An Applied e-Mentoring Model For Academic Development, Reflection And Growth

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Abstract

Effective mentoring brings positive outcomes for mentees, mentors and their organizations. Modern mentoring is developing through employment of technology and thus it is important to better understand these new opportunities and their limitations. Termed as "e-mentoring", the field remains under-researched and sub-optimally theorized.

In this work we introduce and critically examine an innovative model for mentor-mentee engagement. Termed "DARP", our model is designed to foster a cycle of reflection for academic development and growth. DARP stands for: Discuss; Archive; Reflect; Prepare. We ground our model in Kolb's experiential learning cycle and link our theory to practice through discussion of an e-mentoring case study. A key element of our e-mentoring focus is the inclusion of archivable online video-conferencing.

We discuss processes and outcomes associated with our e-mentoring journey by drawing on multiple experiences, including: a fellowship application scheme for professional development; a faculty teaching award application; a promotion application; and a tenured academic position.

Keywords

E-Mentoring, Reflection, Archivable Video-conferencing, Technology

An Applied E-Mentoring Model for Academic Development, Reflection, and Growth

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Effective mentoring brings positive outcomes for mentees, mentors and their organizations. Modern mentoring is developing through employment of technology and thus it is important to better understand these new opportunities and their limitations. Termed as "e-mentoring", the field remains under-researched and sub-optimally theorized. In this work we introduce and critically examine an innovative model for mentor-mentee engagement. Termed "DARP", our model is designed to foster a cycle of reflection for academic development and growth. DARP stands for: Discuss; Archive; Reflect; Prepare. We ground our model in Kolb's experiential learning cycle and link our theory to practice through discussion of an e-mentoring case study. A key element of our e-mentoring focus is the inclusion of archivable online video-conferencing. We discuss processes and outcomes associated with our e-mentoring journey by drawing on multiple experiences, including: a fellowship application scheme for professional development; a faculty teaching award application; a promotion application; and a tenured academic position.

INTRODUCTION

There is strong and sustained evidence that effective mentoring is associated with positive personal and career outcomes for mentees and mentors. For example, Johnson and Ridley (2004) identify desirable elements for mentees from the literature, including: accelerated promotion rates and career mobility; enhanced professional identity and competence; improved levels of career satisfaction; a sense of greater acceptance within their organization; and decreased job stress. In addition, Johnson and Ridley (2004) list benefits to mentors identified in the literature, such as: personal satisfaction and fulfilment; career revitalization; recognition by their organization for developing capacity; and the joy of shaping future generations.

Furthermore, there are organizational benefits of successful mentoring, including: fostering retention; improving productivity; and developing new leaders. In particular, Amber et al (2016) establish mentoring as an approach that can support the work of academics and their institutions within the higher education sector.

The term "mentoring" first gained popularity in the 18th century (Roberts, 2017) and its origin can be traced back to Homer's ancient Greek epic poem, The Odyssey. Therein, Mentor was an individual who, in his old age, was given the role of advising and guiding King Odysseus' son, when Odysseus left his palace for the Trojan War (Shea, 1997). In our modern world, it is recognized that there are a wide range of definitions in the literature (Clarke, 2015), however, mentoring is essentially a relationship where a more experienced person (the mentor) acts as a guide, role model, teacher and sponsor of a less experienced person (the mentee) (Johnson and Ridley, 2004).

Rowland (2012) recognizes that the term e-mentoring has several different names, including: tele-mentoring; cyber-mentoring; virtual mentoring; and online mentoring. Rowland defines e-mentoring as mentoring that primarily uses electronic communications. While communication is certainly a key pillar of any relationship, we argue that technology can serve to support and develop the mentor-mentee relationship in additional ways beyond communication, including fostering opportunities for reflection. Thus we suggest a broadening of the above definition of e-mentoring that captures this wider perspective. For example, if we combine this intent with our previous discussions of Johnson

and Ridley (2004), then we suggest the form: "e-mentoring is a relationship where technology is employed to enable a more experienced person to act as a guide, role model, teacher and sponsor of a less experienced person". Indeed, this is the terminology and interpretation that we will use throughout the present work.

There are a number of benefits associated with e-mentoring that have been identified within the literature. For example, An and Lipscomb (2013) identify efficiencies in time and costs in employing e-mentoring over traditional mentoring models, such as removing the need to organise, travel to and conduct face-to-face meetings. E-mentoring offers the potential for opening up new avenues to form relationships that could not be done previously. For example, "Geographical distances and scheduling differences no longer become obstacles to engaging in mentoring as e-mentors and protégés could be from two completely different organizations, not only different departments within the same geographically proximate organizations" (Single and Single, 2005).

With modern mentoring developing to embed technological aspects, it is important to better understand these new opportunities and their limitations, and to explore which kinds of e-mentoring works best and for whom. Although the literature on e-mentoring has started to increase in recent years (Rowland, 2012), the subject remains under-researched and sub-optimally theorized, and has been particularly sheltered outside North America (Headlam-Wells, 2004). This may be partially due to cultural and social differences; and partly due to our observation that technology associated with e-mentoring is constantly evolving, and as it evolves, there is an important need to gain new insights into the discipline.

Motivated by the above discussion, in this work we introduce and critically examine an innovative e-mentoring model for mentor-mentee engagement. We take the position that models can play an important role in serving as approximations, acting as a simple guide to summarize and illuminate phenomena. According to Krogerus and Tschappeler (2008), models form powerful tools because they: simplify; are pragmatic; sum up; visualize; organize; and can form methods.

Termed "DARP", our model is designed to foster a cycle of reflection for academic development and growth. DARP stands for: Discuss; Archive; Reflect; and Prepare. In particular, a key-en-

abler and innovative element of our e-mentoring focus is the inclusion of archivable, sharable and streaming online video-conferencing. This model forms a foundation within an e-mentoring environment to open up new avenues through synthesizing mentoring, reflection and technology.

We discuss various actions and outcomes associated with our e-mentoring journey by drawing on multiple experiences, including:

- the Higher Education Research and Development Society of Australasia fellowship application scheme (FHERDSA);
- a faculty teaching award application;
- a promotion application;
- a tenured academic position.

Our paper is organized as follows:

In Section 2 we establish reflection as an important element of the mentoring process and, consequently, introduce Kolb's learning cycle. Section 3 contains our research questions on establishing a model to embed reflection into the e-mentoring process; and how this can be supported through technology. We establish and defend our research design in Section 4, drawing on case study research and action research. In Section 5 we introduce our model, discuss its elements and link it with Kolb's learning cycle. We examine a case study in Section 6 regarding the FHERDSA program and how archivable video-conferencing was used to support reflection and growth in the academic e-mentoring context. Section 7 contains discussion regarding the impact of our model, including on the mentee's career progression, drawing on multiple sources of evidence, including a promotion, a teaching award application and a tenured academic position. In Section 8 we provide some limitations and share guidelines for those readers who may be interested in experimenting with, or drawing on elements of, our model. Our conclusions are contained in Section 9.

REFLECTION AS AN ELEMENT OF MENTORING
Benefits of Reflection

Given the important career benefits listed in the Introduction, mentoring can be viewed as a form of professional development and academic practice. In particular, we argue that reflection is an essential element of effective mentoring processes. Indeed, there are many scholars who support this perspective from a developmental point of view. For instance, Branch & Paranjape (2002, p. 1187) advocate this view through "Reflection leads to growth of the individual – morally, personally, psychologically, and emotionally, as well as cognitively." Furthermore, Ferraro (2000) takes the position that "reflective practice can be a beneficial form of professional development"; and Moon (1999) further supports this perspective through the position that "reflection is integral to a deep approach to learning and plays an important role not only in the enhancement of learning but also in professional practice."

We thus see a clear and consistent message that reflection is an essential element of effective mentoring processes. As we will see, our model will foster opportunities for both mentor and mentee to reflect.

Kolb's Cycle

Given the importance and benefits of reflection identified above, we now discuss a model concerning academic development and growth that includes reflection. We will draw on these concepts in later sections.

Kolb's Learning Cycle is a well-known theory, arguing that we learn from our experiences (Kolb, 1984). Indeed, Kolb's view is that "Learning is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984). In particular, Kolb positions the act of reflection as a core part of such learning. Kolb states that learning involves the acquisition of abstract concepts that can be applied flexibly in a range of situations. In Kolb's theory, the impetus for the development of new concepts is provided by new experiences.

Kolb's cycle can be summarized by:

- A concrete experience
- An observation and reflection
- Formation of abstract concepts
- Testing in new situations.

That is, the learning cycle begins by a person carrying out a task; the person reflects on that experience; and then applies the learning in a new situation (Jayatilleke & Mackie, 2013).

RESEARCH QUESTIONS

Combining our previous discussion on reflection with the importance of better understanding the benefits and limitations of e-mentoring, we introduce the following research questions:

RQ1: What is a model where the design principles can embed opportunities for reflection and academic development into the e-mentoring process?

RQ2: How can technology facilitate this model within an e-mentoring environment?

RESEARCH DESIGN AND METHODOLOGY

We draw on two well-known and robust research designs: primarily, on case study research; and secondarily, on action research.

Case study research is a popular approach in the social sciences (Day Ashley, p.114) and has been described as involving "an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence" (Robson, 2011). The power of case study research lies in its ability "to enable the research to intensively investigate the case in depth, to probe, drill down and get at its complexity" (Day Ashley, p.114).

Key principles of case study research design strongly align with our particular e-mentoring case study context, and thus we claim that this approach is highly suitable for our situation. For example, our single case for e-mentoring research is *unusual* (due to the use of innovative and enabling technology) and *revelatory* (because it reveals something hitherto unknown involving synthesizing reflection and e-mentoring) and *longitudinal* (due to it being examined at different moments in time over more than one year's timespan). These three key principles align with Yin's (2014) recommendations on selecting a suitable single case for research. Crucially, our types of research questions align with Yin's (2014) key criteria for case study research. That is, our research questions ask "how or why" and focus on contemporary

phenomena within contexts of the real world (ie, e-mentoring via modern and developing technologies).

Action research has a long history in educational research and is becoming increasingly popular in other fields (Munn-Giddings, 2017, p.71). Action research is considered to be based in practice and not separate from it (Munn-Giddings, 2017, p.71), that is, the researcher(s) are part of their research context and are highly reflective and reflexive. One of the acknowledged advantages of this way of working is that being an insider "brings both a unique and rich knowledge base to their research" (Munn-Giddings, 2017, p.72).

Important elements of action research align with our e-mentoring case for several reasons. Firstly, the authors of this paper are also the subjects of the work, that is, they are also the mentee and mentor of the e-mentoring case study under examination, and thus the researchers are fully immersed within this research context. Secondly, due to the reflective nature designed into the mentoring process and on-going meetings, the research associated with the project itself is highly reflective. That is, through design and activity, the action research cycle of planning, acting, observing and reflecting were carried out during the project.

We thus have established the appropriateness of our chosen research design and methodology for our particular case and we acknowledge their ontological alignment with constructivism and their epistemological connections with interpretivism.

OUR MODEL – DARP

In this section we furnish a model for mentoring. Our discussion includes illustrating how the model embeds opportunities for reflection and academic development and growth; and we ground our ideas within Kolb's experiential learning cycle.

The DARP Model

We first define the core elements of our mentoring model, before grounding it within well-known theories. The elements of our mentoring model are: Discuss; Archive; Reflect; and Prepare. We summarize these through the acronym DARP and visually depict the cycle in Figure 1.

Figure 1. DARP Model
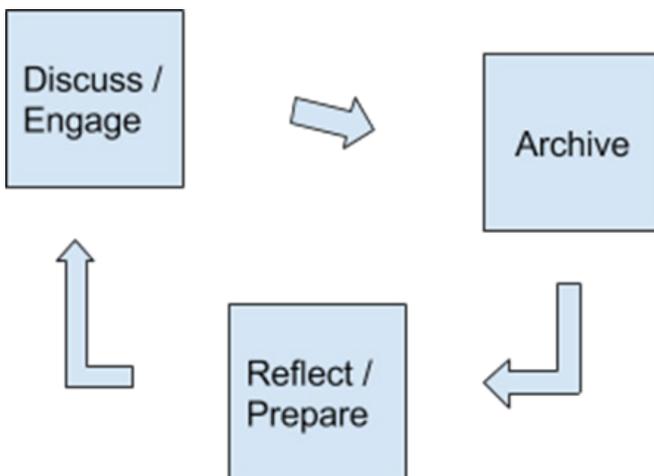
Let us critically examine each element of DARP and the dynamics of Figure 1 in more detail.

The "Discuss" element forms the first part of the process and can be facilitated through discussions at a meeting between the mentee and mentor. The value of structured meetings where meaningful discussion takes place features prominently within the mentoring literature as a way of achieving value-for-time by both the mentee and the mentor (Peterson, 2015; Harvey et al, 2017).

The "Archive" component represents the creation of a record or artefact that captures the preceding discussion between mentee and mentor. This is an essential element of our model and we advocate for a situation where the record is as close to a true representation of the discussion meeting as possible. This might involve the creation of notes, diagrams, a photo, or audio and video. As we will see, the artefact will serve as a useful resource for reflection. We use the term "artefact" to signal that more than just memory is required here. Research has shown, for example, the existence of false memories, like remembering events very differently from the way they happened, are at remarkable levels (Roediger & McDermott, 1995). We conclude that false memories can lead to limitations in the act of reflection, as it is more difficult to reflect on a situation if it cannot be accurately recalled. An accurate archive of the meeting thus serves as an important artefact that can facilitate a more accurate reflection than purely relying on memory alone.

The "Reflect" module indicates the mentee and the mentor reflecting on their actions from their earlier discussion. In particular, the archive of the meeting acts as a shared artefact that can be used to facilitate meaningful reflection. The artefact forms a point of reference that can be revisited and examined through different lenses and perspectives.

The "Prepare" phase forms the final element of DARP and is used as an opportunity to generate new plans, learnings and ideas to be discussed at the next meeting between mentor and mentee (and for those learnings to be used elsewhere).

Linking DARP with Kolb's Cycle and Reflection

Let us theoretically ground our ideas within Kolb's experiential learning cycle.

In Table 1 we summarize the connections between the elements of DARP and Kolb's cycle.

Table 1. Linking DARP with Kolb's Cycle	
DARP Element	**Link with Kolb's Cycle**
Discuss	Having an experience through active discussion
Archive / Reflect	Archiving the experience and reflecting on the experience
Prepare	Learning from the experience and planning something new for the next meeting / discussion
Discuss (New)	Testing and discussing new ideas in a new meeting

Note in Table 1 that we have also included the "new" discussion in the mentor-mentee engagement cycle in the final row. This not only enables a stronger alignment with the final step in Kolb's cycle, but also prompts the creation of a slightly more general model that includes the property of growth and development, see Figure 2.

In Figure 2 we have the basic DARP model captured, but after three steps, the new discussion / meeting breaks away from the previous cycle where new learning is applied. The triangular cycle then continues and expands outward, signifying growth and

development over time. After multiple cycles we would indicate successful academic development through larger and larger triangles.

Figure 2. Triangular Spiral of Engagement, Reflection and Growth
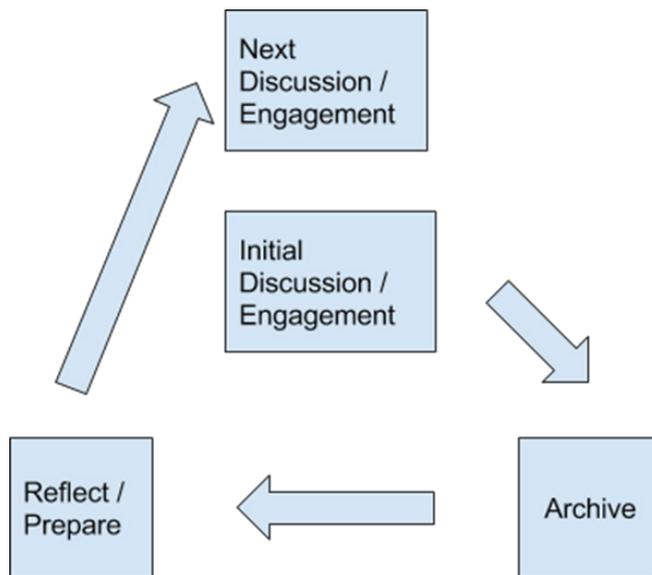
We summarize the opportunities for reflection under the DARP model through Table 2.

Table 2. Opportunities for Reflection under DARP

DARP Element	Opportunity for Reflection
Discuss	Reflect in-action
Archive	Create artefact for reflection on-action
Reflect	Reflect on-action
Prepare	Prepare for new action

Let us unpack Table 2 in a bit more detail. By reflecting "in-action", we mean that both mentee and mentor are thinking about what they are doing or have done during the discussion phase (Schön, 1983). By reflecting "on-action" in the Archive / Reflect phase, we mean thinking about what was discussed during the previous meeting via the archived artefact (Schön, 1983). Finally, the Prepare phase is used for new learnings and ideas to be discussed at the next meeting / discussion between mentor and mentee.

If we analyse the DARP principles then we also see how these elements can align with the ideas of action research: Discuss (action / observe); Archive (observe / reflect); Reflect (reflect); Prepare (plan).

CASE STUDY - FHERDSA AND E-MENTORING
Background
HERDSA is the peak body for educational research and development in Australasia. HERDSA offers a prestigious fellowship scheme, FHERDSA, which is "for academics or leaders who have made a significant personal commitment to the improvement of teaching and learning in a tertiary education context" (Thomas, 2014).

One aim of the HERDSA Fellowship Scheme is for applicants to develop a reflective approach to educational practice

through the process of constructing their fellowship application, taking the form of a portfolio. HERDSA encourages applicants to seek the support of a mentor whose role includes providing support and constructive feedback regarding drafts of the application (Thomas, 2014). The lead time for a Fellowship application is up to two years and so the commitment involved with designing, developing and delivering a portfolio is a serious one.

In mid-2016, the second author (the mentee) took the first step of the FHERDSA process by completing the associated paperwork and contacting the first author (who was already a Fellow of HERDSA), requesting a mentor-mentee relationship. This began our journey.

Let us discuss the mentee and mentor as subjects during our phase of e-mentoring. The mentee was located at a large, research-intensive university in New Zealand; while the mentor was situated over 2,000 km away at a large, research-intensive Australian university. The mentee could be described as an early-career academic, with less than 5 years' duration since completing his PhD. The mentor was more in a mid-career stage, with a timeframe of 15-years post-PhD. The mentee was in an educationally intensive role, roughly comprising teaching (80% of time) and research (20% of time), whereas the mentor was in a more traditional academic role of teaching (40%), research (40%) and service (20%). Given the early career status, the mentee's leadership skills would be described as emerging, while the mentor held a range of management and leadership roles within education. The mentor had also developed a national and international profile in university learning and teaching.

DARP and FHERDSA
Let us align our e-mentoring process with our DARP model discussed in Section 4.

Discuss: Video-Conferencing
After some introductory emails and an initial meeting via online video-conferencing, it was clear that there was mutual excitement for the project from both mentee and mentor. Clearly, distance was a challenge in this relationship. To manage the challenge of distance, we drew on Single and Single (2005), agreeing to engage in video-conferencing for 30 minute, fortnightly discussions through e-mentoring meetings. The timing and duration of meetings seemed manageable for each of our timetables and personal commitments.

Online video-conferencing offers a rich, dynamic and interactive form of communication. We initially employed Skype, which is free and reasonably easy to use. While Skype is well known and popular [and also listed in (Thomas, 2014)], it doesn't natively support call recording and this led to challenges with reflecting on our e-meetings. For example, after a meeting finished we found it both difficult to recall important details of discussions and sometimes experienced the "false memories" discussed earlier in this paper leading to confusion.

After several months of meetings we acknowledged the need to have improved records of our video chats, forming an archive that could be used for reflection purposes. We opted to try Hangouts on Air via YouTube Live (Google, 2017) to replace Skype as our video-conferencing system for meetings. Once again, this was a free option that is similar to other video-conferencing platforms, but with one important difference - it could automatically record and archive each meeting to form a YouTube video. The resultant video could be viewed online by

mentee, mentor or shared with a third party. In fact, the social-networking potential of Hangouts on Air via YouTube Live is significant. For example, the video of the meeting could be shared live during the mentor-mentee discussion, or afterwards, post-session as a YouTube video.

Archive: YouTube Videos

As mentioned above, our decision to employ Hangouts on Air via YouTube Live enabled the mentor-mentee discussions to be recorded and archived as a YouTube video, while traversing the challenge of distance between mentee and mentor. The resultant YouTube video thus formed the important artefact that very accurately captured the discussion between mentee and mentor through audio and video. The archived video can be considered as part of a portfolio of interaction, ideas and activity of the mentor-mentee growth and development process. Furthermore, due to the automatic archiving that this option offered, we found it very easy to concentrate and reflect in-action during the discussion / meeting, rather than, say, trying other forms of archiving, for example, exclusively note-taking while holding the video-meeting.

We can thus see a key element herein was the inclusion of archivable, streaming online video.

Reflect / Prepare: Engage with the YouTube Videos

With a detailed and accurate archive consisting of the full video of the mentor-mentee discussion on YouTube, it was easy for all parties to reflect on-action regarding the previous discussion and to also prepare for the next meeting by engaging with each video. We also used some videos as an accurate reference point when something needed to be revisited for clarity moving forward. For example, specific questions regarding each archived meeting could be raised and addressed via a comments section associated with each video. This promoted convenient, on-going asynchronous dialogues between the mentee and mentor.

IMPACT OF DARP

Let us discuss some of the impact of the DARP model by drawing on multiple sources of evidence. Let us discuss important effects of DARP, with especially great outcomes for the mentee:

- FHERDSA
- An early career teaching award
- A promotion
- A tenured academic position.

In mid-2018 the mentee was inducted as a Fellow of HERDSA. This was a very satisfying outcome to the initial aims of our e-mentoring journey. However, our journey was not limited to this. Early on in the FHERDSA voyage, both mentor and mentee realized the potential to translate DARP to foster other professional development opportunities. Thus, we applied the DARP model to the aforementioned settings that were beyond the fellowship setting. Let us discuss these situations.

The Early Career Excellence in Teaching Award recognizes and rewards excellence and innovation displayed by teaching staff at the Faculty level within the mentee's university. We targeted this award hoping to see a positive effect of the DARP model, and also as a prelude to the mentee's promotion application. The initial discussion on the teaching award application and subsequent reflection on the archived video resulted in a substantial improvement in the mentee's application. In particular, the mentee acknowledged that simply having access to a model

had an effect of building their confidence within the professional domain. By co-developing the DARP model, the mentee and mentor identified a personal connection regarding the meetings and their wider relationship. In addition, the mentee and mentor acknowledged that grounding the four components of the DARP model within associated literature established a scholarly basis for the approach, building a sense of quality and reassurance within their academic mindset. Overall, the above ideas were seen as highly beneficial and the outcome was a successful attainment of this award.

In 2017, the mentee identified the goal of obtaining an academic promotion. With the experience and improved confidence from obtaining the teaching award, we also applied the DARP model to discussions regarding the promotion application. Similarly to the experience with the teaching award, the mentee acknowledged that their promotion application was heavily influenced by the discussions with their mentor, reflection on archived video of the discussion, and new insights were gained through this process of reflection. The mentee was successfully promoted at the end of 2017.

In mid-2018 the mentee applied for, and successfully obtained, a continuing academic position at a different university. Part of this process involved drawing on the e-mentoring experience and learnings in the application, interviews and negotiations. This is an exceptional outcome for the mentee who now has the opportunity to progress to a more stable phase in their academic career.

Let us explore some qualitative assessment of our e-mentoring experiences through the DARP model. Drawing on our discussion within the Introduction, a key question in this regard that we probe here is: were there positive personal and career outcomes for the mentee and mentor?

As can be seen from our preceding discussion, the answer is "yes" for the mentee. We can categorize the aforementioned professional outcomes in the following way:

- Recognition (FHERDSA and teaching award);
- Career progression (an academic promotion);
- Career mobility (a tenured position at another institution).

Was there similar positivity for the mentor? The answer is also "yes", but we note that it was manifested in different ways. The main outcome identified by the mentor involved recognition by relevant organizations (eg, their own university, HERDSA) for developing capacity in others. This recognition was found to be useful during the mentor's annual planning and performance reviews where he could point to these examples as contributions to service and leadership.

Both mentee and mentor acknowledged personal satisfaction with the e-mentoring process. This mainly revolved around social aspects of their relationship and shared experiences. For example, both identified the joy of forming new connections, and subsequently, establishing a micro community of practice through time, dialogue and technology.

LIMITATIONS AND GUIDELINES FOR IMPLEMENTATION

In this work we have discussed what has worked locally "for us". It is well known that quantitative generalization to larger populations from a single case is not the goal of case study research (Day Ashley, 2017). On the other hand, our very selection of an

e-mentoring case indicates that we are connecting it with a more comprehensive group of mentoring cases and steering towards a collective understanding of the e-mentoring phenomenon. Indeed, Yin (2014) advocates that the findings of case studies may also lead to "analytic generalization" through considerations in relation to a wider set of ideas and principles. This kind of generalization has been identified as one way of assessing the external validity of case study research.

From the above discussion we call for more research into the area of e-mentoring. This may include exploring different cultural settings, contexts and technologies. In addition, we hope that our ideas may be useful for related mentoring situations such as research supervision, internships or educational placements where the challenge of distance may be present.

We have not discussed the detailed nature of our "digital dialogues", however we plan to further analyze the (automatically generated) audio transcripts for each recording so that themes of discussion may be identified. On reflection, we essentially see our style of dialogue between mentor and mentee as drawing on Socratic principles of questioning, enabling the mentee to make choices and to shape their own destiny. This kind of "perspective transformation" goes beyond simply passing the four career milestones that we have already discussed. Rather, our mentor-mentee relationship aspired to foster "a praxis, a dialectic in which understanding and action interact to produce an altered state of being" (Mezirow, 1978), particularly within the mentee.

Motivated by the above, after more than 18 months of conducting these interactions, we have the following advice for anyone who might be interested in exploring these concepts.

Set an upper limit for the video meetings. We set an upper limit of 30 minutes per session, but most of our recordings are around 15-20 minutes, capturing only what we felt was important and necessary. If the recorded sessions are very long, then it may be a challenge to keep up engagement when reflecting on these longer videos. Furthermore, it can be more challenging to locate a specific moment or piece of material within a longer video.

Audio quality is a key element. Investing in a headset is highly recommended to ensure the audio is clear and comprehensible both live and within the archived recordings.

Mentoring and development can happen anywhere! We mostly employed our desktop and laptop computers to conduct our discussions. We have not deeply explored the avenue of using video-conferencing via our mobile phones for the mentoring process, but we think this has huge potential to grow. This enables mentoring on the move with mobile technology (m-mentoring)! S-mentoring (mentoring using social media methods) is also something that has great potential to be explored. We have only scratched the surface regarding this on the YouTube platform.

CONCLUSION

In this work we introduced and critically examined a model for mentor-mentee engagement in peer-to-peer academic development. In particular, our DARP model was designed to foster a cycle of reflection for academic development. We theoretically grounded our DARP model in Kolb's experiential learning cycle and illustrated how it was implemented within an e-mentoring environment. In particular, we linked our theory to practice through discussion of a concrete e-mentoring case study showing how technology was utilized to facilitate the process. A key element herein was the inclusion of archivable, sharable and streaming online video-conferencing.

A meaningful mentor-mentee relationship was developed using technology and the process was linked with several important outcomes concerning the mentee's career. In particular, this experience may not have been available without the use of technology and thus we hope that the ideas in this paper open up mentoring possibilities for others that transcend the barriers of distance across the globe.

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