

TEACH^R

With us, for us: Outcomes of a training program for novice research supervisors designed using a participatory design approach

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Abstract

The aim of the research study reported in this article was to create a program that delivered a bespoke form of professional learning that a group of novice supervisors perceived themselves as needing, by engaging them more effectively in their own learning. Professional learning programs for novice research supervisors are typically designed by research experts and experienced supervisors. Few studies have investigated the design of such programs that have incorporated multiple stakeholders' voices, including the novice supervisors themselves. Using a participatory mixed methods approach, a supervisor training

program was devised by engaging novice supervisors at Christian universities as key stakeholders in the design of their own training. In this article, we report on this training program and on their views of themselves as supervisors after they participated in the program. Findings from this study revealed how novice supervisors especially value interactive professional learning activities and opportunities to learn from other supervisors. The study also revealed the role of confidence in the supervisors' views of themselves as supervisors.

Introduction

This article reports the second part of a study previously published in this journal titled Designing a Supervision Training Program with Research

Supervisors' Voices. (https://www.avondale.edu.au/wp-content/uploads/2024/11/17-1-TEACH-Journal-17-1_WebS.pdf). It describes the work and training of higher degree supervisors in two Christian higher education institutions.

Higher degrees by research (HDR) in universities involve research supervisors guiding research candidates through the processes of designing, implementing and writing about a research project. For both supervisors and candidates, the experience of engaging in the processes of a higher degree by research involves teaching, learning, researching, reading and writing. HDR candidates, are typically enrolled in a university-based doctoral degree, such as a Doctor of Philosophy (PhD), or a masters by research degree, such as a Master of Philosophy (MPhil). The supervisor-candidate relationship that forms the basis of the research candidate's learning experience requires a unique form of teaching that is tailored to the candidate's research topic as well as their background, interests and scholarly needs. Typically, a candidate will be situated within a particular discipline, and they will likely use a specific set of research methods during the implementation of their research project. As the degree progresses, the candidate develops and uses contextually appropriate research and writing skills. Accordingly, to guide candidates through their research degrees, supervisors need a range of teaching skills that will enable them to support their candidate's learning.

The article begins with a review of recent research in the areas of researcher and supervisor training (incorporating the *pedagogy of supervision*) and continuing professional learning and development. The project on which this article is based adopted a participatory mixed methods research design during which varied stakeholders were consulted about the needs of novice research supervisors, including the novice supervisors themselves. Most Australian Universities now offer programs that train HDR supervisors, but while existing novice supervisor training programs have engaged supervisors in the implementation and evaluation process, the engagement of novice supervisors in the design process is an area that is less common. The findings reported in this article particularly focus on the co-construction of the training program and the way in which the developed supervisor training program influenced the novice supervisors who participated in the program's workshops. The article concludes with a set of suggested recommendations for the design of future bespoke supervisor training workshops, with a recognition of the importance of involving novice

supervisors in the design of their own training.

Literature Review

Emergence of the Pedagogy of Supervision

The responsibility of supervision within the university has recently been recognised as an area of professional learning that extends across various university departments. Lee (2018) notes:

The development of supervisors is a relatively new area of academic staff development, and the responsibility for managing this provision (if it exists at all) moves (sometimes uneasily) between different parts of the university's organisation: educational/ academic development centres, a director of research, research student support and human resource management in most universities.

(pp. 878-879)

As indicated by Lee, many discussions about supervisor training programs have focused on the organisation and implementation of such programs. Alongside the more functional aspects of supervisor training, a consideration of the pedagogical principles of supervisor development have also emerged. Some of the early research on the pedagogy of "good" PhD supervision (Sinclair, 2004) brought a strong focus on the timely completions of PhD candidates. Progression and successful completion are the objective measures candidates and supervisors strive to meet and, as Sinclair (2004) noted nearly two decades ago, "supervisors who are more 'hands on' in their approach to supervision tend to be associated with faster and more completions" (p. vi). One of the main contentions put forward to explain this observation is that PhD candidates "do not possess all of the ideal qualities that are often expected as pre-requisites to successfully undertaking a PhD" (Sinclair, 2004, p. vi). Addressing this gap in "ideal qualities", the training, teaching and skilling of candidates requires pedagogical intentionality and intervention on the part of a supervisor or supervisory team, and to function productively there needs to be an "inter-relationship of trust, reciprocity, collaboration and teamwork" (Sinclair, 2004, p. 116). Good supervision, good pedagogy and good relationships are not accidental, and contemporary researchers regularly promote professional learning models, guidelines, workshops and processes designed to develop research supervisors into more effective educators (Buirski, 2022; Harrison & Grant, 2015; Lee, 2018; Madan, 2021).

In a recent editorial, Madan (2021) presents a 'brief primer' on the skills and domain knowledge required for a successful PhD supervision relationship, noting there is "... not

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a single approach to the supervisor relationship” (p. 5229). His synthesis of current research highlights key considerations for supervisors, including expectations and management styles of supervisors as well as their ability to tailor the supervision experience to suit the candidate (p. 5229). The importance of matching PhD students with appropriate supervisors (Orellana et al., 2016) and aligning expectations between candidate and supervisor are seen as critical aspects for improving research training and promoting successful outcomes (Cardilini et al., 2022).

Significance of Relationships

The impact of PhD supervisor-student relationships (Le et al., 2021) and the style of supervision (Peng, 2015) raises important considerations when designing and implementing professional development training programs or frameworks. Importantly, candidate perceptions and voices provide key reflection points (Bahtilla, 2022; Bahtilla & Oben, 2022) along with case studies demonstrating the significance of the supervisory role and performance in candidate satisfaction and thesis development success (Bayona-Oré, 2021).

The relational aspect of PhD supervision has been the focus of much recent literature (Haven et al., 2022; Mainhard et al., 2009; Vähämäki et al., 2021; Woolderink et al., 2015), serving to highlight the importance of equitable and productive supervisory relationships. Such literature features tips on person-centered research supervision (Heyns et al., 2019) and knowledge-sharing factors (Khosravi & Ahmad, 2016; Ngulube, 2021), along with reflections on co-regulation, feedback perception and motivation during research supervision meetings (Agricola et al., 2020). The results from a study on “the essential ingredients of research supervision” found “that supervisors and training programs should focus on the interpersonal aspects of supervision and supporting the psychosocial needs of students” (Roach et al., 2019, p. 1243). Recently, authors such as Kreber (2023) have called for a form of postgraduate supervision that incorporates authentic care in addition to the more functionally focused components of supervision associated with timely completion, project management of research processes and skill development. Kreber promotes a view of supervision beyond the more functional and outcomes-centered processes to incorporate authentic care for the candidate as the core of supervision.

Supervisor as Teacher

While attention has been given to the importance

of supervisors developing skills in preparing candidates for PhD examination (Cryer & Mertens, 2003; Golding et al., 2014; Hodgson, 2020), universities across the globe are engaged in ongoing research to assist in professionally developing academic staff skills in teaching writing (Fulgence, 2019; Guerin et al., 2017), increasing the effectiveness of supervision in discipline areas (Hickey & Forbes, 2022; Kreber & Wealer, 2021) and developing threshold competencies for research supervision (Maistry, 2017). Furthermore, of importance across all aspects of supervision is the complex process of providing feedback to candidates. Chugh et al. (2022) note the varied aspects of the candidate, their backgrounds and their degree that need to be considered when providing feedback, including: “the candidate; stage of candidature; type of candidature (part-time, full-time; domestic, international; on-shore, off-shore); course enrolment (Master, PhD, EdD, other Professional PhDs); supervisory position (principal or associate); supervisory team (number, disciplinary mix, relationship/s among the team); and mandatory and optional research tasks” (p. 684). Across the board, expectations of supervisors are diverse and complex. To meet such expectations, the supervisors themselves and their university contexts need to be analysed and considered during the design of professional learning programs for research supervisors, especially in the case of novice supervisor training.

Models of Research Supervision

Various models for research supervision have been developed. These include the community of practice model (Hill & Vaughan, 2018), the collegial model (Eriksson, 2019) and a design thinking approach, which positions the research student as the ‘master’ designer of their own research, recognising their existing expertise within their work-based learning context (van der Laan et al., 2021). Understanding the dynamics of supervisory interactions can assist the development and growth of supervisors and candidates as professional learning programs become more customised. Such programs, depending on their context, strive to incorporate contemporary approaches to supervision that explore innovation in practice (Fitzpatrick & Fitzpatrick, 2015), coaching interventions (Keane, 2016) and mentoring (Robertson, 2017).

With increasing access to technologies and mobilities, supervision training, professional learning opportunities and supervision guidelines have also been offered online (Miller, 2007; Vaughan et al., 2021). Adaptive approaches for

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supervisors who supervise their candidates online or at a distance have been highlighted, along with online professional development models for distance doctoral supervisors (Huet & Casanova, 2021). Recent studies have also investigated the issues, challenges and strategies related to distance research supervision for the supervisor and candidate (Nasiri & Mafakheri, 2015; Zaheer & Munir, 2020). Other researchers have focused on the exploration of cross-cultural teams in which candidates and supervisors operate within different cultural contexts (Alebaikan et al., 2023; Gjøtterud & Ahmad, 2018) and preparing supervisors and candidates to work and research within global contexts (Bitzer et al., 2014).

Summary of literature review

To build on the research conducted by McCulloch and Loeser (2016), who asked the question “Does research degree supervisor training work?”, further research is required to investigate the specific requirements of research supervisors, as expressed by the supervisors themselves. Further, supervisors’ involvement in the design of their own professional development is required to more closely reflect their needs. This gap in current supervisor training literature informed the design of the study outlined in this article, which purposefully engaged supervisors as co-creators of their own training, thus reflecting a point of difference between this study and previously conducted research in supervisor training.

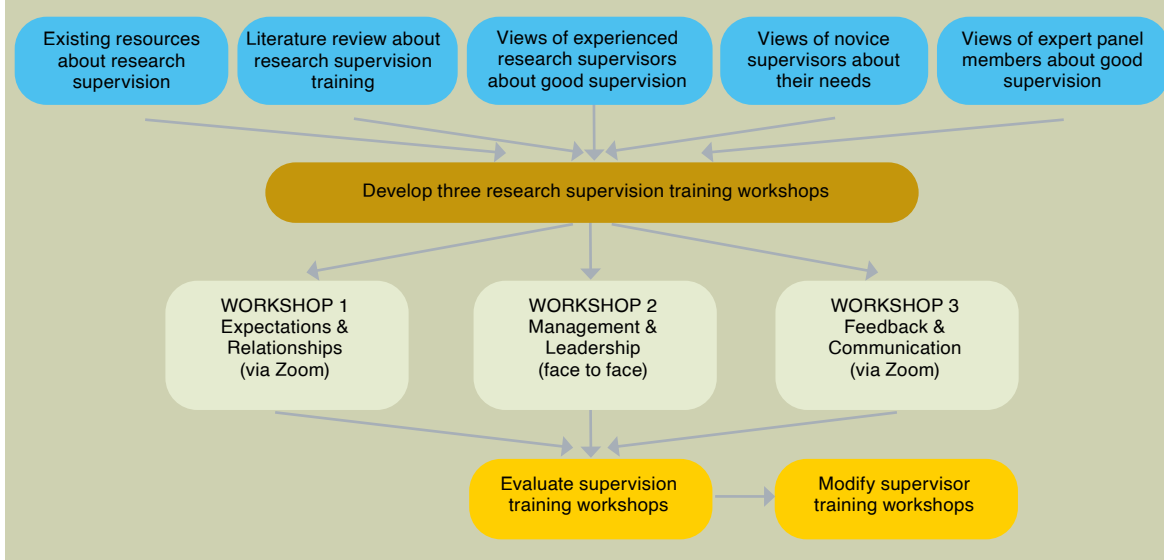
Methodology

Using a mixed methods research approach (Creswell & Creswell, 2018; Johnson & Onwuegbuzie, 2004; Teddlie & Tashakkori, 2009), this research project was focused on promoting the professional development of novice research supervisors. The study drew upon the views of novice and expert stakeholders in research supervision to design a suite of professional learning workshops for the supervisors themselves. Research supervisors with varied levels of expertise (including novice and experienced supervisors) were invited to join the project. By engaging key stakeholders in the data gathering processes comprising online questionnaires, one-to-one interviews, focus group interviews and panel discussions, this participatory-style project (Bergold & Thomas, 2012; Kemmis & McTaggart, 2005) ensured that the content and design of the workshops were suited to those for whom they were intended.

The overall intention of the project was to develop a suite of training workshops for novice research supervisors, the design of which was research-based and stakeholder-informed. To ensure the professional learning program designed for the novice supervisors was tailored to their needs and reflected contemporary research supervision practices, it was important to involve multiple key stakeholders throughout all phases of the project. Within the university in which the project was implemented, the novice supervisors were identified as those with zero to four years of supervision experience, and the experienced

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Figure 1: Two-phase research design



supervisors were selected based on having more than five years of successful research supervision experience.

The project comprised two phases (see Figure 1). In the first phase of the project, data were gathered from various stakeholder-participants who expressed their views about how to design professional learning workshops for supervisors. These data were then used to develop a set of practical recommendations that informed the design, content and format of a suite of supervisor training workshops. The workshops were implemented during the second phase of the project, after which they were evaluated by the novice supervisors themselves and the expert panellists. The second phase of the project is reported in this article.

The project reported in this article was designed and implemented by two groups of researchers: one team from a university in Australia and one team from a university in Papua New Guinea. The outcomes of the second phase of the project at the university located in Australia are reported in this article.

Participants and Data Collection

Three groups of participants contributed data throughout this project, which aimed to design professional learning workshops (Phase 1) and to evaluate their impact (Phase 2). The participants across both phases of the project included:

- eleven novice supervisors (six of which were active supervisors);
- eight experienced supervisors (all of which were active supervisors); and
- four expert panellists from three universities in Australia and one university in New Zealand.

The university in which the project was conducted had 22 active HDR supervisors at the time the data were gathered. The combined number of 19 supervisors who contributed to the project included 14 of the university's 22 active supervisors, representing 64% of the university's total pool of active HDR supervisors.

In the second phase of the project, reported in this article, the novice supervisors who engaged as participants in the project's supervision training workshops were asked to express their views, via questionnaires and interviews, about how the workshops impacted their own supervision capacities. Questionnaire items were drawn from the self-auditing matrix for supervisors in the *Improving HDR Supervisor Practice resource* (Edith Cowan University, 2014, p. 14). They were,

however, modified and updated.

During these data collection processes, the novice supervisors were also asked about how they would recommend the workshops to be further modified for future delivery. These data were collated and analysed, then presented to the expert panellists who considered the novice supervisors' perceptions and offered their own recommendations for future development of the content, design and resources included in the workshops.

Table 1 outlines the participants who contributed to each phase across the whole project, along with the data collection instruments and the type of data collected.

Data Analysis

The data gathered during the second phase of the project included quantitative data from Likert-style questionnaire responses (provided by novice research supervisors), and qualitative data, including open-ended responses from semi-structured one-to-one interviews (with novice supervisors) and panel discussions (with experts). Analyses of these data were conducted for three purposes: (1) to determine the outcomes of the supervisor training workshops on the novice supervisor participants; (2) to gather the views of the expert panelists about the workshops and their outcomes; and (3) to identify any modifications required of future iterations of the workshops, based on the novice supervisors' or the panelists' recommendations.

Analysis of the data from these three pools of data was conducted using the following approach:

1. Descriptive statistics (mean, frequencies and standard deviations) were calculated from the quantitative data gathered from the novice supervisors' responses to Likert-style items on the online questionnaire completed after they participated in the supervisor training workshops.
2. Thematic coding using inductive and deductive analysis within a matrix analysis structure (Miles & Huberman, 2013) was used to analyse the qualitative data gathered from the questions asked of the novice supervisors' responses to interview questions after their workshop participation.
3. Outcomes of the analyses of the novice supervisors' quantitative and qualitative data were collated and presented to the expert panellists, who provided commentary on the novice supervisors' views and provided further commentary on future modifications required of the workshops.

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Table 1: *Data collection instruments, data collected and participants*

Project Phase		Data Collection Instrument	Focus	Data Collected	Participants
1	Workshop design and development	Questionnaire	Self-reported supervision skills and needs	Likert-style responses	Novice research supervisors (n=11)
		1:1 Interviews		Open-ended responses	
		Questionnaire	Perceived supervisors' needs and workshop design	Likert-style responses	Experienced research supervisors (n=8)
		Focus group interviews		Open-ended responses	
		Panel discussion	Perceived supervision needs of effective supervisors	Responses to discussion questions	Expert panellists (n=4)
2	Workshop implementation and evaluation	Questionnaire	Self-reported supervision skills and future needs	Likert-style responses	Novice research supervisors (n=11)
		Interviews		Open-ended responses	
		Questionnaire	Evaluation of each workshop	Open-ended responses	Expert panellists (n=4)
		Panel discussion	Perceived workshop impact and future supervisors' needs	Responses to discussion questions	

4. Qualitative data gathered from the panellists were thematically analysed using a matrix technique (as outlined in Step 2 above).

While the outcomes of the analyses of the data gathered from the project's participants in the first phase of the project were used to develop the workshops themselves, the data gathered during the second phase (reported in this article) were used to determine how engagement in the workshops influenced the novice participants' perceptions of their own skills. Furthermore, the data gathered in the second phase from the novice participants and the expert panellists informed our plans to modify future iterations of the supervision training workshops. These results are reported in the following section of the article.

Ethics Approval

Before any of the data were gathered, ethics

approval to conduct this project was sought and received from Avondale University's Human Research Ethics Committee (HREC) on 3 August 2022 (HREC application no.: ETH.2022.014).

Results

This section provides an account of the outcomes of Phase 2 of the project, exploring the impact of the three supervisor training workshops as perceived by novice supervisors and by a panel of experts supporting the project. A previous publication reported on Phase 1 of the project, in which an interrogation of the literature and an analysis of interviews with potential participants were conducted to determine best practice supervision principles and to identify the current needs of the novice supervisors. As such, results of the analyses of the data gathered in Phase 1 informed the design, content and nature of the workshops (listed in Table 2) that were delivered

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Table 2: *Workshop content and schedule*

No.	Workshop Topic	Dates
1	Expectations and relationships between supervisors and candidates	18 and 20 October 2022
2	Management and leadership of candidate waypoints and progress	8 November 2022
3	Feedback and communication during HDR supervision	17 and 24 November 2022

during Phase 2 of the project.

The three supervisor training workshops that were designed in Phase 1 were implemented and evaluated in Phase 2 of the project. Data were gathered and analysed from novice supervisors in the form of online questionnaires, one-to-one interviews and workshop evaluations. Evaluation data about the workshops and their impacts on novice supervisors were also sought from a panel of experts.

Online questionnaires from novice supervisors

An online questionnaire was administered to the novice supervisors before and after they engaged in the suite of three supervisor training workshops, to determine their views of their own supervision capabilities. Because the questionnaires completed by the novice supervisors before and after the workshops were categorised into scales of *Skills, Knowledge, Attitudes and Action Imperatives*, the pre- and post-data were compared by scale rather than by individual item. These results are illustrated in Table 3.

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In each of the scales, the *low confidence* category showed a mean decrease across all scales of 17.3% as a result of the workshops. Results in the *very confident* category also showed a positive outcome, indicating that the workshops caused the mean score for this category to increase by 16.2% across all scales. This positive mean result was made up of independently positive results where the *very confident* category increased post-workshops in the *Skills* scale by 8.8% (Figure 2), in the *Knowledge* scale by 14.1% (Figure 3), in the *Attitudes* scale by 20.5% (Figure 4) and in the *Action Imperatives* scale by 21.3% (Figure 5).

Interestingly, a comparison of the pre-workshop and post-workshop results indicated that, for two of the scales (*Attitudes* and *Action Imperatives*), the novice supervisors' confidence levels, which were at a medium level (*quite confident*) pre-workshop, dropped after the workshops. However, this result was compensated by a higher post-workshop level of *very confident*, thus suggesting an overall increased confidence level (see Figures 4-5).

Interviews with novice supervisors

During the interviews with the novice supervisors, they were specifically asked about their evaluation of the three workshops they attended, especially

“... an overall increased confidence level”

Table 3: Comparison of confidence levels by scale before and after workshops

	Not Confident At All	Low Confidence	Quite Confident	Very Confident	I Don't Know
SKILLS pre	2%	25%	44%	25%	4%
SKILLS post	0%	1.5%	64.6%	33.8%	0%
KNOWLEDGE pre	2.6%	30.7%	39.2%	22.3%	5.1%
KNOWLEDGE post	1.8%	10.9%	50%	36.4%	0.9%
ATTITUDES pre	2.3%	18.3%	55.3%	19.5%	4.58%
ATTITUDES post	0%	4%	45%	40%	11%
ACTION IMPERATIVES pre	0%	13.2%	46.3%	39.6%	0.8%
ACTION IMPERATIVES post	0%	1.8%	36.4%	60.9%	0.9%

Figure 2: Novice supervisor SKILLS: Pre- and post-workshops

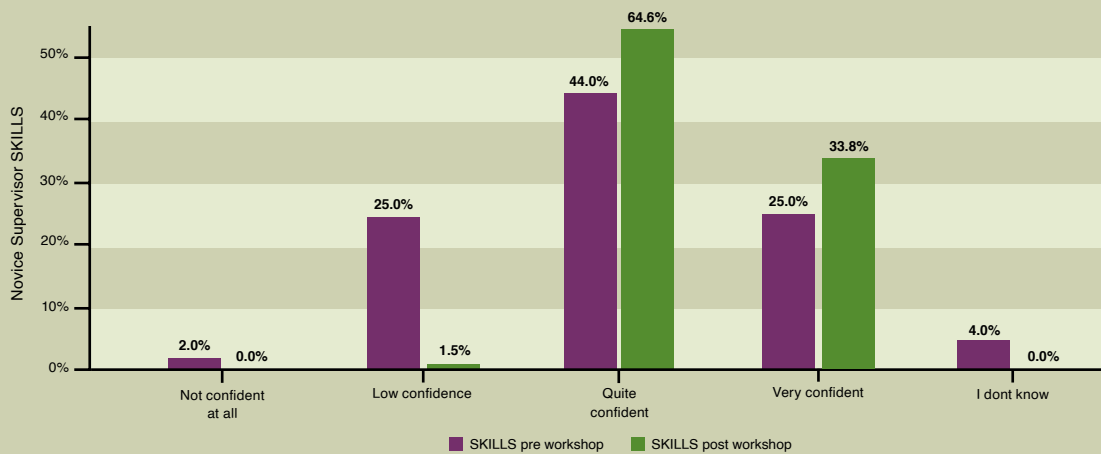


Figure 3: Novice supervisor KNOWLEDGE: Pre- and post-workshops

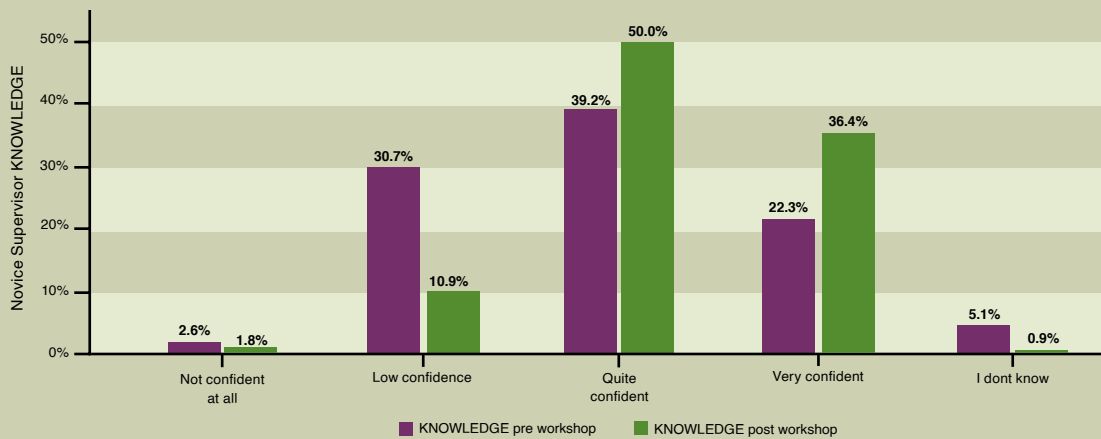
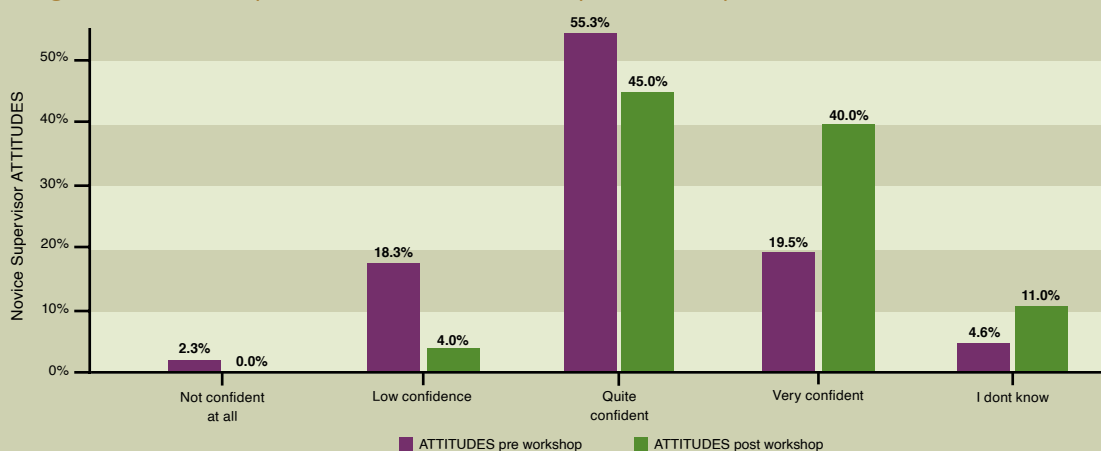
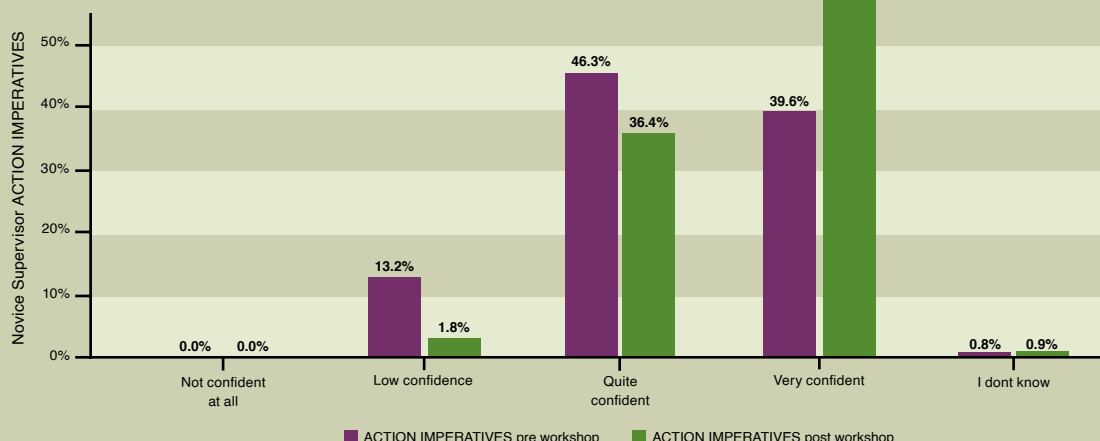


Figure 4: Novice supervisor ATTITUDE: Pre- and post-workshops



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Figure 5: Novice supervisor ACTION IMPERATIVES: Pre- and post-workshops



in terms of how the workshops could be improved for future iterations. Further information was also sought from the novice supervisors, in addition to their questionnaire responses, about their perceptions of the skills and knowledge that they developed as a result of engaging in the supervision training workshops.

Several key points were noted by the participants during their interviews. Some reported an increase in their supervision confidence and noted that they had been affirmed in some aspects of their supervision. One participant shared the realisation that, while it is impossible to reach a level of excellence in everything, by focusing on the skills each person brings and how they complement each other, synergy can be found within a supervisory team. Participants also appreciated the additional “tools in the tool bag” approach the workshops provided, and were looking forward to using the newly acquired knowledge for supervision in the future. Overall, participants noted the following workshop topics as being particularly helpful:

- recognising effective supervision;
- understanding good feedback;
- the importance of clear communication and keeping records of interactions;
- understanding the different types of PhD; and
- creating a framework of milestones.

When asked to give feedback about the workshops, the overwhelming response from the interview participants was focused on how much they enjoyed interacting with other supervisors. They valued the opportunity to listen and share

in workshop discussions and were clear that this was something to retain in future workshops. One participant commented that they felt “empowered to make comments, express ideas and give feedback” like a “colleague in training”, and that is how they want the candidates they supervise to feel.

Several participants included suggestions on how to increase opportunities for supervisors to interact in the future, including formalised opportunities to ask questions of experienced supervisors and networking with other universities. For the future, participants suggested offering a workshop with no set topic where supervisors could share and learn from one another in general because “the value comes from just being in the room”. Other suggestions for future workshops included:

- digging deeper into topics such as methodology;
- cutting back on preliminaries and getting straight into a topic;
- a workshop on dealing with candidate procrastination; and
- a workshop on assisting candidates to defend their chosen topic.

Workshop evaluations from novice supervisors

After each of the three supervisor training workshops, the novice supervisor participants in the workshops also provided qualitative feedback about how the workshops influenced their capabilities as supervisors, and they provided further feedback about areas for future training. Some of the recurring ideas that emerged from an analysis of those data are provided in Table 4.

Overall, the participants reported learning

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Table 4: *Feedback on the workshops provided by participants*

Ideas To Use In Their Practice	Areas They Would Like More Training On	General Comments
• Maintaining good relationships • Planning for honest, clear, and constructive feedback • Maintaining a mutual awareness of meeting times and general timelines • Being aware of cultural differences • Staying informed about a candidate's personal circumstances	• Types of feedback • Managing workloads with varying needs of candidates • Types of research methodology and how to advise candidates • Dealing with difficult candidates or situations	• A lot was learned from the case studies • Great resources provided • Encouraged to keep improving practice • Informative, empowering, and challenging in practising the skills that are involved in this form of teaching

about ways to interact with their candidates during the supervision process, especially in relation to identifying and responding to their candidates' needs and developing foundational relationships between their candidates and themselves as supervisors. Other key topics that the supervisor-participants in the workshops noted were issues associated with feedback, methodology and workload. The practical nature of the workshops, especially in relation to the use of case studies and resources, was also appreciated.

Expert panel data

The project's external expert panel was comprised of four experienced supervisors from four different universities across Australia and New Zealand who provided observations and advice about a variety of HDR processes, especially regarding issues

associated with the research and supervision of research candidates. After observing the progress of the project from the planning stage through to the workshop presentation process and into the post-workshop reflection phase, their evaluation feedback (Table 5) supplemented the data gathered from the novice supervisors.

Summary of the results

The results that emerged from analysing the multiple sets of data gathered in Phase 2 of the study indicated that the confidence of the novice supervisors' confidence levels in their own supervision increased overall, but especially in their attitudes to supervision and their imperative to act in relation to supervision. In terms of the workshops, the novice supervisors especially appreciated their interactive nature and the

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Table 5: *Categories identified by the expert panel as requirements for supervisors*

Theme	Comments
Skills	• The skills required in a smaller university are more diverse. • How to give feedback about technical and practitioner skills, which are different to supervision skills. Should include capacity building skills – even experienced supervisors need to maintain and hone their technical skills. • Training in how to think and write critically. • A session regarding publishing with a candidate or supporting candidates to publish, such as conference attendance or presentation skills for academia.
Humanness	• Awareness of candidate's life – supervisors often concentrate on paperwork and timework, but they need an awareness of the challenges candidates face as human beings, both emotionally and personally. • Assisting candidates in envisioning the candidature process.
Community	• Some cultures are good at working collectively – HDR supervision is often an individual experience. • A community of practice, such as a blog or vlog, may enable supervisors at every level to share and invite comment.

opportunities they offered to learn from more experienced supervisors. The novice supervisors increased their understanding of candidates' needs and backgrounds and noted that they would like to continue to develop their knowledge of research methodologies and supervision processes. The expert panellists further suggested the need for developing a community of practice at the university that was focused on research and supervision. They noted the importance of recognising candidate "humanness" as a quality of effective supervisors, thus underlining the holistic nature of supervision in which the candidate's research, organisation and writing skills were emphasised while also considering the candidate's broader background needs.

Discussion

The purpose of the research reported in this article was not only to engage novice supervisors more effectively in their own learning, but to create a program that delivered exactly the professional learning that these novice supervisors perceived themselves as needing to feel more confident and prepared for their role as HDR supervisor. By engaging novice supervisors in the design stage of their own supervisor training program, they were assured that the subsequent professional learning activities met their requirements.

Our early research looked at the ways in which other universities were training their supervisors. We found that many offered training modules, face-to-face training, and micro-credentials for research supervisors.

While many examples of novice supervisor training were identified throughout the higher education sector, the design process that preceded the implementation of these programs and training activities was not readily available. The data collected during the research project reported in this article were purposefully gathered to inform the design of the suite of bespoke training workshops designed for the novice supervisors who comprised one subgroup of our pool of participants. This difference in how the training activities were developed sets the findings of our research project apart from other training programs.

The research team for this project found that, as information was gathered from the novice supervisors, many of the questions and learning requirements that were mentioned were similar to those already being taught by other universities. There were some clear commonalities across what supervisors need to learn. There were "the essential ingredients of research supervision" and the advice to "focus on the interpersonal aspects

of supervision and supporting the psychosocial needs of students" (Roach et al., 2019, p. 1243). There was a clear desire to learn how to align expectations between candidate and supervisor as suggested by Cardilini et al. (2022), and there was an overall desire to build the sorts of "reciprocity, collaboration and teamwork" Sinclair describes (Cardilini et al., 2022; Sinclair, 2004, p. 116). However, in asking the novice supervisors for their specific professional development requests, it became possible to tailor workshops not only to specific university needs, but to specific cultural requirements, subject area needs and even individual supervisor requests. For example, the supervisor-participants from the university reported in this article expressed a preference for online interaction. Although the results of the component of the study that was implemented at a university in Papua New Guinea are not reported in this article, the supervisor-participants from the university in Papua New Guinea preferred face-to-face communication processes and this preference was used to inform the design of their professional development workshops. This bespoke nature of our workshops reflected the advice by Heyns et al. (2019) and Roach et al. (2019) about person-centered supervision and interpersonal factors associated with supervision, alongside the value of supervisors' dispositional qualities as suggested by Buirski (2022) and referred to as "humanness" by our expert panellists.

The data collected from the novice supervisors also allowed the team to understand which areas of knowledge were a priority for their unique context; in this case, the areas in which the new supervisors felt the least confident in. This meant that workshops did not provide redundant information and did not waste time on areas in which the supervisors already felt confident. It also allowed the team to isolate areas of need that were culturally specific and to provide learning that was targeted to the unique location of the novice supervisors. This aspect of supervisor training design has not yet been extensively researched.

While it has been acknowledged that novice supervisors need more extensive training in the pedagogy of supervision (Buirski, 2022; Harrison & Grant, 2015; Lee, 2018; Madan, 2021), this research adds to the literature the aspect of using the voices of novice supervisors when planning this training. In addition to extending the collection of research studies that have investigated the views of supervisors in relation to their own training, the findings of this study have also extended the research into the ways in which research supervisors work within two universities that

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Recommendations

The novice supervisors who participated in the workshop program appreciated the way in which the workshop activities were designed and tailored to meet their current skills levels and future needs. While the diversity of research student cohorts and research training itself has been recognised (Hammond et al., 2010), this approach, of incorporating the voices of supervisor-stakeholders in the process of designing supervisory training programs, ensures that supervisor diversity is also acknowledged. Thus, the participatory approach to designing workshops is recommended to professional development providers who are tasked with designing training programs with a limited set of resources. By ensuring that the style and content of the training workshops are closely aligned to the needs of the anticipated participants, the institution's resources may be expended in an economical manner. In this way, the supervisor training workshops are collaboratively developed, not just expert-informed, by incorporating the voices of the participants for whom they are designed.

As well as appreciating the bespoke nature of the supervision training workshops, the participants also valued choice-based aspects of the activities and resources within the workshops. Thus, any in-house development of professional learning programs may benefit from an approach that veers towards the provision of options nested within workshops rather than a prescriptive or one-size-fits-all approach. The role of choice in the research to date on the pedagogy of supervision has yet to be fully investigated, but the findings of the study reported in this article suggest that the teaching-learning process that underpins the candidate-supervisor relationship, often referred to as the pedagogy of supervision, may be developed by incorporating specifically designed opportunities for choice within the supervisor training process. For universities that operate from a Christian ethos, such as the two universities mentioned in this article, the values that inform the practices of their staff and students may further inform the design of supervisor training programs. Further research is also recommended to investigate the role of choice as an element to embed into research training processes involving candidates.

While the facilitators of each workshop were appreciated by the workshop participants, the novice-supervisors who participated in the workshops especially valued the experience of collaborating with other supervisors and learning from more experienced supervisors. Furthermore,

the interactive nature of the workshops enabled participants to contribute to the content, as well as the flow and sequence of the workshops. This informal approach to empowering the workshop participants promoted their engagement and agency during the sessions, thus providing motivation for their involvement in and contributions to the workshops. Thus, we would recommend that, when designing further workshops for novice supervisors, such sessions may be more engaging and effective if significant components of the workshops afford opportunities for participants to engage with each other and fellow supervisors with extensive supervision experience.

Conclusion

The specificity of this study, by focusing on the needs and customised professional development for a specific type of supervisor, could be seen as both a strength and a limitation of this research. While the results of this study were drawn from data gathered from both novice and experienced supervisors, the supervisor training workshops that were developed from these results particularly focused on the professional learning of novice supervisors. Further work is required to investigate the specialised needs of mid-career and/or experienced research supervisors and this presents an opportunity for future study.

In this project, the time, effort, and expertise required by the researchers to develop the supervisor training workshops and the time and effort required of the supervisors to attend and engage in the workshops represented limitations and implementation challenges. The novice supervisors' existing workload and institutional scheduling limited their engagement with the program. Furthermore, while the online setting of some of the workshops offered greater flexibility than campus-based activities, some aspects of informal face-to-face professional learning sessions were not afforded to the online participants. Participants who attended the on-campus workshops noted how they benefited just by "being in the room" among other supervisors. These technical, scheduling and workload-related issues may prove to be ongoing challenges for those involved in the provision and attendance of such training programs and further work may be needed to ensure the inclusion of supervisor training workshops into the institution's overall calendar becomes incidental rather than atypical.

In addition to contributing to knowledge about how to involve novice supervisors in the design of their own professional learning activities, this study's findings suggest extensions to the already-

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reported components of supervision pedagogy. That is, the novice supervisors clearly appreciated some level of choice during their engagement in the training workshops and they valued the customised nature of the training provided as it clearly reflected their own perceived requirements.

Findings from this study highlighted the role of confidence in the novice supervisors' perceptions of themselves as supervisors. Engaging in workshops that were specifically designed for novice supervisors appeared to assure the workshop participants that they were not expected to know everything about supervising HDR candidates and that the opportunities for collaboration with other experienced supervisors (both informally and formally, as part of a supervision team) would provide them with multiple learning opportunities in the future.

This study's findings provide evidence of how novice supervisors perceive their own development as supervisors because of contributing to the design stages of professional development workshops, participating in the workshops and, finally, reflecting on the impact of these workshops. Their engagement prior, during and after the workshop sessions was tracked and considered throughout the project. Providing opportunities for the participants to not only contribute to and engage in the learning program but also to reflect on their own progress after the program was a useful approach to encourage self-monitoring of their own development as supervisors.

This study revealed that the concerns of novice supervisors' range across pedagogical issues (i.e., how to facilitate their candidate's learning), organisational aspects of supervision (i.e., organising meetings with candidates, scheduling workload allocation), as well as content and methodological choices (i.e., guiding candidates on their choice of topic, methodologies and methods). This diversity of issues, within the realm of research supervisor development and training, suggests that the professional development sessions designed for supervisors also require diverse structures and content, thus further contributing to our current understanding of the pedagogy of supervision.

The methodology used in this study and the results of this study may help inform the design, content and delivery of professional learning programs for novice research supervisors in other universities and higher education institutions. Furthermore, while the supervisors' competence to supervise and subject-specific expertise are important and valued by candidates, this study revealed that the supervisors' confidence levels to supervise play a crucial role in the development

of their perceptions of themselves as effective supervisors.

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References

- Agricola, B. T., van der Schaaf, M. F., Prins, F. J., & van Tartwijk, J. (2020). Shifting patterns in co-regulation, feedback perception, and motivation during research supervision meetings. *Scandinavian Journal of Educational Research*, 64(7), 1030–1051. <https://doi.org/10.1080/00313831.2019.1640283>
- Alebaikan, R., Bain, Y., & Cornelius, S. (2023). Experiences of distance doctoral supervision in cross-cultural teams. *Teaching in Higher Education*, 28(1), 17–34. <https://doi.org/10.1080/13562517.2020.1767057>
- Bahtilla, M. (2022). Research supervision of international doctoral students: Perspectives of international students in two comprehensive universities in China. *International Journal of Doctoral Studies*, 17, 181–199. <https://doi.org/10.28945/4970>
- Bahtilla, M., & Oben, A. I. (2022). International students' perception of research supervision in the Social Sciences: The case of three comprehensive universities in China. *Journal of Further and Higher Education*, 46(3), 327–340. <https://doi.org/10.1080/0309877X.2021.1945554>
- Bayona-Oré, S. (2021). Perceptions of postgraduate students on the relationship between thesis development and performance of a supervisor. *Journal of Turkish Science Education*, 18(4), 559–573. <https://doi.org/10.36681/tused.2021.90>
- Bergold, J., & Thomas, S. (2012). Participatory research methods: A methodological approach in motion. *Historical Social Research/ Historische Sozialforschung*, 37(4), 191–222. <https://www.jstor.org/stable/41756482>
- Bitzer, E., Trafford, V., & Leshem, S. (2014). Crossing borders in preparing doctoral candidates and supervisors for global research contexts. In A. Kwan, E. Wong, T. Kwong, P. Lau, & A. Goody (Eds.), *Research and Development in Higher Education: Higher Education in a Globalized World* (37, pp. 28–38). <https://dx.doi.org/10.4314/jh.v28i2.1>
- Buirski, N. (2022). 'Ways of being': A model for supportive doctoral supervisory relationships and supervision. *Higher Education Research & Development*, 41(5), 1387–1401. <https://doi.org/10.1080/07294360.2021.1910209>
- Cardilini, A. P., Risely, A., & Richardson, M. F. (2022). Supervising the PhD: Identifying common mismatches in expectations between candidate and supervisor to improve research training outcomes. *Higher Education Research & Development*, 41(3), 613–627. <https://doi.org/10.1080/07294360.2021.1874887>
- Chugh, R., Macht, S., & Harreveld, B. (2022). Supervisory feedback to postgraduate research students: A literature review. *Assessment & Evaluation in Higher Education*, 47(5), 683–697. <https://doi.org/10.1080/02602938.2021.1955241>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.
- Cryer, P., & Mertens, P. (2003). The PhD examination: Support and training for supervisors and examiners. *Quality Assurance in Education*, 11(2), 92–99. <https://doi.org/10.1108/09684880310471515>
- Eriksson, M. (2019). Research supervision as a mutual learning process: Introducing salutogenesis into supervision using 'The Collegial Model'. *Health Promotion International*, 34(6), 1200–1206. <https://doi.org/10.1093/heapro/day088>
- Fitzpatrick, E., & Fitzpatrick, K. (2015). Disturbing the divide: Poetry as improvisation to disorder power relationships in research supervision. *Qualitative Inquiry*, 21(1), 50–58. <https://doi.org/10.1177/1077800414542692>

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- Fulgence, K. (2019). A theoretical perspective on how doctoral supervisors develop supervision skills. *International Journal of Doctoral Studies*, 14, 721–739. <https://doi.org/10.28945/4446>
- Gjølterud, S., & Ahmad, A. K. (2018). Transformative power of cross-cultural PhD supervision. *International Journal of Doctoral Studies*, 13, 441–456. <https://doi.org/10.28945/4140>
- Golding, C., Sharmini, S., & Lazarovitch, A. (2014). What examiners do: What thesis students should know. *Assessment & Evaluation in Higher Education*, 39(5), 563–576. <https://doi.org/10.1080/02602938.2013.859230>
- Guerin, C., Walker, R., Aitchison, C., Mattarozzi Laming, M., Chatterjee Padmanabhan, M., & James, B. (2017). Doctoral supervisor development in Australian universities: Preparing research supervisors to teach writing. *Journal of Academic Language and Learning*, 11(1), A88–A103. <https://journal.aall.org.au/index.php/jall/article/view/446>
- Harrison, S., & Grant, C. (2015). Exploring of new models of research pedagogy: time to let go of master-apprentice style supervision? *Teaching in Higher Education*, 20(5), 556–566. <https://doi.org/10.1080/13562517.2015.1036732>
- Heyns, T., Bresser, P., Buys, T., Coetzee, I., Korkie, E., White, Z., & Mc Cormack, B. (2019). Twelve tips for supervisors to move towards person-centered research supervision in health care sciences. *Medical Teacher*, 41(12), 1353–1358. <https://doi.org/10.1080/0142159X.2018.1533241>
- Hickey, A., & Forbes, M. (2022). Higher degree research supervision beyond expertise: A Ranciérian and Freirean perspective on HDR supervision. *Studies in Higher Education*, 47(8), 1712–1723. <https://doi.org/10.1080/03075079.2021.1957812>
- Hill, G., & Vaughan, S. (2018). Conversations about research supervision—Enabling and accrediting a community of practice model for research degree supervisor development. *Innovations in Education and Teaching International*, 55(2), 153–163. <https://doi.org/10.1080/14703297.2017.1406388>
- Hodgson, D. (2020). Helping doctoral students understand PhD thesis examination expectations: A framework and a tool for supervision. *Active Learning in Higher Education*, 21(1), 51–63. <https://doi.org/10.1177/1469787417742020>
- Huet, I., & Casanova, D. (2021). Exploring the professional development of online and distance doctoral supervisors. *Innovations in Education and Teaching International*, 58(4), 430–440. <https://doi.org/10.1080/14703297.2020.1742764>
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14–26. <https://doi.org/10.3102/0013189X033007014>
- Keane, M. (2016). Coaching interventions for postgraduate supervision courses: Promoting equity and understanding in the supervisor–student relationship. *South African Journal of Higher Education*, 30(6), 94–111. <https://doi.org/10.20853/30-6-720>
- Kemmis, S., & McTaggart, R. (2005). Participatory action research: Communicative action and the public sphere. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage book of qualitative research* (3rd ed., pp. 559–604). Sage.
- Khosravi, A., & Ahmad, M. N. (2016). Examining antecedents of knowledge-sharing factors on research supervision: An empirical study. *Education and Information Technologies*, 21, 783–813. <https://doi.org/10.1007/s10639-014-9354-4>
- Kreber, C. (2023). On a pedagogy of authentic care in postgraduate research supervision. *Studies in Higher Education*, 1–13. <https://doi.org/10.1080/03075079.2023.2215805>
- Kreber, C., & Wealer, C. (2021). Intentions, concepts and conceptions of research supervision: a consideration of three disciplines. *Teaching in Higher Education*, 28(6), 1–18. <https://doi.org/10.1080/13562517.2021.1900815>
- Le, M., Pham, L., Kim, K., & Bui, N. (2021). The impacts of supervisor–PhD student relationships on PhD students' satisfaction: A case study of Vietnamese universities. *Journal of University Teaching & Learning Practice*, 18(4), 269–285. <https://doi.org/10.53761/1.18.4.18>
- Lee, A. (2018). How can we develop supervisors for the modern doctorate? *Studies in Higher Education*, 43(5), 878–890. <https://doi.org/10.1080/03075079.2018.1438116>
- Madan, C. R. (2021). A brief primer on the PhD supervision relationship. *European Journal of Neuroscience*, 54(4), 5229–5234. <https://doi.org/10.1111/ejn.15396>
- Mainhard, T., van Der Rijst, R., van Tartwijk, J., & Wubbels, T. (2009). A model for the supervisor–doctoral student relationship. *Higher Education*, 58, 359–373. <https://doi.org/10.1007/s10734-009-9199-8>
- Maistry, S. (2017). Betwixt and between: Liminality and dissonance in developing threshold competences for research supervision in South Africa. *South African Journal of Higher Education*, 31(1), 119–134. <https://doi.org/10.20853/31-1-841>
- McCulloch, A., & Loeser, C. (2016). Does research degree supervisor training work? The impact of a professional development induction workshop on supervision practice. *Higher Education Research & Development*, 35(5), 968–982. <https://doi.org/10.1080/07294360.2016.1139547>
- Miles, M. B., & Huberman, A. M. (2013). *Qualitative data analysis* (3rd ed.). Sage.
- Miller, P. (2007). Problematising “good” HDR supervision: A case study of an international pilot of an on-line HDR supervisor professional development program. *International Journal of Research Supervision*, 1(1), 29–38. http://epubs.scu.edu.au/cgi/viewcontent.cgi?article=1018&context=gcm_pubs
- Nasiri, F., & Mafakheri, F. (2015). Postgraduate research supervision at a distance: A review of challenges and strategies. *Studies in Higher Education*, 40(10), 1962–1969. <https://doi.org/10.1080/03075079.2014.914906>
- Ngulube, P. (2021). Postgraduate supervision practices in education research and the creation of opportunities for knowledge sharing. *Problems of Education in the 21st Century*, 79(2), 255–72. <https://doi.org/10.33225/pec/21.79.255>
- Orellana, M. L., Darder, A., Pérez, A., & Salinas, J. (2016). Improving doctoral success by matching PhD students with supervisors. *International Journal of Doctoral Studies*, 11, 87. <https://doi.org/10.28945/3404>
- Owens, A., Brien, D. L., Ellison, E., & Batty, C. (2020). Student reflections on doctoral learning: challenges and breakthroughs. *Studies in Graduate and Postdoctoral Education*, 11(1), 107–122. <https://doi.org/10.1108/sge-04-2019-0048>
- Peng, H. (2015). Assessing the quality of research supervision in mainland Chinese higher education. *Quality in Higher Education*, 21(1), 89–100. <https://doi.org/10.1080/13538322.2015.1049441>
- Roach, A., Christensen, B. K., & Rieger, E. (2019). The essential ingredients of research supervision: A discrete-choice experiment. *Journal of Educational Psychology*, 111(7), 1243–1260. <https://doi.org/10.1037/edu0000322>
- Robertson, M. (2017). Aspects of mentorship in team supervision of doctoral students in Australia. *The Australian Educational Researcher*, 44(4), 409–424. <https://doi.org/10.1007/s13384-017-0241-z>
- Sinclair, M. (2004). *The pedagogy of 'good' PhD supervision: A national cross-disciplinary investigation of PhD supervision*. Department of Education, Science and Training, Canberra.
- Teddle, C., & Tashakkori, A. (2009). *Foundations of mixed methods research*. Sage.
- Vähämäki, M., Saru, E., & Palmunen, L. M. (2021). Doctoral supervision as an academic practice and leader–member relationship: A critical approach to relationship dynamics. *The International Journal of Management Education*, 19(3), 1–11. <https://doi.org/10.1016/j.ijme.2021.100510>
- van der Laan, L., Ormsby, G., Fergusson, L., & Pau, M. (2021). The higher degree by research student as ‘master’: Utilising a design thinking approach to improve learner experience in higher degree research supervision. *Journal of University Teaching & Learning Practice*, 18(1), 1–28. <https://doi.org/10.53761/1.18.1.3>
- Vaughan, S., Blackburn, C., & Curzon, R. (2021). Continuing conversations: Moving support for doctoral supervisors’ professional development online. *Innovations in Education and Teaching International*, 58(6), 716–726. <https://doi.org/10.1080/14703297.2021.1991423>
- Woolderink, M., Putnik, K., van der Boom, H., & Klabbbers, G. (2015). The voice of PhD candidates and PhD supervisors. A qualitative exploratory study amongst PhD candidates and supervisors to evaluate the relational aspects of PhD supervision in the Netherlands. *International Journal of Doctoral Studies*, 10, 217–235. <https://doi.org/10.28945/2276>
- Zaheer, M., & Munir, S. (2020). Research supervision in distance learning: issues and challenges. *Asian Association of Open Universities Journal*, 15(1), 131–143. <https://doi.org/10.1108/AAOUJ-01-2020-0003>