Designing a supervision training program with research supervisors' voices

TEACH[R]

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Abstract

The purpose of this study was to design a series of workshop training events for new or novice supervisors of higher degree by research candidates using input from the novice supervisors, experienced supervisors and a panel of experts. A mixed methodology was adopted where the novices and experienced supervisors completed a Likert-style questionnaire and participated in semi-structured focus groups and interviews. Data from experts were collected from a hosted panel. The novice supervisors were most concerned about managing the supervision process and dealing with candidate issues, giving feedback, working with different methodologies they may not be familiar with, and supervising in areas outside their field of expertise. The experienced supervisors added that the workshops should include advice about relationships and the wellbeing of candidates. The outcomes of the study were pragmatic because they fed into the content of the workshops, thereby training novice supervisors with aspects of supervision they felt they needed, along with aspects recommended by experienced supervisors. This study suggests that, when institutions are designing training events for higher degrees by research supervisors, key stakeholders, including the potential learners (novice supervisors), should be systematically consulted. This form of teaching in a Christian institution includes all the basics of recognised good supervision but adds the elements of Christian care and support.

Introduction

Overview

Being a Christian higher education institution comes with all of the teaching responsibilities of a Christian school, but adds the equally important area of research and guiding Higher Degree by Research candidates through a focused and sometimes stressful but rewarding part of their career. The teaching component involves not only the teaching of candidates how to research and build a thesis worthy of their effort, but also the training of new PhD supervisors in the skills of quality supervision. This study was designed to discover from new

> *design … training events for … novice supervisors … using input from the novice [and] experienced supervisors, and a panel of experts.*

and experienced supervisors the areas of training and development they see as vital in learning to become a competent mentor to PhD candidates in a Christian setting. It was hypothesised that the Christian values of care, compassion, positive relationships, and trust in God's guidance would surface in this study, along with the same academic and administrative responsibilities of higher degree supervisors at other institutions.

As a form of teaching, the process of guiding research candidates through their research-focused degrees is often overlooked, understandably, in place of a focus on the research topic itself and the research candidate's needs (Bruce et al., 2009). While the selection of research supervisors is contingent on their existing disciplinary or methodological expertise, they also require skills to facilitate their candidates' learning about research. The act of supervising research candidates, who are typically enrolled in doctoral or masters by research degrees, involves a particular form of teaching, often referred to as the pedagogy of supervision (Bruce et al., 2009, Baxter et al., 2016, Green & Lee, 1999, Qureshi & Vazir, 2016, Sinclair, 2004, Zeegers & Barron, 2012). The extent to which researchers as supervisors are proficient in this form of teaching, essentially providing researcher education to the candidates they supervise, is partially dependent on the quality of their own experience of being supervised (Robertson, 2017) and through on-the-job experiences (Spowart et al., 2019). This mimicking of supervision experience, drawn from experiences of being supervised and transferred to situations in which they are supervising others, can be a positive experience if the original supervision practices were worthy of imitation. However, when the opposite is the case, novice research supervisors have little on which to base their practice, without an additional form of professional learning. Whether their own experience of being supervised as a research candidate was positive or otherwise, the benefits of engaging in supervisor training programs are well documented (Emilsson & Johnsson, 2007, Huet & Casanova, 2021).

> *The act of best practice research supervision can be taught, modelled, and developed … the more guidance a supervisor receives, the better the experience of the student*

In recent decades, universities and higher education institutions have acknowledged that, just as research candidates require guidance from their supervisors to conduct research, the supervisors themselves require instruction on how to provide such guidance. The act of best practice research supervision can be taught, modelled, and developed as the supervisor transitions from novice through to experienced and, eventually, to an expert level of supervision. Gaining relevant experience and instruction on the path to developing as a skilled supervisor can involve a range of professional learning activities including participating in mentoring programs, engaging in informal corridor conversations with more experienced colleagues, attending professional development workshops and gathering advice from panels of expert supervisors. The design, construction, and delivery of supervision training programs to guide the development of research supervisors is usually undertaken by those with experience and expertise in research supervision. Based on a recent literature review, few studies into supervisor education have addressed the issue of how to engage supervisors themselves in the development of their own professional learning activities. This article reports on the findings of a mixed methods research project in which a university's cohort of novice supervisors and other stakeholders were consulted during the process of designing supervisor training workshops for novice supervisors. The findings of the project were twofold:

1. A set of research-informed recommendations used to guide the design of a suite of supervisor training workshops; and
2. The supervisor training workshops themselves.

As well as drawing on data gathered from key supervisor-stakeholders during the early stages of the project, the researchers consulted literature, experts in the supervision of higher degree by research (HDR) candidates and publicly available supervision resources to guide their construction of the above-mentioned practical recommendations and supervisor training workshops. The literature consulted during the early period of the study is now outlined.

Background

It should be noted that the words 'students' and 'candidates' are used interchangeably by authors when referring to those studying higher degrees by research.

Our literature review was focused on finding the most important aspects of supervisor training to enhance both the supervisory and student experience with the goal being timely completions and an overall satisfactory experience for all involved. Recent literature indicated that studies of HDR supervision show that the more guidance a supervisor receives, the better the experience of the student. Cryer and Mertens (2003) suggested that training a PhD supervisor, providing support, advice, and recognition, would in turn enhance the relationships between supervisor and student, as well as delivering better final outcomes in terms of research and completion. This targeted training of

supervisors not only benefits the student, but allows the supervisor themselves to acquire new skills, develop a deeper relationship with the pedagogy, to develop a supervisory person and to build relevant networks (Swai, 2019). Creating this targeted training is the responsibility of the University and procedures should be created around the question '*What makes a qualified supervisor?*', a concept that may evolve over time (Lee, 2018).

Further studies have discussed specific topics that should form the basis of supervisor training. One common issue arising for HDR students and supervisors is a mismatch in expectations. Cardilini et al. (2022) found that there was a disparity between how much guidance supervisors think they provide students, and how much students perceive that they receive. Training may help to increase the communication skills needed to plan and manage those expectations. These expectations will vary across different students and supervisors. Madan suggests that supervisors need to be trained in different supervision styles so that they can find the right one for each student and given that the PhD experience is formative for students in their future careers, supervisors need to be aware of expectations, management styles, and the whole supervision experience (Madan, 2021). This expectation of individualised care is further explored by Schmidt and Hansson (2018) who contend that doctoral student wellbeing is one of the most important parts of the supervisor's experience, something that may well be out of their usual area of expertise and therefore, something that should form a part of any supervisor training program.

A study in 2021 also suggested that professional learning workshops for supervisors should be broad with different skill sets taught and targeted so that supervisors would have the opportunity to learn about "different concepts of supervision and become aware of their personal conceptions, for such awareness could encourage a more thoughtful approach to supervision practice, and one aligned with the needs of individual students" (Kreber & Wealer, 2021). These different skill sets could include such things as interpersonal skills, learning around providing feedback to students, working within a team of supervisors, understanding and teaching autonomy and the monitoring of well-being across both supervisor and student (Woolderink et al., 2015). Haven et al. (2022) claim that supervisors must also be trained in responsible research practices for students to learn these themselves. Knowledge of responsible research practices, along with interpersonal skills development, will allow supervisors to pass these skills on to students in a practical and valuable way. Another important part of supervisory training is developing within supervisors the ability to teach and mentor writing skills, as one of the things students feel they need the most guidance in, is academic writing (Guerin et al., 2017).

The way in which supervisors are trained is also important. As many will be supervising online in distance mode using online technologies, it is important that training includes not only instruction on this style of supervision, but training in this online mode itself. This allows the supervisor to make the paradigmatic shift around coping with the challenges of modern supervision, much of which will occur in the online space. To this end, it is suggested that at least part of any supervisor training be done in the online space so that the supervisor can understand the dynamics of the mode (Huet & Casanova, 2021). This would also allow them to be more effective supervisors of students engaged in international distance learning and further training may be necessary to spend time acknowledging, learning, and explaining situational differences so that communication between supervisor and student can be optimised despite cultural divergence (Alebaikan et al., 2023). Research by Van Veldhuizen et al. (2021) suggests that one-off professional development programs are just the beginning for supervisors and that reflection, sharing and further professional development is needed for supervisors to put new ideas into practice with their students. Even seasoned supervisors can benefit from ongoing training and development as students' learning needs change over time.

> *"there was a disparity between how much guidance supervisors think they provide students, and how much students perceive that they receive."*

The review of current literature identified a variety of areas of practice that could form part of the supervisor training, and provide valuable information on the modes of training, reflective practices and ongoing support that could be put into place around our workshops. The information was used to create a targeted list of topics and skills to cover within the workshops as well as a multi-modal format that would include both in-person and online modalities, and involved panels, discussions, lectures, and activities.

Methods

The intention of the research project reported in this article was to design a novice supervisor training program (including workshops supplemented by online resources) informed by stakeholder input, relevant literature, and current best practice. The project adopted a two-phase action research approach, the design of which was built upon the involvement of stakeholders (Bergold & Thomas,

2012; McTaggart, et al., 2007) and consultation with experts in the field of research supervision.

This methodology fostered project participant ownership, especially from novice research supervisors, while also producing a training program to improve supervisors' capabilities. This paper reports on the first phase of this project which comprised the following three stages:

1. Review of literature and best-practice existing resources in research supervision.
2. Stakeholder and expert consultation to determine current capabilities and needs of novice supervisors, including gathering data and advice from novice supervisors, experienced supervisors, and experts.
3. Workshop design of three two-hour interactive workshops with resources embedded.

"Gathering data from … experienced supervisors ensured … workshops incorporated institution-specific aspects of supervision that were seen as important."

This capacity building project, intended to promote the professional development of research supervisors, was designed and implemented by research teams at two collaborating universities: one in Australia and one in Papua New Guinea. The processes and outcomes of the project that were designed for and implemented in the Australian university are reported in this paper[1].

Participants and data collection

In the first stage of this project, three groups of participants were invited to contribute data in the form of self-assessment of supervision skills, perceived needs of research supervisors and expert advice. Together, these data were pooled and used to inform the development of three training workshops (with associated resources), outlined in the Findings section of this paper.

Firstly, all the novice supervisors at the Australian university were selected using the following inclusion criteria:

- qualified to supervise research candidates or has the potential to supervise research candidates.
- available to attend three 2-hour workshops and two 1-hour data collection sessions.
- not currently enrolled in their own PhD studies.
- willing to be involved in the project.
- supported by their Head of School and Dean to be involved in the project; and
- not intending to take substantial periods of leave, beyond regular annual leave periods, during the duration of the data gathering and workshop implementation stages of the project.

In total, thirteen novice supervisors were selected and invited to join the project and eleven accepted the invitation. The novice supervisors were requested to complete an online questionnaire in which they self-reported on their current supervision skills. They were also invited to contribute to a semi-structured interview in which they were asked to further comment on areas of supervision they were concerned about and to articulate their preferences for the content and style of future supervision training workshops. Gathering data from the novice supervisors ensured the supervision training workshops, designed specifically for novice supervisors as part of the project, incorporated the views of the key stakeholders to which the project was targeted.

Secondly, the researchers consulted a group of experienced supervisors at the same university, to gather their views of the skills, knowledge and capabilities required of research supervisors. The most experienced supervisors at the Australian university were selected using the following inclusion criteria:

- more than five years of successful research supervision experience.
- qualified to supervise research candidates and/or classified as research active according to the university's relevant policy.
- willing to be involved in the project.
- supported by their Head of School and Dean to be involved in the project; and
- available to attend a 1-hour data collection session at the beginning of the project.

A total of eight experienced supervisors from the Australian university were invited to participate in the project and all these supervisors accepted the invitation. The experienced supervisors were requested to complete an online questionnaire that identified key skills and knowledge required of research supervisors. In follow-up focus group interviews, the experienced supervisors were given opportunities to share their views on the content and style of supervisor training workshops. Gathering data from this group of experienced supervisors ensured that the supervision training workshops incorporated institution-specific aspects of supervision that were seen as important by the university's experienced supervisors. The data gathered from experienced supervisors also provided advice to the workshop designers from those who had engaged in recent, successful, and authentic supervision experiences.

[1] Outcomes of the project's final phase, in which the supervisor training workshops were implemented and evaluated, are reported elsewhere.

Lastly, experts in the field of research supervision were sought from four additional universities in Australia to ensure the design of our research training workshops featured issues central to national research guidelines, reflected expert voices and included key issues relevant to modern supervision practices. The experts were selected according to the following criteria:

- has a reputation as a successful and experienced research supervisor.
- currently holds a leadership role within an Australian university that comprises governance or management of higher degree supervisors and/or candidates.
- available to attend a 1-hour Expert Panel session at the beginning of the project and a 1-hour Expert Panel session at the conclusion of the project.
- ideally, is active and holds membership of relevant HDR-related organisations such as the Australian Council of Graduate Research (ACGR).
- willing to spend one hour preparation for each of the two Expert Panel sessions mentioned above; and
- willing to be involved in the project.

The expert panellists were requested to provide commentary on the way in which research training workshops should be designed, along with their views and experience of key issues relevant to higher degree research and supervisor training practices. The expert voices in this project were also supplemented by a comprehensive literature review, completed by the project's researchers in the early stages of the project, which sought recent practical recommendations from experts in the fields of research supervision, supervision training and professional learning/development, researcher education and the pedagogy of supervision.

Table 1 summarises the type and number of participants involved in the first phase of the project, along with the data collection instruments used to gather data from these participants.

In addition to the participants from an Australian university, outlined above, approximately 19 novice supervisors and four experienced supervisors were included in a parallel version of this project from a university in Papua New Guinea. Results of the analysis of the data gathered and the workshops developed for the university in Papua New Guinea are reported elsewhere.

> *"experts in the field of research supervision were sought from four additional universities in Australia"*

Data analysis methods

All data gathered from novice supervisors, experienced supervisors and expert panellists were analysed with the intention of identifying a set of practical recommendations to inform the design, development, and implementation of a suite of research supervisor training workshops that served to promote the professional learning of a group of 11 novice research supervisors in one Australian university. Data gathered from the online questionnaires, contributed to by the novice

Table 1: *Participants and data collection methods*

Participants	No. of participants	Data collection instrument	Type of Data
1. Novice research supervisors	11	Online questionnaire[2]	Quantitative: Likert-style question responses
		One-to-one semi-structured interview[3]	Qualitative: Open-ended questions
2. Experienced research supervisors	8	Online questionnaire[4]	Quantitative: Likert-style question responses
		One-to-one semi-structured interview[5]	Qualitative: Open-ended questions
3. Expert panellists from universities in Australia	4	Panel discussion questions[6]	Qualitative: Open-ended questions

[2] Items drawn from, and modified and updated, page 14 of the self-auditing matrix for supervisors in the Improving HDR Supervisor Practice book (Edith Cowan University, 2014). .
[3] Questions drawn from issues revealed in literature review about research supervision.
[4] Items drawn from, and modified and updated, page 14 of the self-auditing matrix for supervisors in the Improving HDR Supervisor Practice book (Edith Cowan University, 2014).
[5] Questions drawn from issues revealed in literature review about research supervision.
[6] Questions drawn from issues revealed in literature review about research supervision.

and experienced supervisors, were analysed using descriptive statistics (mean, frequencies, standard deviations) to determine the key areas of supervision that required emphasis in the supervisor training workshops.

The qualitative data from the interviews with novice supervisors, focus group interviews with experienced supervisors and the expert panel discussion were analysed using a coding/analysis matrix (Miles & Huberman, 2013). This method was used to collate and categorise (code) the data, firstly, by using the research project's intention and the questions used in the interviews and focus groups as deductive categories and, secondly, by identifying the emergent themes using inductive analysis[7].

Toward the end of the coding process a thematic map was developed to reflect the essence of the collated data's meaning, to represent the supervisors' and experts' combined views. During this point of the data analysis process, signposts in the data were sought that provided evidence of:

- the novice supervisors' self-evaluation of their own skills.
- information regarding the design, content, style, activities, and structure of the workshops (from novice supervisors, experienced supervisors and expert panel members); and
- suggestions for improvement of the workshops for future workshop offerings (from novice supervisors and expert panel members).

[7] Items drawn from, and modified and updated, page 14 of the self-auditing matrix for supervisors in the *Improving HDR Supervisor Practice* book (Edith Cowan University, 2014).

> *"the qualitative data comprised most of the data gathered, and the quantitative data were used to supplement the findings of our … qualitative data"*

As advised by St. Pierre and Jackson (2014), only substantial themes and sub-themes, made up of meaningful collections of data, were retained in the final thematic map.

Overall, the qualitative data comprised most of the data gathered, and the quantitative data were used to supplement the findings of our analysis of the qualitative data. Together, our analyses of the quantitative and qualitative data enabled us to pinpoint the key skills and knowledge required by research supervisors, along with a set of practical recommendations that were used develop a suite of professional learning supervisor training workshops.

Method used to report the findings

The findings that follow are twofold. They provide an outline of the research-informed design recommendations that were drawn from an analysis of the data gathered during the first stage of this

Table 2: *Skills to be incorporated into the workshops*

Skills the experienced supervisors believe are important, and the novice supervisors are already confident with. **These should *not* feature strongly in the workshops.**	**Category**	Skills the experienced supervisors believe are important, and the novice supervisors are not confident with. **These should be included in the workshops.**	**Category**
Communicates effectively	Skills	Gives appropriate feedback	Skills
Motivates and inspires	Skills	Broad knowledge of research paradigms	Knowledge
Gains respect and trust	Skills	Manages the process	Skills
Establishes rapport	Skills	Expertise in scholarly publications	Knowledge
Establishes research purpose	Action Imperatives	Listens to candidates concerns	Attitudes
Timely responses	Action Imperatives	Confronts progress issues	Attitudes
Celebrates successes	Action Imperatives	Identifies barriers to progress	Skills
		Assists candidate to reduce barriers to success	Skills
		Extends candidates capability	Skills

project, and an outline of the training workshops that were developed from these recommendations.

Results

Before the supervisor training workshops were designed, the pools of data gathered from multiple stakeholders were analysed to establish a set of research-informed recommendations to guide the design of a suite of supervisor training workshops. These results are outlined below, followed by a description of the workshops themselves.

Online surveys

The online surveys consisted of 44 questions that novice and experienced supervisors were asked to answer. The questions were categorised into groups labelled as skills, knowledge, attitudes, and action imperatives. It was established that if experienced supervisors thought the characteristic or skill was important and the novice supervisors believed they were already proficient in that area, that aspect became a low priority in providing training in that area in the workshops. If, however, the experienced supervisors saw a characteristic or skill as important and the novice supervisor felt inadequate in that area, it was decided those areas would be helpful to include in the workshops and became a priority.

Table 2 provides both the list of elements not seen as vital for the workshops because the novice supervisors were already confident in these areas, and a list of those that needed to be included in the future workshops.

The elements that the novice supervisors felt confident in were relationship skills and important timely responses. The areas the novice supervisors felt less confident in included knowledge and attitudes.

Interview data – Experienced Supervisors

Focus group interviews were conducted with the experienced supervisors. These revealed that, despite their experience, this group found working on research methodology to be one of the least enjoyable aspects of supervision. Understandably, another area they did not enjoy was working through candidate challenges, specifically the difficult conversations relating to lack of progress, focus, motivation, independence, and personal challenges.

The feedback from experienced supervisors also indicated there were three areas in which most felt they would benefit from further training and development:

1. Mentoring – this included learning to be a mentor to candidates and other supervisors and having opportunity to be mentored by other supervisors.
2. Supervising – outside their area of expertise.
3. Thesis writing process – training, resources, advice (reviewing and editing, developing skills, where to start first, where to go for help).

> *Experienced supervisors found working on research methodology to be one of the least enjoyable aspects of supervision.*

Interview data – Novice Supervisors

While experienced supervisors took part in a focus group interview, one-to-one interviews were conducted with each of the novice supervisors. Table 3 outlines the top responses from each group.

From the interviews, several common themes

Table 3: *Common responses from participants*

	Least enjoyable aspects of supervision	Areas identified for further training
Novice supervisors	• Managing candidate challenges such as lack of motivation, focus and progress. • Research methodology • Lack of clarity on the roles and contribution within the supervisory team • Editing candidate drafts	• Research methodology • Mentoring candidates and being mentored by experienced supervisors. • Thesis styles • Working with topics outside area of expertise • Assisting with writing the thesis
Experienced supervisors	• Research methodology • Candidate challenges, specifically the difficult conversations relating to lack of progress, focus, motivation, independence, and personal challenges	• Mentoring - candidates and other supervisors • Supervising outside area of expertise • Thesis writing process – training, resources, advice (reviewing and editing, developing skills, where to start first, where to go for help)

emerged from both groups of supervisors:

1. The desire for more information and resources relating to research methodology.
2. The need for mentoring in supervision:
   - Novice supervisors were interested in being mentored by an experienced supervisor.
   - All supervisors were interested in training on mentoring candidates as researchers; and
   - Experienced supervisors were interested in training on mentoring less experienced supervisors.
3. The difficulties of managing candidate challenges, particularly lack of progress.
4. The desire for information and resources relating to the process of writing of the thesis.
5. The need for reassurance and guidance for supervisors working outside their areas of expertise.
6. The difficulties of managing expectations and responsibilities within the supervisory team.

> *[Experts] saw the value in ensuring that research and writing is not done independent of … the candidate's faith and world view in their research,*

Expert Panel data

Four experts from universities in Australia and New Zealand were invited to provide guidance for this project. At their first meeting with the research team, they were asked to provide opinions on what capacities, skills, and knowledge supervisors need to develop to work effectively with their candidates. Furthermore, expecting there would be a long list of answers to this question, they were then asked which of these would be the most important for a novice supervisor to be exposed to first as they begin their supervisor journey.

The panel were keen to instil in candidates a 'big picture' view of research and research journeys. This included helping candidates to think and write critically. They also saw the value in ensuring that research and writing is not done independent of culture. This includes consideration of the candidate's faith and world view in their research, and the culture of a desire for ongoing learning and reflective practice for both the candidate and supervisor.

There were also specific aspects the expert panel suggested were especially important for novice supervisors to learn in the early stages of their candidature. The process of the novice supervisor transitioning from a candidate to a supervising guide is important. They will inevitably reflect on their own experience as a PhD candidate and their relationship to their supervisor and need to decide which of those experiences and relationships they would like to retain, and which they desire to do differently.

Other aspects of supervision that the experts suggested were important 'up front' included: being authentic and empowering the candidate, giving constructive feedback, making plans, and setting milestones with the candidate, being able to distil the core questions to be answered and knowing how to navigate the ethics process. While these are all process type skills, the experts also commented on personal attributes that supervisors need to be able to demonstrate. These include: nurturing the students' strengths, dealing with doubts and uncertainties, listening and responding, working

Table 4: *Content of workshops constructed from the data*

	Workshop 1	Workshop 2	Workshop 3
Title	Expectations and Relationships	Management and Leadership	Communication and Feedback
Content	• Recognising good practice in supervision (c) • Identifying responsibilities of candidates and supervisors (a) • Considering the issues of multiple supervisors (b)	• Understanding the milestones • Choosing topics and methodologies (a) • Considering supervision types and styles • Looking at types of projects possible	• Verbal communication • Written communication • Feedback
Mode	Online and on campus	Online and on campus	Online and on campus
Delivery	• Sharing and reflection • Survey and discussion • Case study analysis	• Discussion and quiz • Activity stations	• Presentation • Discussion • Reflection

a. Derived from novice supervisor data
b. Derived from experienced supervisor data
c. Derived from the expert panel

collaboratively, being able to engage and stimulate the candidate.

Apart from the skills the expert panel suggested should be included in the workshops, they also gave advice on the style and activities of the workshop. It was suggested that the workshops needed to be authentic and collaborative, engaging the novice supervisors in the discussion. They should be encouraged to express their fears and aspects or supervision they are less confident with.

It is interesting that while novice supervisors were more concerned with their own specific knowledge and skills base, the experts were more concerned that the novices learned global skills first such as the place of culture, relationships, and empowerment.

Workshop content

The result of this project was the development of workshops for higher degree by research supervisors. The data that were used to structure the workshops were collected based on the perceived and stated needs of the supervisors - both novice and experienced. The data therefore took the following form:

- online surveys of novice and experienced supervisors and their comparison;
- interviews with novice and experienced supervisors; and
- comments and ideas coming out of the initial expert panel.

The content of the workshops that was a result of this research is found in Table 4.

Discussion

The purpose of the research reported in this paper was pragmatic in nature. The project was initiated from a desire to provide relevant and practical workshop training to novice higher degree by research (HDR) supervisors. Therefore, it was clear that the input of novice supervisors through surveys and interviews to find out what they believed would be the most helpful for them in a workshop would be vital data from which to plan the workshops.

Based on the knowledge that novice supervisors have not had the experience to recognise the types of needs they may have, experienced supervisors and a panel of experts were also consulted about useful additions to workshops for beginning supervisors.

When collated, the data collected from the different groups provided us with content that informed the workshop programs. The first priority was planned to be the aspects of supervision that novices knew were important, but they were not confident in. The second priority was aspects experienced supervisors thought were important that novices were not confident in. The third and fourth priorities were aspects the novice supervisors were confident in. A decision-making matrix was constructed (Table 5) to help in our planning.

The diversity of ideas for workshops seen as necessary by novice supervisors, experienced supervisors, and the expert panel confirmed the ideas of Kreber and Wealer (2021) who maintained that novices need to be exposed to different approaches and philosophies of supervision because they are dealing with individual PhD candidates with different ways of experiencing their research journey. Without such exposure a novice supervisor could easily replicate their own PhD experience because they have not had the opportunity to envisage alternatives.

With the input from our groups of participants, it was found that, as reported in the literature, there was a need for workshop training in all three areas: knowledge, attitude, and skills. While the need for specific *knowledge* is pointed out by Haven et al. (2022), and the focus on skills is recommended by Guerin et al. (2017), multiple authors emphasise the necessity for supervisors to have or to develop attitudes that allow them to understand their candidate and care for their wellbeing (Madan, 2021, Cardilini et al., 2022, Schmidt & Hansson, 2018). The area of attitudes is particularly important

> *novices need to be exposed to different approaches and philosophies of supervision because they are dealing with individual[s] … with different ways of experiencing their … journey.*

Table 5: *Decision matrix for workshop design*

	Novice supervisors not confident with this aspect	Novice supervisors confident with this aspect
Seen as important by novice supervisors	**Priority 1**	**Priority 3**
Seen as important by experienced supervisors and experts.	**Priority 2**	**Priority 4**

in a Christian institution where, in caring for the candidate's wellbeing, helping the new supervisors to understand the importance of connecting their candidate with God's care should be integral to the supervisor.

Conclusions and implications

The obvious outcomes of this study were primarily pragmatic. As part of our Supervisor Training Program the need to invest in the knowledge and confidence of new HDR supervisors was recognised. By using several methods of determining the type of training that they perceived was most needed, the design of the workshops was 'fit for purpose' and appreciated by the novice supervisors, especially because they were invited to have input into the design of the workshops that were specifically designed for the novice supervisors themselves.

The most significant outcome from this study is the efficacy of including academic staff of all levels of experience in the training design process. We therefore recommend that when designing any professional learning experience, time is taken to systematically seek the perceived needs of the learners, along with input where possible from experienced staff, stakeholders, and experts in the area of training. TEACH

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