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## **Developing learning cohorts for postgraduate research degrees**

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### **Introduction**

Increasing student enrolments in higher degree research studies, the loss of experienced research student supervisors and decreasing overall government funding is placing pressure on universities to develop more efficient and effective ways of supervising larger numbers of research students to completion. Consequently there is mounting interest in policy, practice and research on postgraduate student learning and supervision. A review by Carr, Galvin and Todres (2010) showed that, whereas early research on supervision concentrated on ways to improve pedagogic frameworks and achieve high completion rates, recent interests are in more efficient and effective ways of supervising research students. McCallin and Nayar's (2012) recent review of

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\* Sarojni Choy was an employee of the Queensland University of Technology at the time the data for this research study were collected.

postgraduate research supervision identified three common models of supervision: traditional, group, and blended. Burnett (1999) described the traditional approach as the Apprentice Master Model (AMM) where the supervisor assumes the role of a 'master' with the student as the 'apprentice' and the group approach as the Collaborative Cohort Model (CCM) where the supervisor becomes the mentor. Further, McCallin and Nayar (2012) noted there was little research evidence about the efficacy of these models and called for more discussion and research to improve supervision as pedagogy.

This paper concentrates on the cohort (sometimes referred to as the community) model of supervision. The foundations of learning cohorts are informed mainly by the theory of social constructivist (Fosnot 1996) and Lave and Wenger's (1991) concept of 'community of practice'. Within the educational theory of social constructivism, learning is construed as an "interpretive, recursive, building process by active learners interacting with the physical and social world" (Fosnot 1996, p. 30). It is argued that a social world is less threatening and facilitates interactive dialogue and critical reflection (Brookfield & Preskill 1999) to construct, re-construct and apply knowledge in socially meaningful contexts. Regardless, the social, physical, psychological and pedagogical contexts in which learning occurs needs to be purposefully designed and maintained to enhance student achievement. Furthermore, learners need to be enculturated into those social worlds to engage in and contribute in meaningful ways. However, a learning environment and enculturation alone will not lead to successful learning. As Dysthe, Samara and Westrheim (2006) and Wisker, Robins and Shacham (2007) argue that members of a cohort need to be purposefully developed if this model is to succeed.

However, approaches to developing learning cohorts specifically for research degrees are not evident in the academic literature. This paper on developing cohorts for postgraduate research degrees describes and justifies the approach we used to develop a cohort of seven students enrolled in a Master of Education (Research) at an Australian University. Their development included provisions through four main schedules: i) a week long residential workshop; ii) formation and fostering of a community of learners; iii) nourishing scholarship; and iv) ongoing cohort learning opportunities. In addition, we also progressively evaluated the design at the reaction level (see Kirkpatrick & Kirkpatrick, 2007) using student evaluation surveys, group discussions, feedback from cohort sponsor representatives and our reflective notes during 2010. This evaluation provided some early indication of success or otherwise.

We begin by reviewing current practices and benefits of cohort supervision reported in literature. This is followed by an overview of the cohort that we supervised and the details of the research course they were enrolled in. We then briefly describe our approach to supervision. The next section of the paper explains our developmental approach and its evaluation. The point of departure from mainstream studies on supervision and our paper is its particular focus on how to develop cohorts – an area that demands more discussion and space in literature. Our aim is to share our experiences and initiate more research on the development of cohorts for research degree studies.

### **Cohort supervision**

As mentioned earlier, cohort models gained attention in an attempt to manage supervision of increasing numbers of students enrolling in higher degree research studies within limited resource allocations in universities. While there is evidence of more advanced team learning in the sciences, mainly attributed to students working on related projects and sharing common laboratory or field spaces, it is in the social sciences that cohort models of research supervision are better known. Groups of students at different stages in their science projects work alongside each other and are commonly supervised by a single supervisor. Technically they do not form a cohort, but aspects of their learning journey are similar to those of a cohort.

Current cohort models reflect one of two broad features:

- i) A cohort-with- one: a cohort sharing a common research area or theory is assigned to a single supervisor with expertise in the research topic, theory and methodology; or
- (i) Cohort-with-team: a cohort is assigned to a team of supervisors whose complementary expertise in the research topic, relevant theory and methodology broaden the scope of support for the group.

Both these sets of features offer efficiencies and opportunities for collaborative and action learning.

A cohort shares five common characteristics (Imel 2002). These are:

- (i) Have a defined, long-term membership who commence and complete together;

- (ii) Share a common goal that can best be achieved when members are academically and emotionally supportive of each other;
- (iii) Engage in a common series of learning experiences;
- (iv) Follow a highly structured, intense meeting schedule; and
- (v) Form a network of synergistic learning relationship that is developed and shared among members.

Nonetheless, these characteristics are nourished when member relationships are fostered early in the group formation within an environment that supports and challenges individuals and the group maintains a balance between the group and individual development. Lawrence (2002) concurs with Imel and contends that the success of a cohort lies in the continuity in the group's learning journey which strengthens the stability of the community of learners as they grow to know each other and count on one other for support. Others, such as Burnett (1999), Maher (2004) and Tisdell et al. (2004) promote cohorts for broader support and as a resource base to students. According to Saltiel and Russo (2001), the members' interpersonal relations not only facilitate learning, but also maintain motivation. This is particularly important to overcome isolation common under traditional approaches to postgraduate research studies, especially in social sciences. Dinsmore and Wenger (2006) argue that a sense of community fosters learning, and discourages intellectual and professional isolation and this reduces potential for dropping out. Such a community offers sound opportunities to engage in action learning (Revans 1988) to apply theory to practice, then revise the theory in light of what is learned and reapply the revised theory (Tisdell et al. 2004). In this way cohort models provide strong curriculum designs. Furthermore, a critical mass inherent in cohorts incites and sustains high impact responsiveness to emerging issues and opportunities as well as innovation (Delahaye and Choy 2007).

Group learning also fosters intellectual independence through social and emotional support (Manathunga and Goozee 2007). Parker (2009) contends that a community learning approach contributes to better scholarly writing. While these benefits of cohort models are widely acknowledged, cohort members need to take self-responsibility, and sustain a high level of patience, courage, humour, commitment, and sensitivity - attributes evident in team learning contexts. Ge and Harde (2010) suggested that a sense of ownership, personal investment and mutual dependency are essential for cementing the type of relationships are needed to maintain cohortness to achieve individual and group goals. Hence, groups need to be specifically developed to foster relationships and responsibilities to sustain on-going learning and support for each member. Imel's (2002) study

suggests that well developed and coordinated cohorts stimulate positive effects such as increased critical thinking skills, critical reflection, knowledge construction, enhanced knowledge base and learning motivation.

The design for our learning cohort was based on these concepts, particularly the five characteristics identified by Imel (2002) and the development of a sense of ownership, personal investment and mutual dependency.

### **Our cohort**

There were over 100 students enrolled in the Master of Education (Research) course at our university, however, only seven were members of our cohort. They were sponsored for part-time studies over two years by the Government Department responsible for Vocational Education and Training (VET) in the State of Queensland. The sponsor was interested in developing the research capacity of a small group of staff working in public and private registered training organizations (RTOs) that delivered courses in VET. The university was approached for a partnership to develop VET researchers and at the same time, advance seven research projects that were of priority to the sector. Apart from meeting the university's entry requirements, an important corollary to their development as researchers was that the new knowledge and skills had to focus on the emerging research needs of the VET sector therefore their projects had to be integrated into the VET environment. Further, as an additional benefit, programs which have a strong connection to the workplace are better suited for cohort delivery (Saltiel & Russo 2001). Cohorts provide strong curriculum designs because people learn best when they apply theory to practice, then revise the theory in light of what is learned in the application and reapply the revised theory (Tisdell et al, 2004), a process that defines action learning (Revans, 1988).

Appropriately, a cohort approach facilitated a stronger connection to serve VET imperatives and interests. The individuals were required to negotiate arrangements with their work supervisors to attend 12 days face to face workshops/forums over the two years. Costs associated with research were met by their employers. Each student was required to nominate a local mentor who could advise on the feasibility and applicability of their research and offer moral support throughout the study period. These arrangements, together with various forms of learning support from the university, and the relationships between cohort members formed a supportive and nurturing structure for each student.

The cohort members were professionals and had the foundational knowledge bases about their individual fields of practice. They drew on three sources for learning: their own knowledge and experiences; the knowledge and experiences of other cohort members; and the knowledge and expertise of the supervisory team and other academics in the Faculty of Education (administrative unit).

### **Master of Education (Research) course**

The MEd course was a two year part-time program and comprised two core study units (*Professional Applications of Research* and *Conducting Innovative Educational Research*) and a research project leading to a 50,000 word thesis. There were four key milestones for the course: i) completion of the core units with a grade point average greater than 5 (on a scale of 3-7); ii) development of a confirmation document (15-20,00 words, typically including at least three chapters – introduction, literature review and methodology) for internal examination and oral presentation to a panel; iii) completion of the research to write a thesis (about 50,000 words) for internal examination and oral presentation to a panel; and iv) preparation of the thesis for external examination. The internal examinations and oral presentations to panels form significant developmental and quality check processes of the Faculty.

The two core units were offered in a blended learning mode (face to face lectures and e-learning using weekly *Eluminate* sessions which allowed almost synchronous interactions). This model was much in line with recent transition to blended learning across the university. A blended learning approach to research supervision is highly recommended by De Beer and Mason (2009), Crossourd (2008) and Wisker et al (2007). Engagement and completion of the two units enabled students to scope and formulate their projects using the theories and principles around the methodological approach appropriate for their projects. Both units were facilitated and assessed by academics other than the supervisors. Following the completion of these two units, the students worked closely with their supervisors to prepare for confirmation, complete their research projects and write the thesis. Over the candidature period, students had access to a range of faculty wide structured and unstructured learning experiences to help complete each milestone. The interactions with other academics and students in the course offered opportunities to learn in and from the wider academic community.

### **Supervision**

The case presented in this paper adopted a cohort-with-team feature (see Wisker et al, 2007) and followed a Collaborative Cohort Model (see Burnett, 1990) where the writers became the mentors and supervisors. Other university personnel and networks were invited for their expertise on a needs basis to provide relevant knowledge input. The supervisors organised the pedagogical design of the program within the administrative framework of the faculty, a practice that is common in most universities (Franke and Arvidsson 2011). The pedagogical design not only developed and maintained the 'cohortness' of the group, it also facilitated a triachic relationship between individual students, supervisors and the cohort. In addition to the interactions between these parties, the students had access to other networks both, within and outside the university.

### **Developmental approach and evaluation**

The experience of using learning cohorts for course work postgraduate programs had highlighted to us several issues important to managing the learning processes within a learning cohort. These issues have been the subject of previous publications (details to be provided on acceptance of this paper) and include:

- The use of andragogical principles which assumes that adults prefer to take responsibility for their own learning
- The need to gradually develop the learners from being dependent to fully independent
- Managing the process of learning rather than providing explicit content input
- Harnessing the energy of group processes.

In particular, the focus on andragogy was intended to encourage the development of tacit knowledge, moving the learning cohort from being dependent to independent learners as well as integrating the learning into the workplace (Choy & Delahaye, 2009) Research has shown that tacit knowledge differentiates experts from novices (Hedlund et al, 2003). Further, as Armstrong and Mahmud (2008) have shown that tacit knowledge can be increased by utilising the full range of learning styles (for example, Kolb's accommodator, diverger, assimilator and converger), a variety of learning strategies were used, including information input, experiential learning, discussions and reflective activities.



A thorough literature review also provided a number of key additional insights into conducting learning cohorts that appeared to be highly relevant to developing postgraduate research students. These insights included four considerations. First, and most importantly, the learning should commence with a residential workshop at the beginning of a learning cohort program, as emphasised by Tisdell et al. (2004) and Cooner (2010). Second, the curriculum design should establish a sense of belonging within the community (Dinsmore and Wenger 2006) by developing group relationships and creating an environment that is both supportive and challenging to encourage critical reflection and knowledge construction (Imel 2002). Third, the learners need 'nourished scholarship' that offers a sense of belonging, managing anxiety, growing confidence, commonality and uniqueness, values clarification, scholarly community, and negotiating the rhythms of receptive and active times (Carr et al. 2010). Finally, continual opportunities over the long term for knowledge generation processes of internalisation (explicit knowledge to tacit knowledge) and externalisation (from tacit knowledge to explicit knowledge) have to be provided (Nonaka and von Krogh 2009). Dinsmore and Wenger (2006) and Maher (2004) believe that such processes strongly contribute to a more collaborative cohesive cohort, a balanced group, as well as to individual development. The understandings gained from these insights formed the basis for designing the cohort-with-team model, discussed in this paper.

Our model placed the cohort, workshop, and team learning experience as central to the supervisory experience for students undertaking the Master of Education (Research) degree, a strategy strongly suggested by Glover (2010). Data for the review and evaluation of the developmental provisions was collected during three face-to-face sessions held with the cohort in their first year.

This paper reports on the first year of the two year part-time program. As an evaluation process, the students completed a short questionnaire and participated in reflective exercises, guided by a set of broad prompts about the design and usefulness of the developmental strategies. The supervisors also discussed the provisions with the cohort's sponsor at each of the workshops and during regular administrative meetings.

Here we share the rationale of the development of learning cohort approach and the results of the first year evaluations of the four provisions: initial residential workshop, development of a learning community, nourishing scholarship, and ongoing learning opportunities.

(i) Initial residential workshop

Although De Valero (2001) recommended a two-semester orientation course which is university-wide, we followed Tisdell et al. (2004) and Cooner's (2010) suggestion of an initial week long residential workshop held eight weeks before the semester commenced, at a time that was mutually convenient to all involved and was within the resource constraints of the faculty. The orientation initiated a psychological contract – students' set of beliefs and attitudes about mutual obligations between themselves, their RTO and the university. The workshop began with students introducing each other, explaining their roles in the VET sector, and briefly stating their area of research interest and expectations of the course. Through this exercise they learnt about each other and also sought for synergies between their research interests. Not surprisingly, discussions around their roles and research interests extended beyond the workshop hours and initiated networking, not only for the course but also other work related matters. These observations demonstrated evidence of highly productive relationship building that was useful for cohort formation.

The cohort was then introduced to key Faculty staff who explained their roles and responsibilities. An advantage of meeting the different staff and participating in activities organised by them was the opportunity for the cohort to meet and affiliate with them as such a relationship would prove to be important as the students gradually progress through the program – in essence, having these 'outsiders' closely related to the cohort's community of learning, as opposed to each student being one among the mass of postgraduate students. This approach to introduction and enculturation into the wider research community of students and supervisors across the faculty and the university is critical, and highly recommended by Dinsmore and Wenger (2006) and Lee (2008).

Next, a typical learning journey for the MEd Research and transition from dependent to independent learning was shared by a recent graduate who brought to light the realities of being a part-time research student.

Following the orientation workshop, one of the students commented:

*The orientation workshop provided not only good information, but the opportunity to re-think [my project] and share with the cohort what was most valuable. (Participant 02)*

The cohortness was a little fragmented in the first semester of studies when the students completed the two faculty wide units. They still had access to the supervisory team and could meet when mutually convenient, but

reported that they were overwhelmed by the demands on their time for the two study units and also learning in academia, especially after a long period since completing their undergraduate degrees. We observed a weakening coherence in students' focus on their project perhaps resulting from irregular contacts with us. This illustrated a weakness in our process and the importance of the supervisory team working closely with the coordinators of the core units, and scheduling regular meetings in the early phase of the project.

Our approach to a week-long residential was unusual. Normally, masses of research students participate in a one to two day orientation which introduces them to the study processes and access to a range of resources.

(ii) Development of the learning community

In developing the cohort as a learning community, we took on the advice from Probst and Borzillo (2008) who suggested a focus on building research capability rather than the research itself because such a community offers a powerful way to stimulate learning (Wenger, 1998). Activities during the week long workshop were designed to establish and enculture the students into a community of learners. Our purpose was to develop member relationships early in the group formation, within a supportive and challenging environment, one that also maintained a balance between group and individual development (Imel 2002).

The roles, responsibilities and rights of all parties were negotiated and established up front but left open to re-negotiation if and when needed. This was to ensure there was no confusion over the entitlement to resources and services and there were no mistaken expectations and assumptions. Although we did not experience any issues with how each member of the cohort conducted oneself, a code of practice for the cohort and team of supervisors in the research degree course is highly recommended.

As a way of setting the tone for a sense of belonging within the community, the students developed group relationships through voluntary participation, sharing goals, and offering non-evaluative feedback in an environment that was supportive, yet sometimes challenging. To facilitate and reinforce community building, they were rotated between groups and pairs for different activities, ensuring that they all interacted with each other and got to establish closer relations. For instance, as they engaged in extensive periods of practice (active learning – see Delahaye 2011) and acquired basic technical skills in library procedures, accessing academic databases, APA referencing style and academic writing. Much of their learning here was from each other. A few 'champions' became the leading light for others – offering evidence of collegiality and collaborative learning.

The learning environment for these activities was non-threatening because the students were not being assessed and most of them were novice at the tasks around them. The interactions extended beyond the meetings at the university and these students engaged in regular conversations through their work meetings and forums. There was no evidence of issues such as power and trust as raised by Roberts (2006). Participant 4 explained the open and collaborative environment:

*In the beginning we felt like strangers, but by the end of the week we could open up and not feel been judged by others because we were kind of on the same level and starting this journey together.* [Participant 4]

Other group activities were organised to encourage critical reflection and knowledge construction, as recommended by Tisdell et al. (2004) and Dysthe et al. (2006). To help them with academic writing the students shared short pieces of writing and critically reflected on the content and revised these as a group. These activities created a sense of mutual dependency and cemented relationships to maintain cohesiveness (Ge and Harade 2010). Therefore, it was important for this space to be supportive and challenging (Drago-Severson et al. 2001) in order to facilitate academic learning, provide emotional and psychological support, offer different perspectives, and sustain learner persistence.

(iii) Nourished scholarship

Carr et al. (2010) suggest a nourished scholarship that offers a sense of belonging, managing anxiety, growing confidence, commonality and uniqueness, values clarification, scholarly community, and negotiating the rhythms of receptive and active times. The workshop activities created a highly integrated learning culture and facilitated a sense of belonging. As the students shared their thoughts and ideas, it opened the way to building trust and gave confidence to openly discuss and clarify points with the group. In developing a cohort it is important that there is openness between the cohort and supervisory team as well as within their community. Accordingly, the broad parameters for membership of the cohort were outlined and made the cohort aware of the code of behaviour that was expected. At the end of the first year it was evident that the cohort connected with each other better than with the supervisors. The exercises in the workshops enhanced their confidence, as written by four students.

*Amazed I actually sound and think like a researcher and enjoy hearing [of] people's research* [Participant 03].

*That perhaps I know a little more than I give myself credit for* [Participant 05].

*I can still do this (study) after many years of absence* [Participant 06].

*How quickly I could write when I made a concerted effort in desperation* [Participant 07].

Finally, as suggested by Hockey (1996) our own motives on furthering discipline knowledge, material or career benefits from publications, and self-esteem resulting from the recognition carried by the supervision role was made clear to the students. Also, the basic rules for communication with supervisors were formalised. For example, after discussing the project plan and schedule of activities, and milestones for the semester the students were responsible for initiating meetings with the principal supervisor or the supervisory team at a time convenient to both parties. Before each meeting the student would send an agenda and a piece of writing that the supervisory team would read and prepare feedback. The principal supervisor would collate the responses, discuss any conflicting comments with the supervisory team and then share with the student via email or in person. This exercise encouraged the supervisors to reflect on their roles in the relationship as a provider of support as well as co-developer of knowledge (Calma 2007).

The students understood that while they work on individual projects, they were to embark on a group experience which required collaboration with the whole cohort. They were tightly knit by the common factor of VET knowledge and how the various problems interact in the overall policy and practice of VET. The supervisors remained as only one of the possible knowledge sources and this arrangement offered some flexibility in the contract learning for their research projects. When not interacting with their supervisors, members of the cohort networked with each other, providing some evidence of a cohort agency emerging with increasing levels of bonding (Maher 2004). Naturally, those whose topics had synergies displayed tighter bonding than others. Additionally, some activities (e.g. individual or group presentations, followed by class discussion) were deliberately organised to encourage rational discourse and reflective processes that are necessary precursors to transformational learning. Transformational learning occurs when there is a change in the learners' basic beliefs and/or values (Mezirow 2009). The concept of transformational learning was addressed specifically in a session to encourage students to transform from being dependent to independent learners.

The entire cohort found the developmental workshops very beneficial. Two students were quite pragmatic, commenting that the induction workshop enabled her to focus for the whole week without work distraction (Participant 05); and “provided not only good information but the opportunity to re-think and share with the cohort” (Participant 02). Others appreciated the group work and knowledge that their peers also felt anxious in the beginning as they did and this was reassuring according to Participant 03.

The experiences following the first workshop and emerging personal issues gave at least one participant pause for thought but after discussions with one of the supervisors, she decided to continue with the program.

#### (iv) Ongoing learning opportunities

Ongoing learning over the long term for the knowledge generation processes of internalisation (explicit knowledge to tacit knowledge) and externalisation (from tacit knowledge to explicit knowledge) have to be provided (Nonaka and von Krogh 2009).

Following the initial workshop, the academic supervisors and a department representative who coordinated the sponsorship maintained support and communication. A website was established for collaboration, sharing and on-going discussions, but was underutilized mainly because students communicated using the systems at work. They continued to interact with each other during various VET forums organised by the sponsor of the cohort.

Near the end of the first semester another day long workshop was held. This workshop concentrated on the knowledge generation processes (see Nonaka and Takeuchi 1995). The curriculum process encouraged internalisation (explicit knowledge to tacit knowledge) when the participants reflected on the workshop (Nonaka and von Krogh 2009). Externalisation (converting tacit knowledge to explicit knowledge) was demonstrated when each participant explained her/his research project to a peer (prior to the workshop) and this peer had to present a description of the project to the group at the workshop. This process reflected significant elements of communicative learning (Mezirow 2009) as each tried to understand the inner worlds of the peer. The exercise not only engaged the pairs in collaborative learning and critical thinking - generated by constant questioning to clarify the project details - it also strengthened the relations between and among the cohort members. The emphasis on knowledge generation strongly led to a more collaborative cohesive cohort and a balance between

group and individual development (Maher 2004; Dinsmore and Wenger 2006). The exercise challenged assumptions and engaged in joint knowledge construction with each other and the supervisors. The cohort found this approach challenging and uncomfortable but recognised it as a powerful learning tool. This was explained by one student who said:

*The questions that [name of co-learner] asked made me realise how my written proposal was not thoroughly thought through although in my head I knew what I wanted to do. It made me really come out of my comfort zone. [Participant 08].*

Active engagement with the cohort members enhanced critical thinking and personal meaning making, which led to each finding his/her own personal ‘voice’ and experience the power of emancipation (Lee 2008). Surprisingly, the supervisory team did not experience the limiting factors for learning cohorts, reported by Imel (2002), such as passive or dominant group members, lack of commitment to the cohort, and members viewing the facilitators as the ultimate authority.

By the end of the first year we noted that the cohort members were prepared to navigate much of the learning themselves. Their suggestions to have greater input in future workshops indicated that they were becoming more self-directed and there was a decreasing need for the supervisors to organise highly structured learning sessions (Lee 2008). It became increasingly evident to us that the cohort members were experienced VET practitioners with a wide variety of expertise. They needed directions in the research and academia – areas they were not familiar with.

## **Summary**

The learning curriculum for the first year offered several provisions suggested in literature. For example, it presented a safe environment that allowed the participants to take hard and honest looks at their own knowledge and also provided intellectual and emotional support for creating and accessing knowledge (Tisdell et al. 2001). This encouraged the participants to build ongoing relationships, have conversations that can reach deeper levels of analysis and reflection (Maher 2004), and value diversity (Imel 2002). As a result the students were able to make changes and adjustments to their project scope. The roles of the learners and the supervisors took a new

path because the students felt empowered to decide what they needed and when. This was one of the intended outcomes so that on completion of the course the cohort would continue the collegial relationship and contribute to research activities for the VET sector (Lee 2008). The representatives of the cohort sponsor acknowledged the benefits of developing the cohort at the beginning of the study program.

*What brought about the success of this group was the initial investment during the week long orientation where they all got to know each other and formed a learning community.*

The cohort reported that the feedback and support received from fellow members of the cohort were the most affirming and helpful actions of the learning experience. A final concern that was not addressed but needs attention was the loneliness factor. A few students said they felt lonely between the first workshop and the start of the tutorials for the core units. When studying at home, they felt “alone with no idea what to do or someone to ask ‘on the spot,’” [Participant 07]. At this early stage it was surprising that the students did not contact the supervisors regularly. One student felt lost and misunderstood that she could not access the supervisors for discussion while studying the core units offered by other academics.

## **Conclusion**

The four provisions (initial residential workshop, development of a learning community, nourishing scholarship, and ongoing learning opportunities) resulted in gradually developing an environment and culture that students found very supportive and nurturing. A key aspect does appear to be a collaborative partnership with the sponsors of the students and our faculty’s support for a cohort-with-team supervision model.

While the evaluation was only conducted at the Reaction Level (Kirkpatrick & Kirkpatrick, 2007), the results do lend support to suggestions in literature on the learning experience design for, and conduct of, learning cohorts. The strategy of providing information to clarify the psychological contract, and thus encourage self-selection, seems to have had some success – at the end of the first semester, all applicants are still in the program. In addition, all the applicants were aware that the learning strategy would be based on a learning cohort - pre-knowledge that Maher (2004) believes is essential. The departmental senior manager and the academics were pleased with the selection process, as the dual needs for alignment with the organisation’s strategic needs and satisfying the university academic



standards were achieved. The selection process also fulfilled the recommendations to ensure a strong connection with the workplace and to promote intrinsic motivation within the potential learners (Saltiel & Russo, 2001 and Ge & Hardre, 2010).

Cooner (2010) and Tisdell et al (2001) emphasise the importance of a residential workshop at the beginning of a learning cohort program. The participants endorsed this recommendation, commenting very favourably on both workshops. They said the workshops provided support, information on the university process, research knowledge and skills; developed peer relations and increased bonding between members; and even, to an extent, facilitated transformational learning (Mezirow, 2009) - as evidenced by the personal development insights some participants shared in the second evaluation. The provision of a university and a departmental coordinator appeared to be important to the participants. This feature should be retained in any future learning cohorts.

The course work units departed from the learning cohort concept somewhat and this departure was reflected in the mixed evaluations on these units. The evaluation of the blended learning used was also mixed, with some appreciating the freedom of e-learning and others feeling lonely and disconnected. Details around this comment will be investigated further to understand the nature of students' expectations. Similarly, difficulties with web navigation will need attention. Strategies to overcome a sense of isolation during this detour into course work, a common feature of most higher education, will need to be addressed. To maintain the synergies between the core units and the research project, the facilitators of the two core units need to be more engaged and involved with the preliminary workshops. Further consideration in future designs for learning cohorts would include - more careful explanation during the clarification of the psychological contract stage; more time invested during the workshops on e-learning technologies; and additional support by the coursework unit facilitators.

Overall, based on this small sample, the learning cohort approach seems to be a viable option when developing research skills and knowledge through a masters-by-research degree. However, it relies on a negotiated process of development of the cohort members, andragogical design, and the roles of the various parties (e.g. students; their employers; mentors; sponsors, senior managers and coordinator; and university staff). Evidently, learning cohorts do take the supervisor responsibilities beyond what

would be considered the norm in other settings – including added time, and frequent and closer interactions between members of the supervisory team and other support staff.

This reaction level evaluation of our approach did appear to substantiated the value in investing time and resources for purposely developing a cohort for higher degree research studies.. In addition, the writers formed the conclusion that the supervisors do need substantial knowledge of, and experience, in developing self-directed learners, particularly in managing the learning process rather than providing knowledge input. Acquiring this knowledge and experience does need significant time. Whether the cohorts are sponsored or not, universities will still need to invest time and resources for cohort development if a cohort model is to be practiced to gain wider efficiencies in supervision of higher degree research students

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