Article

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ECLECTIC LEARNING: TRANSDISCIPLINARY PREPARATION

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INTRODUCTION

This dual-method autoethnographic and hermeneutic phenomenological enquiry within the Aotearoa New Zealand environment provides evidence of how eclectic learning prepares individuals for transdisciplinary innovation. The article summarises the findings of an enquiry into the essence of constructive critical conversations (CCCs) and their impact in the workplace. A postconstructivist approach to discourse analysis of narrative data shows how transdisciplinary preparation occurs through eclectic learning through these kinds of conversations.

The aim of the study was to understand the essence of constructive CCCs in the workplace and how these impact strategic quality goals as defined by the organisation. The need for research comes from a recognition that robust quality policies and processes are not sufficient to realise quality outcomes at the point of agency. Individuals who are socially influenced are in a position to impact quality outcomes on behalf of the organisation. As a result, the professional development of these individuals must be considered an essential part of a quality approach.

Within the enquiry, eclectic learning was defined as the unique internal combination of connectedness which occurs across subconscious and conscious perceptions and conceptions. This connectedness can be drawn on through reflective practice to enable learning within new experiences. This connectedness is unique to each individual and occurs irrespective of disciplinary boundaries, thus contributing to the learner's ability to think in a transdisciplinary way.

In the same way, transdisciplinarity is defined as that which occurs within the blurred boundaries of traditionally defined subject disciplines – for example, tertiary education or cognitive science. Transdisciplinarity is not confined by any one discipline's rules or expectations. Rather, it draws on multiple disciplines as required to attend to a given subject, and without regard to where boundaries may exist from the perspective of specialist expertise within those disciplines. Given this definition of transdisciplinarity, the observer may not be able to separate the particular elements which have converged from the various disciplines.

FUTURE CHANGES

The anticipated needs of the unknown future, occurring within an environment of super-complexity (Barnett, 2000; 2017), require a rethink of workplace learning and therefore of professional development. Reflection in the workplace (Helyer, 2015) will play an important part in building flexibility and resilience within what have been described as three-dimensional changes unfolding within an unknown future (Chima & Gutman, 2020). This reflection will require a focus on learning and a deeper understanding than currently exists within reflective practices. Acknowledging this need forms the premise for arguing that organisations must become facilitators of the individual's eclectic learning. Utilising an understanding of eclectic learning within the workplace will support the transdisciplinary innovation which will be required in the future. The anticipated ever-increasing rates of change highlight an inevitable overlap of knowledge and skills which traditionally have been protected by boundaries. In

2003 Dervin described this kind of overlap on the edges of disciplines as research redundancy, which was simply archived. This luxury will not be possible in the future if organisations wish to not only keep up with a rapidly changing environment, but to be sustainable and thrive.

ECLECTIC LEARNING

Eclectic learning is a unique internal connectedness which occurs across the individual's subconscious and conscious. In the first instance, perceptions and conceptions impact this connectedness as lived events without a conscious directive from the individual. However, through conscious reflection on an event, perception or conception, the individual can consider the matter with criticality.

Part of the epistemology of how eclectic learning occurs is meta-cognitive, in that it is thinking about thinking. However, eclectic learning has at its disposal the entirety of the individual's connectedness. This is not confined to thinking processes. It includes every element which constitutes that unique individual, including emotions, perceptions, physical needs, or any other impact on the person's internal connectedness. To access the connections which have occurred at a subconscious level, reflection and purposeful connecting of new experiences through criticality is required so as to have the entirety of the individual's eclectic learning available to draw on and to reach a state of flow.

As presented by Csikszentmihalyi (1997), flow occurs where a high level of skills is matched by a high level of challenge. "In moments such as these what we feel, what we wish, and what we think are in harmony" (p. 29). Kahneman (2012) explains the deep concentration level achieved within a state of flow: "maintaining focused attention on these absorbing activities requires no exertion of self-control, thereby freeing resources to be directed to the task at hand" (p. 41).

In this state of flow, defined disciplinary boundaries are disregarded by the eclectic learner in the pursuit of understanding a new experience. The internal connectedness of perceptions and conceptions are not bounded by disciplinary expectations. Further, questions can be asked about a given subject drawn from the internal connectedness the individual has accumulated over time.

The act of choosing to engage in opportunities to learn eclectically aligns with the use of reflection as a way of seeking emancipation (Moon, 1999). Put another way, within the concept of eclectic learning, reflection is the recognition of an ability to make choices in the hope of shedding bias and the hegemony of socio-political circumstance. Freire's (1992/2017) description of his own transformation through reflection while working in Chile can be seen as an example of connectedness through the eclectic pursuit of personal interests.

In regarding the unconscious as an integral part of eclectic learning, personal interests become a primary element. This is because the unconscious mind determines many decisions for the individual, as demonstrated by Soon et al (2008). Participants in the enquiry identified opportunities to learn in the workplace as highly dependent on the individual's choices in genuinely engaging socially with a purposeful intent to learn.

THE WORKPLACE LEARNING ENVIRONMENT

Looking at the workplace as an environment which offers opportunities for self-directed learning through conversations, narratives and sharing within the organisation as a community of practice highlights the importance of connectedness of personal experiences and of criticality. Once a person is aware of connectedness and can engage criticality, the self-directed individual needs only to be able to recognise opportunities for learning to take advantage of eclectic learning toward preparing for an unknown future.

Considering the human individual and the complex social being which they constitute, many different disciplines would need to be called on to explain any one aspect of that individual's workplace learning, as demonstrated by such disciplines as cognitive science (Kahneman, 2012) and education (Helyer, 2015; Lave, 2019). Importantly, however, these disciplines can only explain or recognise certain aspects of workplace learning. They cannot dictate the combination of internal connectedness which becomes eclectic learning through individuals' unique ability to make sense of new experiences.

These disciplines have contributed to our understanding that the internal connectedness or sense-making of individuals is influenced socially. In the workplace, this social influence occurs primarily through conversations.

CONSTRUCTIVE CRITICAL CONVERSATIONS

CCCs are social interactions that provide an important opportunity for individuals to learn in the workplace environment. Data drawn from the enquiry supported use of the adjective "constructive," as it is not practical to expect learning to occur voluntarily in anything other than a positive and supportive environment, indicative of the culture of an organisation (Stahl et al., 2014). All participants in the study agreed that the culture of the organisation dictated whether or not a constructive environment existed for their conversations.

The term "constructive" also alludes to a culture of continual improvement (Chandrasekaran & Toussaint, 2019), and participants in the enquiry identified CCCs as opportunities for them to improve or grow personally. This points to an underpinning theory of constructivism – that individuals build on their prior knowledge and experiences, both cognitively and socially (Piaget, 1929/1990; Roth, 2015; Vygotsky, 1930/1978).

CCCs are "critical" in the sense that criticality is engaged, with participants asking pertinent questions until there is resolution or better understanding of the issue (Eales-Reynolds et al., 2013). Criticality assumes that there are unseen dimensions impacting on the moment, particularly underlying assumptions of power, as asserted by Freire (1973) on hegemony and by others on the power of the language used in such exchanges (Fairclough, 1989; Fatemi, 2019). Therefore, within these conversations, an appreciation of criticality is crucial for the individual's understanding of what is occurring in the moment. Participants in the study asserted that their own criticality determined whether or not CCCs became opportunities for learning that probed the boundaries of other disciplines. This included viewing quality as a discipline with its own defined boundaries of appropriateness and acceptability within specified contexts.

The fact that the CCC environment is a conversation introduces the concept of intersubjectivity, where relationships are important and allow for empathy in the give-and-take that occurs between participants (Stevanovic & Koski, 2018). Participants identified personal relationships as paramount in nurturing the ability to learn within a CCC. This was stated in terms of perceived trust and transparency, genuineness and empathy.

Finally, the CCC is all-inclusive. All participants in CCCs are in the same position regarding opportunities to learn, regardless of their current level of understanding or knowledge of a subject. This relates to communities of practice as defined by Clarke and Rossiter (2018), where there is shared interest, shared knowledge and active practitioners with varying levels of expertise. CCCs provide opportunities to learn for full members of the community of practice, as well as the peripheral members who may initially observe more than they participate. In doing so, they will be privy to narratives which they may not otherwise have the opportunity to hear. Participants in this enquiry differentiated their experiences when they were full members of a community of practice from those when they were given opportunities as peripheral members. Both perspectives were seen as strong positions from which to learn within the CCC.

COMMUNITY OF PRACTICE

Regarding the organisation as a community of practice allows narratives within conversations to be considered as opportunities to learn and supports the concept of CCCs as workplace learning opportunities (Clark & Rossiter, 2018). The individual who recognises CCCs as learning opportunities in the workplace will have multiple naturally occurring opportunities to take advantage of this, both as an active participant and as an observer.

The opportunity to engage in a CCC with intent to learn is distinctive for each individual because of the unique connectedness each individual brings to the conversation, and their unique perspective on what is occurring in the moment. In this sense, learning is opportunistic in that only the individuals themselves can recognise an opportunity to learn within the ambit of their own personal interests, knowledge and experience. The reflection required to make sense of experiences in the workplace implies this unique character of the experience for the individual. Part of this uniqueness lies in the individual's personal fulfilment through the learning (Barrow & Keeney, 2012). For this to occur, the environment within the CCC must be safe, in the sense that participants can be confident that their contribution will be accepted, without any punitive or disciplinary threats associated with voicing their thoughts (Anderson et al., 2008).

Participants in the study stated that their level of engagement in conversations was directly related to the level of trust they perceived within relationships in the CCC. If they did not feel their contribution was valued, or they felt that someone else was not being genuine, then they did not engage.

There was also an overt acknowledgement across the narratives that, in order to turn these conversations into learning moments, the CCCs need to go beyond what could be deemed to be surface communication. In other words, criticality must be a part of the conversations in order to question assumptions. Any aspect of the event may be questioned – the experience, concept or issue – as a part of criticality. For example, if someone is wanting to understand more about student completion rates, questions may be asked about the delivery in the classroom. However, within criticality, it is just as relevant to ask questions about the type of preparation the student received in earlier education prior to arriving, the recruitment process, the pastoral care offered to students, and many other aspects which could be considered irrelevant if the essence of the matter is not required or sought.

The context of CCCs is the space of reflection-in-action (Eraut, 1995; Lave, 2019). In other words, within the conversation there is consideration in real time of what the experience is offering, whether for the individual or for others in the conversation. Importantly, time is of the essence within the timeframe of the conversation, meaning that a self-determined practice of reflecting-in-action is required for the CCC to be realised as an opportunity to learn eclectically. According to participant responses, this skill takes time to acquire through deliberate practice.

Awareness to what is happening is an integral part of reflection. This awareness adds depth to the ability to reflect (Roth, 2015). Some would refer to this alertness or awareness as mindfulness (Burch & Irvin, 2016). Lave (2019) has built on the concept of reflection-in-action and explains in depth its connection with flow as developed by Csikszentmihalyi (1997).

Participants in the study revealed an increase in their ability to be aware of opportunities to learn within CCCs as their personal reflective practice developed. This awareness was stated by some as an ability to think from different perspectives.

The idea of eclectic learning accommodates the concept of reflection-in-action, as eclectic-ness is not bound by specific learning contexts or environments. Rather, reflection-in-action anticipates that the eclectic learner will be in a state of flow through unique internal connectedness and intent on learning within the CCC. In practical terms within the workplace, this means that CCCs are a link to transdisciplinary innovation.

TRANSDISCIPLINARY INNOVATION

The ability to learn eclectically and reflect-in-action does not imply that the learner is ready to innovate themselves in a transdisciplinary way. Rather, it suggests that the learner is prepared to collaborate in a transdisciplinary manner toward achieving innovation. Their prior eclectic learning has prepared their ability to reflect-in-action such that they can understand others' contributions to the collaboration and build on that from within their own connectedness.

Eclectic learning is prompted by the individual's unique combination of interests across multiple discipline spaces without regard to, or reverence for, existing boundaries. The eclectic-ness of the individual's learning has a theme which can only be truly known by the individual themself. The eclectic nature of their learning emerges from the connections of understanding which the individual makes across their unique combination of interests and experiences. The breadth of connections created by this eclectic-ness over time adds value to the individual's overall ability to connect new experiences within their existing knowledge. Thus, this uniqueness adds to their ability to innovate in a transdisciplinary way because the learning process itself has been transdisciplinary, irrespective of disciplinary boundaries.

AN EXAMPLE OF ECLECTIC CONNECTEDNESS

As an example of eclectic-ness as a concept within the learning context, and to distinguish this kind of learning from sets of skills or knowledge learned within defined, traditional disciplinary boundaries, an analogy can be drawn between eclectic learning and home decorations. A home which has a Victorian theme throughout is distinct from a home decorated with a mix of furniture from various periods. The latter contains an amalgam of furniture which is unique to that home. The overall theme is identified by stating that the home has an eclectic style of decoration – no other home has the same combination of styles of furniture. Of particular note, no other home owner has made the same combination of choices in their investment in furniture over a period of time.

Instead of eclectic home decorations, now consider the individual who is an expert in auto mechanics. This title in itself gives a snapshot of the individual's prior learning and experience because of the disciplinary boundaries involved in the field of auto mechanics. However, considering the mechanic as an eclectic learner who makes connections across disciplinary boundaries, albeit within their unique set of interests and lived experiences, there is much more to understand about this individual. For example, the auto mechanic may also have some theoretical understanding of the discipline of information technology through using computers at work and home. They may also have some knowledge of the physical and medical needs of a family member who is missing a limb. Here, their understanding will likely be more practical than theoretical – for example, receiving guidance to assist with movement in the first instance. Then, while assisting movement, the mechanic feels the family member's balance shifting. The mechanic moves and adjusts to accommodate the reality of what the family member requires through the sensation of feeling their balance shift. The mechanic is able to connect theories of physics with that sensation, and their own physical response to keep the family member safe. This connection happens without conscious thought as a result of the simultaneous inputs to various parts of the mechanic's brain. This learning is eclectic in the sense that no one disciplinary boundary could explain all the sensory and thought processes occurring uniquely within the mechanic's lived experience.

This example creates an entirely different picture of the individual who has crossed disciplinary boundaries in learning through self-directed interests. The choices that this individual has made over time to learn has enabled them to make unique connections which are meaningful within their lived experiences. As a result, they are likely someone who could contribute to innovation in technologically aided movement through physical devices, using new ideas or perspectives to influence new ways or means of achieving a desired outcome

To complete the analogy between eclectic choices in furniture purchases and eclectic learning where choices are made as opportunities for learning are recognised, time is considered as the investment. Time is purposefully

invested to procure knowledge, deeper understanding or skills. Further, this procurement is irrespective of the boundaries of any defined discipline or designed theme of learning.

PERTINENT QUESTIONS

The connectedness of understanding across disciplinary boundaries, albeit not necessarily at an expert level, enables the individual to ask pertinent questions within a new context. Those pertinent questions disregard disciplinary boundaries and, in so doing, help more expert participants in the conversation to consider new perspectives on creative innovation.

The fact that, at times, the individual asks these questions from a perspective of ignorance of a particular discipline does not matter. In fact, these kinds of questions may be more useful for considering new perspectives on a subject just because they are not bound by disciplinary expectations. Thus, the individual's preparation through habitual eclectic learning prepares them to contribute to transdisciplinary innovation, whether from a place of intuition or expertise.

In effect, the combined efforts of multiple participants who have arrived prepared to innovate in a transdisciplinary way match the rapidly changing environment. This ability for individuals to be in a state of flow, as a result of their eclectic preparation through previous connectedness, provides the possibility of group flow, where disciplinary boundaries are not relevant. Pertinent questions asked within this environment of flow enable the blurriness of the disciplines' boundaries to accommodate the shape of innovation which emerges.

THE ORGANISATION'S ROLE IN FACILITATION

In this sense, at a practical level an organisation cannot afford to leave individuals behind in a rapidly changing and expanding environment. Those individuals who occupy the point of agency on behalf of the organisation need to be able to deal with the same perpetual, pervasive and accelerating changes. Eclectic learning supports connectedness of understanding, enabling quicker adjustments for the individual within the 3-D change environment.

Wenger, McDermott and Snyder (2002) refer to the effectiveness of facilitating social interactions in engineering firms where meeting spaces and times were arranged. The learning which occurred was not dictated or designed. Here, the firms recognised the propensity for engineers to learn from each other during social interactions. That learning was anticipated as priming, or preparing the right environment for, innovation within their workplace.

Eclectic learning influences organisational flexibility in the sense that individuals are learning as built-in opportunities within a given context are presented to them. Individuals will be up-to-date with the latest ideas and technology because they are constantly engaged and learning eclectically in an environment of criticality. In this way, the organisation has an ever-improving collective human resource, increasing in knowledge and skills over time.

Participants in this study strongly indicated that a self-directed propensity to learn socially through CCCs was their primary way of developing professionally.

Individuals are unique, bringing their own distinctive packages of understanding and experience and connectedness to the environment within the organisation. Therefore, it would make sense for the organisation to find a way of facilitating eclectic learning. To state it differently, in the absence of utilising individuals' propensity through intrinsic motivation to learn eclectically, an organisation may be wasting resources which could be made available for innovation. One way of utilising this embedded resource is to adopt an educative approach, whereby the organisation facilitates eclectic learning.

An organisation which facilitates CCCs in the workplace will enhance individual team members' eclectic learning and thereby increase the organisation's internal resources for transdisciplinary innovation.

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