continuity and interaction between the learner' and what is able to be learnt (Dewey, 1938 p. 10). The challenge with the current diagram is how to illustrate the intersecting circles as being in perpetual motion or repeating cycles of new interaction/s in both directions, towards and away from critical reflection. Additionally, there may be times when it could be considered there is more activity in one dimension than another. So in effect, the circles could be of varying sizes to denote the degree or strength of each interaction. Clearly the model illustrates all three contributors as operating together in a collaborative manner, and it is through critical reflection that integration occurs. Through this integration, there is the potential for a sound educational experience for the learner. The purpose of the model is to aid and enhance student understanding of how each part of their experience, within the board picture of cooperative education, can be drawn upon for critical reflection, and the prospective consequences of this interaction.

DISCUSSION

The transactional model of critical reflection supports, and is supported by, experiential learning theories underpinning cooperative education and the various ways in which they are enacted. Through this student-centred or driven learning approach, knowledge is derived from experience, which in this context is extremely dynamic due to the complex interactions as they occur. The term 'interaction' used to describe this model was derived from Dewey's (1938, p. 42) philosophy of education where he examines two key criteria of experience these include; continuity and interaction. As Dewey (1938) explains, "continuity and interaction in their active union with each other provide the measure of the educative significance and value of an experience" (p. 44-45). Continuity requires collaboration between each contributor, identified as a key feature of cooperative education, thus giving a longitudinal aspect to the overall experience, including consideration of future activities. Positioning of critical reflection in the centre of the model allows for integration of the three contributors in a way that is orientated towards future knowledge (based on prior knowledge) and potential action.

According to Dewey (1938) the "quality" of an experience is identified through two features. His first feature, which is easily identified, lies in how "agreeable" it might be to the learners, or the perceived value of the experience, therefore influencing his/her level of engagement in the activity (p. 27). The second, less obvious feature is determined by the degree of influence an earlier experience might have upon later experiences. Critical reflection, as presented within this model, has the capacity to cumulatively link experiences and interactions to one another in order to reduce the likelihood of experiences being or becoming disconnected, even though each experience might individually be agreeable or exciting in its own right. Connecting experiences through the development of critical reflection enhances ones' ability to understand and manage future events. Elkjaer (2009) states; "experience has to become reflective and communicated (with self and others) in order to later be used in an anticipatory way" (p. 82).

This model does not demonstrate the internal conditions of the learner, but illustrates the objective conditions of the learning situation. Frameworks, such as Borton or Gibbs (Rolfe et al., 2011) should be utilized to assist the development of reflective writing and thinking, as they generally include some acknowledgement of the internal conditions of the individual (such as emotions) that may influence and promote particular learning moments. Critical reflection is often driven by uncertainties or difficulties occurring, within one of each of the

interactive domains (E, A, and TP) that promote certain feelings. Recognizing opportunities to critically reflect may stem from the uncertainty held within the experience, which may be interpreted as feeling uncomfortable. Critical reflection on this type of experience may assist the student transform a difficult situation into one of a more manageable status and towards feeling more comfortable. Through understanding this challenging situation future actions and behaviors might be changed or altered.

According to Van Gyn and Grove-White (2011) transactional learning focuses on the “development of skills needed to acquire knowledge” with a strong “emphasis on intellectual and rational activities associated with problem solving and the development of cognitive skills to further support knowledge acquisition” (p. 33). The transactional model presented emphasizes the role critical reflection (as a cognitive learning process) plays as the students, who are independent learners, explore how the transactions within a cooperative education experience occur and what they have learnt from the transactions embedded in their experiences. By considering the outcomes of critically reflecting through the model, it is possible for transformative learning to occur, that is, the “growth in critical consciousness, autonomy, and independent thinking” (Van Gyn & Grove-White, 2011, p. 36). As indicated by the model, the practice of critical reflection can be transformative, as the learner may become a “critical agent of change” (Zegwaard, 2015, p.92) rather than a “participant of the norm” (Zegwaard, 2015, p.94) within each of the three cooperative education transactional dimensions. This model supports Zegwaard’s (2015) claim that “there needs to be greater recognition that during work placement transformative learning can, and does, occur” (p. 92).

This model considers and demonstrates how critical reflection can play a pivotal role in the integration of each contributor (educator, student, workplace supervisor) through their participation in the learning approach. Integration of this nature addresses the need and desire for higher education that is progressive and dynamic, as it prepares an individual for a professional future, often requiring an understanding of their personal and professional identity and having the ability to learn independently for life. Hence, the role of each contributor in this model is important. As Dewey (1938) points out it is the “responsibility of educators...they should know how to utilize surrounding, physical and social, that exist so as to extract from them all they have to contribute to building up experiences that are worthwhile” (p. 40). The support offered by the educator to enable student engagement in critical reflection is important in order for them to gain deeper meaning from their experiences. A cooperative education program encourages students to actively participate in the formation of the purpose/s of their own learning (through learning contracts or similar), a complex intellectual operation (Dewey, 1938). Students attitudes and aptitude can significantly impact on the type of learning agreed upon and achieved. The workplace environment provides students with opportunities to contribute something meaningful to how it operates. Although the workplace is often the source of an event suitable to critically reflect upon it is seldom considered to be the place where critical reflection is learnt. It is unclear what role the industry supervisor might play in assisting students with advancing their practice of critical reflection. A students’ desire and ability to critically reflect can hinge on the level of involvement and connection between all contributors and the role each plays in the relationship. Dewey (1938) confirms this sentiment when he states; “control of individual action is effected by the whole situation in which individuals are involved, in which they share and of which they are cooperative or interacting parts” (p. 53).

Overall there are several possible outcomes arising from the development of this model. These include;

- The presence of a schematic representation of critical reflection as part of a cooperative education program.
- Students, and teachers, are invited to use this model to demonstrate how critical reflection fits within this specific learning environment.
- The model contributes to the discussion of the role critical reflection could play in the notions of integration within cooperative education.
- This model clearly illustrates the complexity of work-integrated education and can be applied to a range of work place based learning programs.
- An understanding of where critical reflection is positioned in a program of learning of this nature challenges those who might suggest cooperative education is purely “work experience”.
- A contribution to the dialogue for advancing theoretical developments related to critical reflection in cooperative education.
- This model provides researchers with a platform for ongoing examination of student experiences of critical reflection in cooperative education.

CONCLUSIONS AND FURTHER RESEARCH

The transactional model of critical reflection presented in this paper identifies the collaborative and interactional aspects of utilizing critical reflection within a cooperative education program. Centralizing critical reflection within this model advocates for the value of critical reflection in work-integrated education, particularly to enhance the development of professionalism and life long learning. The utility of critical reflection has the potential to encourage students to engage with learning by examining their workplace experiences within the three dimensions of a cooperative education partnership or alignment. If learning is to occur through the experiences emanating from the transactions identified within this model, then cognition is important. Cognition brings the bodily manifestation of an experience into the conscious realm of being able to communicate and understand it. If it was possible to peel back further layers of the model, we would find beneath the centrally positioned critical reflection the frameworks to guide and support the cognition we associate with being able to critically reflect.

Based on the understandings derived from this model there are three key areas identified for further examination. Firstly, the paper acknowledges collaboration is a foundation principle of cooperative education, however there are many challenges to attaining alignment of all three stakeholders. It would be of interest to explore further how critical reflection may support this alignment. Secondly, the model presented has centralized critical reflection in a cooperative education program thus supporting the importance of advocating for students to practice critical reflection. Examining how students perceive this model as a way of supporting the development and advancement of critical reflection practices would be useful. Finally, does student engagement in the practice of critical reflection have the potential to enable, encourage, or guide students towards a truly integrated learning approach?

ACKNOWLEDGEMENTS

The author would like to thank those who provided support with improving this manuscript. This includes critical friends; Professor Chris Hickey, Associate Professor Bernadette Walker-Gibbs, Dr Amanda Mooney and editorial assistance from Dr Alexandra Bowmar.

REFERENCES

- Argyris, C., & Schön, D. (1974). *Theory in practice: Increasing professional effectiveness* (1st ed.). San Francisco, CA: Jossey-Bass.
- Billett, S. (2009). Realising the educational worth of integrating work experiences in higher education. *Studies in Higher Education, 34*(7), 827-843.
- Billett, S., & Choy, S. (2011). Cooperative and work-integrated education as a pedagogy for lifelong learning. In R. K. Coll & K. E. Zegwaard (Eds.), *International handbook for cooperative and work-integrated education: International perspectives of theory, research, and practice* (2nd ed., pp. 25-30). Lowell, MA: World Association for Cooperative Education.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi:10.1191/1478088706qp063oa
- Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. London, England: Sage.
- Cooper, L., Orrell, J., & Bowden, M. (2010). *Work integrated learning a guide to effective practice* (1st ed.). New York, NY: Routledge.
- Cowan, J. (2014). Noteworthy matters for attention in reflective journal writing. *Active Learning in Higher Education, 15*(1), 53-64. doi:10.1177/1469787413514647
- Dewey, J. (1997). *How we think*. New York, NY: Dover Publications. (Original work published 1910)
- Dewey, J. (1938). *Experience and education*. New York, NY: Touchstone.
- Eames, C., & Coll, R. K. (2010). Cooperative education: Integrating classroom and workplace learning. In S. Billett (Ed.), *Learning through practice, professional and practice based learning* (pp. 180-196). Dordrecht, Netherlands: Springer. doi:10.1007/978-90-481-3939-2_10
- Elkjaer, B. (2009). Pragmatism: A learning theory for the future. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists... in their own words* (pp. 74-89). New York, NY: Routledge.
- Fleming, J. (2015). Exploring stakeholders' perspectives of the influences on student learning in cooperative education. *Asia Pacific Journal of Cooperative Education, 16*(2), 109-119.
- Fleming, J., & Haigh, N. (2017). Examining and challenging the intentions of work-integrated learning. *Higher Education, Skills and Work-Based Learning, 7*(2).
- Fleming, J., & Martin, A. (2007). Facilitating reflective learning journeys in sport cooperative education. *Journal of Hospitality, Sport, Tourism, Leisure and Education, 6*(2), 115-121. doi:10.3794/johlst.62.171
- Harvey, M., Coulson, D., Mackaway, J., & Winchester-Seeto, T. (2010). Aligning reflection in the cooperative education curriculum. *Asia-Pacific Journal of Cooperative Education, 11*(3), 137-152.
- Harvey, M., Coulson, D., & McMaugh, A. (2016). Towards a theory of the Ecology of Reflection: Reflective practice for experiential learning in higher education. *Journal of University Teaching & Learning Practice, 13*(2), 2.
- Hatton, N., & Smith, D. (1994, July). *Facilitating reflection: Issues and research*. Paper presented at the meeting of the Conference of the Australian Teacher Education Association, Queensland, Australia.
- Kolb, D. (2015). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall. (Original work published 1984)
- Lincoln, Y. S., & Guba, E. G. (1990). Judging the quality of case study reports. *International Journal of Qualitative Studies in Education, 3*(1), 53-59. doi:10.1080/0951839900030105
- Lucas, P., & Fleming, J. (2012). Reflection in sport and recreation cooperative education: Journals or blogs? *Asia-Pacific Journal of Cooperative Education, 13*(1), 55-64.
- Lucas, P. (2015). *Exploring critical reflection in cooperative education: A case study* (Doctoral thesis, Deakin University, Melbourne, Australia). Retrieved from <http://dro.deakin.edu.au/view/DU:30084875>

- Martin, A. J., & Fleming, J. (2006). Facilitated reflection in cooperative education in sport. *Proceedings of the 9th New Zealand Association for Cooperative Education Conference*. Retrieved from <https://nzace.files.wordpress.com/2014/07/2006-queenstown.pdf>
- Miller, J. P., & Seller, W. (1990). *Curriculum Perspectives and Practice*. Mississauga, ON: Copp Clark Pitman.
- Raelin, J., Glick, L., McLaughlin, K., Porter, R., & Stellar, J. (2008). Reflection-in-action on co-op: The next learning breakthrough. *Journal of Cooperative Education, 42*(2), 16–33.
- Rolfe, G., Jasper, M., & Freshwater, D. (2011). *Critical reflection in practice* (2nd ed.). Basingstoke, England: Palgrave.
- Schön, D. A. (2009). *The reflective practitioner: How professionals think in action*. London, England: Ashgate. (Original work published 1983)
- Schram, T. H. (2006). *Conceptualizing and proposing qualitative research* (2nd ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- Smith, E. (2011). Teaching critical reflection. *Teaching in Higher Education, 16*(2), 211–223. doi:10.1080/13562517.2010.515022
- Stake, R. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.
- Tennant, M., McMullen, C., & Kaczynski, D. (2010). *Teaching, learning and research in higher education: A critical approach*. New York, NY: Routledge.
- Van Gyn, G. (1996). Reflective practice: The needs of professions and the promise of cooperative education. *Journal of Cooperative Education, 31*(2–3), 103–131.
- Van Gyn, G., & Grove-White, E. (2011). Theories of learning in education. In R. K. Coll & K. E. Zegwaard (Eds.), *International handbook for cooperative and work-integrated education: International perspectives of theory, research, and practice* (2nd ed., pp. 31–40). Lowell, MA: World Association for Cooperative Education.
- Zegwaard, K. (2015). Building an excellent foundation for research: Challenges and current research needs. *Asia Pacific Journal of Cooperative Education, 16*(2), 89–99.
- Zepke, N., Nugent, D., & Leach, L. (2011). *Reflection to transformation: A self-help book for teachers* (2nd ed.). Wellington, New Zealand: Dunmore.



About the Journal

The Asia-Pacific Journal of Cooperative Education publishes peer-reviewed original research, topical issues, and best practice articles from throughout the world dealing with Cooperative Education (Co-op) and Work-Integrated Learning/Education (WIL).

In this Journal, Co-op/WIL is defined as an educational approach that uses relevant work-based projects that form an integrated and assessed part of an academic program of study (e.g., work placements, internships, practicum). These programs should have clear linkages with, or add to, the knowledge and skill base of the academic program. These programs can be described by a variety of names, such as cooperative and work-integrated education, work-based learning, workplace learning, professional training, industry-based learning, engaged industry learning, career and technical education, internships, experiential education, experiential learning, vocational education and training, fieldwork education, and service learning.

The Journal's main aim is to allow specialists working in these areas to disseminate their findings and share their knowledge for the benefit of institutions, co-op/WIL practitioners, and researchers. The Journal desires to encourage quality research and explorative critical discussion that will lead to the advancement of effective practices, development of further understanding of co-op/WIL, and promote further research.

Submitting Manuscripts

Before submitting a manuscript, please ensure that the 'instructions for authors' has been followed (www.apjce.org/instructions-for-authors). All manuscripts are to be submitted for blind review directly to the Editor-in-Chief (editor@apjce.org) by way of email attachment. All submissions of manuscripts must be in Microsoft Word format, with manuscript word counts between 3,000 and 5,000 words (excluding abstract, references, and tables).

All manuscripts, if deemed relevant to the Journal's audience, will be double-blind reviewed by two or more reviewers. Manuscripts submitted to the Journal with authors names included will have the authors' names removed by the Editor-in-Chief before being reviewed to ensure anonymity.

Typically, authors receive the reviewers' comments about 1.5 months after the submission of the manuscript. The Journal uses a constructive process for review and preparation of the manuscript, and encourages its reviewers to give supportive and extensive feedback on the requirements for improving the manuscript as well as guidance on how to make the amendments.

If the manuscript is deemed acceptable for publication, and reviewers' comments have been satisfactorily addressed, the manuscript is prepared for publication by the Copy Editor. The Copy Editor may correspond with the authors to check details, if required. Final publication is by discretion of the Editor-in-Chief. Final published form of the manuscript is via the Journal website (www.apjce.org), authors will be notified and sent a PDF copy of the final manuscript. There is no charge for publishing in APJCE and the Journal allows free open access for its readers.

Types of Manuscripts Sought by the Journal

Types of manuscripts the Journal accepts are primarily of two forms; *research reports* describing research into aspects of Cooperative Education and Work-Integrated Learning/Education, and *topical discussion* articles that review relevant literature and give critical explorative discussion around a topical issue.

The Journal does also accept *best practice* papers but only if it presents a unique or innovative practice of a Co-op/WIL program that is likely to be of interest to the broader Co-op/WIL community. The Journal also accepts a limited number of *Book Reviews* of relevant and recently published books.

Research reports should contain; an introduction that describes relevant literature and sets the context of the inquiry, a description and justification for the methodology employed, a description of the research findings-tabulated as appropriate, a discussion of the importance of the findings including their significance for practitioners, and a conclusion preferably incorporating suggestions for further research.

Topical discussion articles should contain a clear statement of the topic or issue under discussion, reference to relevant literature, critical discussion of the importance of the issues, and implications for other researchers and practitioners.



EDITORIAL BOARD

Editor-in-Chief

Dr. Karsten Zegwaard

University of Waikato, New Zealand

Copy Editor

Yvonne Milbank

Asia-Pacific Journal of Cooperative Education

Editorial Board Members

Mr. Matthew Campbell

Queensland Institute of Business and Technology, Australia

Dr. Sarojni Choy

Griffith University, Australia

Prof. Richard K. Coll

University of South Pacific, Fiji

Prof. Rick Cummings

Murdoch University, Australia

Prof. Leigh Deves

Charles Darwin University, Australia

Dr. Maureen Drysdale

University of Waterloo, Canada

Dr. Chris Eames

University of Waikato, New Zealand

Mrs. Sonia Ferns

Curtin University, Australia

Dr. Jenny Fleming

Auckland University of Technology, New Zealand

Dr. Phil Gardner

Michigan State University

Dr. Thomas Groenewald

University of South Africa, South Africa

Dr. Kathryn Hays

Massey University, New Zealand

Prof. Joy Higgs

Charles Sturt University, Australia

Ms. Katharine Hoskyn

Auckland University of Technology, New Zealand

Dr. Sharleen Howison

Otago Polytechnic, New Zealand

Dr. Denise Jackson

Edith Cowan University, Australia

Dr. Nancy Johnston

Simon Fraser University, Canada

Dr. Mark Lay

University of Waikato, New Zealand

Assoc. Prof. Andy Martin

Massey University, New Zealand

Ms. Susan McCurdy

University of Waikato, New Zealand

Dr. Norah McRae

University of Victoria, Canada

Dr. Keri Moore

Southern Cross University, Australia

Prof. Beverly Oliver

Deakin University, Australia

Assoc. Prof. Janice Orrell

Flinders University, Australia

Dr. Deborah Peach

Queensland University of Technology, Australia

Mrs. Judene Pretti

Waterloo University, Canada

Assoc. Prof. Philip Rose

Hannam University, South Korea

Dr. Anna Rowe

Macquarie University, Australia

Dr. David Skelton

Eastern Institute of Technology, New Zealand

Prof. Heather Smigiel

Flinders University, Australia

Dr. Calvin Smith

Brisbane Workplace Mediations, Australia

Prof. Neil Taylor

University of New England, Australia

Assoc. Prof. Franziska Trede

Charles Sturt University, Australia

Ms. Genevieve Watson

Elysium Associates Pty, Australia

Prof. Neil I. Ward

University of Surrey, United Kingdom

Dr. Nick Wempe

Taratahi Agricultural Training Centre, New Zealand

Dr. Marius L. Wessels

Tshwane University of Technology, South Africa

Dr. Theresa Winchester-Seeto

Charles Sturt University, Australia