

Knowledge Translation from Clinical Education Workshop to Workplace

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Abstract

Challenging situations are frequently experienced by clinical educators (CEs) during allied health student placements. However, there is limited literature reporting outcomes of training of workplace-based CEs to manage such challenges. The aim of this proof-of-concept study was to explore knowledge translation processes adopted in an interprofessional continuing professional development (CPD) workshop and the feasibility of follow up outcome measures. This project recruited CEs who participated in a “Working with Students in Challenging Situations” workshop. Knowledge translation processes including goal setting and outcome measures focusing on workplace application of learning were incorporated in workshop design. Post-workshop knowledge translation and learning outcomes were explored by analysing the nature and achievement of participants’ learning goals. This approach to workshop evaluation highlights current and future learning needs of workshop participants. Participants’ learning goals included information-seeking to support students with complex learning needs, developing proactive educational approaches and critical reflection but rarely focused on their own personal attributes. Post workshop findings indicate variability in effective implementation of learning goals with practice transformation influenced by CE, student and workplace factors. Findings show goal setting could be an important design feature of clinical education CPD workshops. However, workshop participants may require time and support to reflect on their individual professional needs and construct realistic goals that encompass and consider the impacts of educator and workplace factors. Goal attainment measures may be a useful indicator within a suite of measures to track knowledge translation and enhance supervisory practice in response to challenging situations.

Keywords: *clinical educators, continuing professional development, knowledge translation*

Introduction

Clinical Educators (CEs) exert a powerful influence on the nature and quality of students’ clinical competence and work readiness through supporting work-based placements in healthcare

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environments ([McAllister & Nagarajan, 2015](#); [Newstead et al., 2018](#)). Ideally, clinical education provides mutual benefits for CEs and students, including quality learning and teaching interactions and opportunities for enhanced healthcare services. Nonetheless, preparing students to be work-ready is no simple task. Despite their professional experience, many CEs experience challenges in delivering high-quality placements and feel ill equipped for educator responsibilities in their work ([Bearman et al., 2018](#); [Hall et al., 2015](#)). We explore the role of continuing professional development (CPD) in equipping educators to manage challenging situations and present an approach to evaluating the outcome of CPD workshops using a knowledge translation framework. Understanding the learning needs and challenges experienced by clinical educators is an important aspect of implementing effective continuing professional development programs. We argue that complex, integrated skills are required for effective clinical education and learning needs and challenges experienced by CEs typically involve a combination of student, educator, and workplace factors ([Hall et al., 2016](#); [Thomas et al., 2007](#); [Rodger et al., 2008](#)).

An effective educator develops appropriate placement curricula, demonstrates sound professional, self-management and communication skills, and balances student-centred supervision with optimal levels of client care ([Delany & Bragge, 2009](#); [Gibson et al., 2019](#)). Practising health professionals typically demonstrate effective communication, reasoning, organisation, and time management skills in daily practice. Yet, professional expertise may not necessarily transfer to supervisory ability and clinical education may be perceived as adding additional complexity to health professionals' roles and responsibilities ([Bourne et al., 2020](#), [Ryan et al., 2018](#)). It cannot be assumed that an excellent clinician will become an excellent educator without training and support. Educational skills may be especially tested when CEs manage underperforming students. During placements students must develop knowledge, skills, attitudes, and values they need for real-life practice in diverse work settings ([McAllister & Nagarajan, 2015](#)). For many students (and their educators), a placement provides an opportunity for significant professional and personal growth. However, some students require additional support to master expected competencies which can be time consuming and/ or stressful for CEs ([Bearman et al., 2013](#); [Bourne et al., 2021](#)). Hence, for CEs who struggle to manage students who experience competency challenges, there may be negative impacts on their confidence and motivation to provide further clinical education opportunities.

Workplace factors may also influence CEs experiences. As noted by Kellish and colleagues ([2021](#)), contemporary health professionals are increasingly required to do more with less resources and time, operating within a work environment that may be discordant with providing quality student education. Workplace challenges of limited resources, overlaid with pressures for high clinical productivity may impact CEs capacity to create supportive learning environments that boost students' confidence and motivation to learn ([Delany & Bragge, 2009](#); [O'Brien et al., 2017](#)). Moreover, CEs may perceive limited workplace support from employers and/or colleagues regarding the value of clinical education contributing to increased stress during placements when unexpected or significant challenges occur ([Barton et al., 2013](#); [Bourne et al., 2021](#); [Hall et al., 2016](#)). Clearly, there is a need to equip CEs with the skills to prepare for their roles and to manage challenging situations.

Unsurprisingly, CEs recognise the need for continuing professional development (CPD) to develop time management, task prioritisation skills and effectively manage placements ([Bearman et al., 2018](#)). Quality CPD programs may also facilitate health professionals to extend their practice roles confidently and competently to clinical education ([Steinert et al., 2016](#)). However, to provide effective CE support, CPD needs to be sustainable, address pressure points in placement experiences and enhance capacity of health professionals to fulfil this important role ([Tassoni et al., 2023](#)).

Formalised approaches to CPD have included individual study packages, short workshops, and longer courses ([Attrill et al., 2020](#); [Steinert et al., 2016](#); [Tai et al., 2016](#)). Informal workplace-based approaches such as peer mentoring, communities of practice or non-structured opportunities to support the application of knowledge and skills in dynamic workplaces are also increasingly

used to support educators, particularly in medicine (Campbell et al., 2019; King et al., 2021). Yet, existing studies in allied health have not explored how the complexity of an individuals' workplace context may influence their CPD learning needs and subsequent skill development or application following a clinical education CPD program.

While some approaches to CPD have demonstrated immediate knowledge gains, the longer-term impact of applying this knowledge on CE practice or wider impacts (e.g., improved student learning outcomes) of any single or combined approaches are not well established. This reflects the status of current published research that focuses on impacts based upon evaluations conducted immediately post-workshop (Campbell et al., 2019; Steinert et al., 2016).

The premise underpinning our study is that the workplace environment impacts an individual's ability to integrate and adopt knowledge and skills (Campbell et al., 2019; Reich et al., 2015), therefore it is vital that CPD programs are evaluated once attendees have resumed their clinical education duties. Understanding how and why CEs change their practice post-workshop may facilitate the codesign of strategies to better support knowledge translation. This empirical evidence is needed to inform the design of CPD for CEs, particularly addressing the needs of allied health professions in managing challenging supervisory situations. We utilised a proof of concept approach to acquire insight into CEs learning goals and self-reported goal achievements following their participation in a CPD program that targeted managing clinical education challenges.

A Continuing Professional Development Workshop Focusing on Clinical Education Challenges

The Managing Students in Challenging Situations Workshop, designed and implemented by the University of Sydney, targets allied health professionals who have previously supervised students during placements. The four-hour workshop was presented face to face at the university with attendees pre-allocated to small interdisciplinary groups. Workshop design was underpinned by the Knowledge to Action (KTA) Framework. KTA acknowledges the importance of social interaction in the adaptation of research evidence, taking account of local context and culture (Graham & Tetroe, 2011). For example, in clinical education settings, educators' knowledge and effective application of adult learning theory and supervisory practice may be influenced by an interaction between their own personal skills or situation, workplace context and capabilities of individual students. Therefore, learning to manage challenges requires a focus on factors within each of these areas.

The KTA framework comprises two major components: knowledge creation and an action cycle. During the workshop, knowledge creation was supported by CEs identifying factors that contribute to challenging clinical education situations and reflecting upon the impact of these factors in their workplace contexts. During Part 1 of the workshop, attendees focussed on understanding challenging situations. Each group was assigned a case study that included a complex mix of student, educator and workplace factors that interacted to create a challenging learning situation. Facilitators guided each group to explore potential contributing student, educator, and workplace factors. Discussions shifted CEs' focus from the 'student as a problem' to focus on broader and underlying placement issues. Strategies were experientially grounded with opportunities for workshop attendees to discuss effective approaches to managing different challenging case scenarios.

A focus on active learning within the workshop prepared CEs for translation of their knowledge of supervisory practices when they returned to their workplaces. In Part 2 of the workshop, CEs worked through a structured process for managing placement challenges by engaging in peer learning role play activities. The process was adapted to address challenges that included mental health issues in workplace learning, developing professionalism, providing inclusive learning environments, and facilitating clinical reasoning and reflection. The format was highly interactive

with participants actively sharing perspectives, experiences, and problem-solving strategies. Self-directed resources were provided for CEs to consolidate their learning and strategies post-workshop. At the conclusion of the workshop, attendees created individual goals for transforming their future clinical education practice.

Goal setting and goal attainment scaling is widely used in professional practice to identify and measure contextual behavioural change. Goal attainment is accepted as a person centred and collaborative approach that facilitates understanding of meaningful outcomes in clinical and research settings ([Bard-Pondarré et al., 2023](#); [Eslami Jahromi & Ahmadian, 2021](#); [Harpster et al., 2019](#)). Learning through work by goal-directed problem-solving activities also facilitates CPD by practising health professionals ([Billett, 2016](#)). Hence, while goal attainment has not been previously reported as outcome measure for CPD clinical education, goal attainment scaling offers an opportunity for clinical educators to shape and reflect on goals specifically relevant to the nature of student, educator and workplace challenges in their workplace environment. The overall objective of this study was to acquire insight into how KTA-related measures may be used to evaluate educators' learning outcomes from a CPD workshop. Such measures move beyond satisfaction measures to understand how CEs apply workshop knowledge to develop and implement goals for future supervisory practice. Hence, the aims were to:

1. Explore the use of post workshop goal setting to understand how CE's plan to translate knowledge and skills acquired during continuing professional development workshops to their supervisory practice.
2. Investigate the feasibility of using goal attainment scaling and a follow up survey to identify outcomes and factors influencing knowledge translation and supervisory practice change.

Method

Study Design

This proof-of-concept study drew upon a knowledge to action (KTA) framework to develop and trial CPD outcome measures. The KTA framework comprises two major components: knowledge creation and an action cycle. As explained earlier, knowledge creation was supported during the workshop by CEs identifying factors that contribute to challenging clinical education situations and reflecting upon the impact of these factors in their workplace contexts. A focus on active learning within the workshop then prepared CEs for translation of their knowledge of supervisory practices when they returned to their workplaces. Our study focuses on the action cycle of the KTA framework where, according to Graham et al.'s (2006) model, stages of implementation include: identifying a problem, adapting knowledge to local contexts, assessing implementation barriers, tailoring interventions, monitoring and evaluating knowledge use, evaluating outcomes, and sustaining the use of new knowledge.

Qualitative descriptive methods were used to explore the nature and implementation of knowledge acquired during the *Managing Students in Challenging Situations* CPD workshop. Qualitative description may provide insights into a topic of interest by addressing questions of 'who, what, where, why and how' ([Sandelowski, 2000](#)). In our study, we sought to develop KTA outcome measures that described the nature of CEs post-workshop learning goals and explored the factors influencing their attainment in the workplace based on the educators' perceptions and experiences. This research consisted of two stages. Stage one, focussed on how CEs utilised goal setting to plan their application of workshop knowledge to workplace practice. Stage two explored use of an outcome survey to understand CEs experience of implementing supervisory goals in their workplace settings. Ethics approval was granted by the Human Research Ethics Committee (HREC) of the University of Sydney (Project No. 2018/824).

Participants

A convenience sampling strategy recruited health professionals who attended an annual *Managing Students in Challenging Situations Workshop* at the University of Sydney. CEs who offered placements to

University of Sydney students during the two years prior to the workshop received an email invitation to participate and the workshop was advertised on the university website.

Following the workshop, one author, (BB, not a workshop facilitator), presented study information to all workshop attendees. Detachable study consent forms were circulated with routinely used feedback forms. Workshop attendees who opted to participate signed the consent form and submitted feedback to the 'feedback box.'

For study inclusion, attendees needed to be eligible to offer clinical education placements during the six months post workshop in diagnostic radiography, exercise physiology, occupational therapy, rehabilitation counselling, physiotherapy, or speech pathology.

Research Tools

A Workshop to Workplace Goals document was developed for attendees to identify three goals for future supervisory practices ([Appendix A](#)). Participants were requested to use a SMART goal framework to write clear and realistic goals ([Bovend'Eerd et al., 2009](#)). This framework, emphasising goal descriptors of specific, measurable, attainable, relevant, and time-related, is widely used by allied health professionals in professional practice ([Bowman et al., 2015](#)). Hence, it was expected that workshop attendees would be familiar with writing SMART goal statements and no additional training was provided in this process.

In the absence of empirically tested survey tools that met study needs, authors designed the Workshop to Workplace Questionnaire ([Appendix B](#)) to evaluate workshop outcomes. This online questionnaire requested demographic information including profession, workplace, and previous supervisory experience. Participants rated goal achievement using Goal Attainment Scales ([Ottenbacher & Cusick, 1990](#)) which measure outcomes on a scale ranging from -2 to +2 (e.g., where -2 represents much less than expected achievement). Open-ended questions provided opportunities for participants to describe facilitators and barriers that impacted their goal attainment process and outcomes.

Data Collection

Data were collected in two stages. Stage one focussed on planning changes to supervisory practices recorded on the Workshop to Workplace Goals document. Workshop facilitators forwarded the goals documents of attendees who consented to the research team. Individual documents were de-identified, coded and scanned prior to data analysis.

Stage two focussed on processes and outcomes of implementing goals reported on the Workshop to Workplace Questionnaire. Participants were emailed a link to the questionnaire with a copy of their workshop goals four months after the workshop. This timeframe provided opportunity for participants to implement goals during a post-workshop placement. A reminder email was sent one week later. The questionnaire was completed online using the university supported REDCap system ([Harris et al., 2009](#)).

Data Analysis

An inductive qualitative content analysis process was used to analyse the nature of participants' supervisory goals ([Graneheim & Lundman, 2004](#)). This analysis explored participants' intended actions following the workshop. Each individual goal comprised a meaning unit; none were excluded from analysis. Meaning units therefore typically included sentences that included some or all components of a SMART goal framework. Authors familiarised themselves with the data by multiple readings of participants' goals. Meaning units were condensed during a group meeting. Then, each author individually coded goals to identify the area of supervisory practice addressed by the participant. Coding differences were resolved during regular meetings by returning to the data and reaching group consensus. A decision-making audit trail was maintained for coding consistency ([Korstjens & Moser, 2017](#)). A mind mapping strategy was led by author (CC) which as Jackson & Trochin (2002) stated helps to collate codes into categories. During this iterative process, the authors kept returning to the original data to ensure meaning was retained. Category names and descriptions were refined by authors (AA & BB) during manuscript preparation.

Quantitative data derived from the questionnaire were descriptively analysed. Due to the limited number of participants, it was not appropriate to use measures of central tendency to report findings. However, preliminary insights into post-workshop knowledge translation are achieved by describing each of the three respondents' experiences, including demographic data, their post workshop goals and survey responses that addressed post workshop experiences with clinical education challenges. Participants' responses to open ended survey responses ranged from one to several paragraph length explanations of goal attainment ratings supported by specific examples. Participants' learning outcomes were explored through comparison of goal attainment ratings attached to each goal and CEs' perceptions of facilitators and barriers to knowledge translation. Participants' perceptions of the impacts of knowledge translation for educator development, student learning and clinical care were another key descriptive feature. Because this is a proof-of-concept study, findings were not intended to demonstrate the effectiveness of the CPD workshop. Rather, we sought to determine whether our suite of outcome measures provided a feasible approach to evaluating knowledge translation that warranted further design attention.

Situating the Authors

Two members of the research team were university academics with experience supporting CEs during health profession placements and conducting educational research. Both academics had previously designed and implemented clinical education workshops and worked directly with CEs and students in response to challenging clinical education scenarios. They had firsthand experience of the negative consequences that may accompany unmanaged challenges, and perceived proactive approaches may avoid such consequences for CEs and students. However, the authors were motivated to gather evidence beyond satisfaction measures to determine if CPD workshops had potential to change educator behaviours. The third member was a health profession student who engaged in placements prior to and during the study and expressed an interest in learning more about clinical education processes. The authors' experiences as managers (academics) and consumers (student) of clinical education experiences is an acknowledged factor that may have influenced analysis. Having perspectives of academics and a student with recent clinical education experience provided opportunities for the research team to examine any assumptions about expected educator practices.

Results

Thirty-six CEs attended the *Managing Students in Challenging Situations Workshop* and 12 (33%) consented to participate in the study. [Table 1](#) shows study participants included eight speech pathologists, two occupational therapists and one exercise physiologist, reflecting three of five health professions represented at the workshop. One participant's profession was unreported. Eight participants self-reported supervising ten or more students prior to the workshop, one participant reported supervising five to nine students, and three participants did not disclose their supervisory experience.

Table 1

Workshop Participants

Participant code	Health Profession	No. students supervised pre-workshop	No. Clinical education goals
P 1	Speech Pathologist	>10	3
P 2	Exercise Physiologist	>10	3
P 3	Not reported	Not reported	3
P 4	Occupational Therapist	Not reported	3
P 5	Speech Pathologist	>10	3
P 6	Speech Pathologist	>10	3
P 7	Speech Pathologist	>10	2

P 8	Speech Pathologist	>10	3
P 9	Speech Pathologist	5-9	3
P 10	Speech Pathologist	>10	3
P 11	Speech Pathologist	>10	3
P 12	Occupational Therapist	Not reported	2

Goal Statements: Planning Practice Change from Workshop to Workplace

Ten participants documented three future goals, while two participants generated two goals, providing 34 post-workshop learning goals for analysis. [Table 2](#) presents themes, categories, and descriptors.

Table 2

Workshop to Workplace Clinical Educator Goals

Themes	Categories	Goal Description
Continue professional development to prepare for potential challenges	<ul style="list-style-type: none"> • Mental health factors impacting student learning • Cultural and linguistic diversity in clinical education • Working with students with disabilities • Insights into emotional intelligence 	Acquiring knowledge to support students' specific learning needs.
Undertake proactive approaches to facilitate student learning	<ul style="list-style-type: none"> • Prepare placement environment: resources and structure • Prepare placement environment • Set clear placement expectations • Set clear assessment expectations • Ensure regular feedback 	Avoiding challenging situations: preparing resources and schedules, communicating expectations to students.
Develop effective strategies to manage challenging situations	<ul style="list-style-type: none"> • Communication skills for challenging conversations • Processes to manage future challenges • Toolkit of resources 	Increasing educator readiness for managing future challenges.
Engage and reflect on diverse supervisory experiences	<ul style="list-style-type: none"> • Increase clinical education experience • Reflect on supervisory practices following challenges • Reflect on supervisory practices following feedback 	Learning from supervisory experiences.

Continue Professional Development to Prepare for Potential Challenges

Following the workshop, participants planned further CPD in clinical education. Future CPD included formal or self-directed learning mainly focused on supporting students with specific learning needs, including mental health issues, disability, and cultural and linguistic diversity. For instance, one participant aimed to acquire knowledge to 'better understand personality disorders' (P6) while another identified a need to learn 'more about cultural perspectives' (P8). Goals also focused on developing skills required for managing interpersonal interactions with students, including 'motivational interviewing' (P4) and 'emotional intelligence' (P11).

Undertake Proactive Approaches to Facilitate Student Learning

Participants developed goals to avert challenges during future placements. Such goals emphasized effective communication to minimize misunderstandings with students. For example, P10 'will meet each student starting a new block individually to discuss placement expectations.' Participants also planned to clearly address expectations regarding competencies evaluated in placement assessments, so students are 'aware of criteria they need to meet' (P5).

Proactive approaches focused on changing the frequency or nature of student feedback, for example, P1 planned 'to schedule weekly feedback meetings with all students on placement' whereas P2 considered implementing 'peer learning strategies for more effective student learning'. Participants further planned to acquire additional student learning resources. For example: 'develop tests more specific to workplace and student needs' and 'a reflection template' to facilitate students to engage in 'more structured and insightful reflection' (P3).

Develop Effective Strategies to Manage Challenging Situations

Participants' goals also focused on preparing for challenging situations. Two participants intended to review workshop strategies for initiating conversations with students who were underperforming (P1, P6). Another intended to increase familiarity with university resources and develop 'a set process for addressing concerns 'with students' (P7).

Engage and Reflect on Diverse Supervisory Experiences

Participants identified supervisory experience with 'different year levels/different unis' as helpful for supervisory development (P5). Reflection was a key goal for P8 who planned to seek advice from the university regarding different supervisory styles as well as 'to receive feedback from the students at the end of block placement and identify three goals to improve my supervision style'. Another participant recognised that challenging situations offer learning opportunities and decided to 'keep a diary that outlines [positive] outcomes in challenging situations - things that work & ways they have worked' (P6).

Post Workshop Questionnaire: Implementing Change from Workshop to Workplace

Three participants completed the four-month follow-up questionnaire (P2, P9 and P10).

These CEs identified post-workshop outcomes for CEs, students, and their clients/patients. [Table 3](#) compares participants' goals, learning outcomes and factors influencing knowledge translation. While the response rate constrained planned analysis, the participants' responses are presented as exemplars of the nature of data regarding goal attainment and implementation experiences that can be gathered using this follow-up approach.

Table 3

Clinical Educators' Workshop Outcomes

	Participant 9	Participant 10	Participant 2
CE experience	0-2 yrs, 5-9 students	3-5 yrs, 25+ students	0-2 yrs, 25+ students
Experienced challenging situation post workshop?	No	Yes	Yes
Goal 1 Focus	Continue professional development- mental health	Undertake proactive approaches to facilitate student learning- outline expectations in group meetings	Undertake proactive approaches to facilitate student learning- develop peer learning strategies
GAS Rating*	-2	+1	+2
Goal 2 Focus	Continue professional development- disability	Undertake proactive approaches to facilitate student learning- discuss expectations with individual students	Undertake proactive approaches to facilitate student learning- set clear expectations
GAS	-2	-1	0
Goal 3 Focus	Continue professional development- cultural and linguistic diversity	Undertake proactive approaches to facilitate student learning- develop learning materials	Undertake proactive approaches to facilitate student learning- develop reflective template
GAS	-2	0	+1
Facilitators	Personal interests	Forward planning and goal-oriented practice	External support from manager and university
Barriers	1. Time constraints 2. Lack of opportunity in the workplace	1. Time constraints 2. Competing deadlines 3. Personal issues	1. Student behaviours 2. Inexperience to guide students 3. Emotional burdens

Outcomes for educator, students, clients	Educator: developed more holistic approach Students: focused more on learning than marks Clients: not identified	Educator: not identified. Students: improved learning through regular discussions and additional resources Clients: improved outcomes	Educator: identified CE resources Students: faster improvement and achieved more learning outcomes Clients: better treatment
Future goals	1. Continue learning how to support students with disability/ mental health issues	1. Increase peer learning opportunities. 2. Develop time management strategies	1. Continue previous goals; 2. Develop strategies to manage stress and avoid burnout.
Strategy to achieve future goals	1. Complete CPD programs (identified at workshop)	1. Communication with colleagues and students regarding peer learning 2. Read about peer learning	1. Revise current tasks (identified at workshop) 2. Manage work-life balance

Footnote:

* GAS Ratings: Perceptions of goal achievement

+2 much more than expected

+1 somewhat more than expected

0 expected level

-1 somewhat less than expected

-2 much less than expected

P9 Learning focussed: a holistic perspective of educator role

P9 focussed on goals developing CE knowledge and skills for working with students with specific learning needs and reported GAS ratings of -2 (much less than expected) for all three goals. Limited time and workplace support were identified barriers to achieving workshop goals. Nevertheless, P9 adopted 'a more holistic perspective on different factors that contribute/ effect(sic) learning and I ... see my role as one to support and guide learning, not just to aim for a "pass" mark.' With the shift to a more holistic educational focus, P9 reported that this change in practice enabled students to place greater value on the learning process during placements.

P10: Service focussed: educational resources to enhance client care

P10's workshop goals focussed on proactive approaches to facilitate student learning and P10 reported expected or higher than expected levels of goal attainment for two goals, which addressed developing placement resources and providing clear placement expectations during group learning sessions. However, P10 assigned a GAS rating of -1 (somewhat less than expected) for discussing expectations with individual students. P10 attributed a goal orientated approach to positive workshop outcomes. By implementing workshop goals, P10 provided students with additional learning resources and

opportunities for case discussion with perceived benefits for clients with language and literacy needs: 'Literacy outcomes in particular improved at... Public School.' However, P10 cited time constraints, competing deadlines, and personal issues as barriers to goal attainment.

P2: Task focussed: Efficient skill development

P2's goals focussed on enhancing proactive supervisory strategies. P2 reported attaining all three goals, rating GAS 0 (expected level) for setting clear expectations on day one of placement, GAS +1 for developing a reflection template and GAS +2 for developing peer learning strategies. P2 identified workplace and university support as key facilitators for 'guidance on how to implement goals'. Yet, P2 reported feeling 'quite shocked when I have to confront students about certain behaviours' and when students demonstrated 'very emotional responses' during feedback sessions. Nonetheless, with awareness of and access to more clinical education resources and coping strategies, P2 implemented task-based learning and reported students' skills progressed faster during post-workshop placements.

Discussion

This proof-of-concept study explored how reviewing post CPD workshop goal development and implementing follow up measures can inform understanding of how CEs translate knowledge and enhance their supervisory practices within the workplace. Findings suggest that this approach to workshop evaluation can enhance understanding of learner outcomes and future needs.

Insights into Planning Change: Workshop to Workplace Goal Statements

Analysis of post workshop goals suggests that CEs adapted workshop knowledge in forming context-specific goals to address future supervisory challenges. The nature of the learning goals often reflected workshop design features and content. For example, students with mental health issues and from culturally and linguistically diverse backgrounds were featured in workshop case studies and then in post workshop learning goals. This is useful in informing future CPD needs because it was somewhat surprising to find these topics included in future goal setting. Developing culturally safe or inclusive practices are already priority areas to improve quality of healthcare ([Australian Institute of Health and Welfare, 2021](#)) and would likely already be part of other workplace education programs. However, participants identified a need for CPD specific to clinical education.

Reviewing workplace goals also drew attention to areas CEs did not identify as learning needs despite workshop content. In this study, although workshop activities highlighted knowledge, skills, or attributes of CEs as relevant factors to consider in challenging situations, only one participant's goal reflected personal attributes. This provides new insights into participants and potential questions for exploration that may not have otherwise been considered. For example, given previous studies report CEs rarely identify personal attributes as a focus for change ([Brown, 1981](#); [Gibson et al., 2019](#)), is it therefore possible that CEs' constructed knowledge without altering their fundamental beliefs (e.g., students are the core 'problem' rather than challenging situations being multi-factorial)? This then could lead to future support strategies for CEs to promote their personal growth. Our findings suggest that reviewing post-workshop goals provides a useful mechanism to better understand the current and future learning needs of workshop attendees.

Insights into Implementing Change: Post workshop Questionnaire

Information gathered through the follow up approach used in this proof-of-concept study highlights variation in CE translation of knowledge and perceived levels of goal achievement: Participant P9 did not achieve planned goals, whereas P2 and P10 achieved two or more goals. Information from this sample provides impetus for future studies that could use the same approach with a larger sample, and additionally conduct in depth exploration of contributing factors to differences between participants' perceived learning outcomes. For example, P9's goals related solely to broader knowledge acquisition, whereas the other two participants focussed on specific supervisory skills. Previous research suggests goals associated with clear intention and specific standards are more likely to direct changes compared with vague and broad goals ([Curtis et al., 2017](#)). Hence, workshop designers could consider options for

attendees similar to P9 who may benefit from supplementary approaches to support knowledge translation, for example, learning from a workplace mentor or community of practice. Further, P2 and P10 reported that enhancing supervisory processes benefited student learning and client care in their workplaces. Goals that were highly relevant to educators' situations post-workshop may have provided a strong incentive to overcome reported barriers in this and previous studies, including insufficient time and heavy workload (Tai et al., 2016). Follow up measures also highlighted qualitative post-workshop changes that may not have been captured in other evaluation methods. For example, while P9 perceived low levels of goal attainment, this participant reported positive post-workshop changes; developing a 'holistic' approach that focussed on students' learning processes. P2 perceived high levels of goal attainment yet this educator experienced post-workshop challenging situations as emotionally burdensome. By tracking goal attainment and influencing factors, this novel approach to evaluation enables workshop designers to consider a range of modifications or additions to CPD programs to enhance knowledge translation and greater transformation in their workshop attendees.

Overall, findings in this proof-of-concept study suggest goal setting could be an important design feature of clinical education workshops to directly support knowledge translation as well provide insights for those evaluating workshop outcomes. For example, from the preliminary outcomes in this study, we would suggest to our workshop facilitators that CEs may need additional time and support to reflect on individual professional needs and construct realistic goals that encompass and consider the impacts of educator and workplace factors. Strategies to enhance educators' participation in goal setting may also include opportunities for peer sharing and feedback via small group discussion or shared online documents.

While post-workshop goal setting provides meaningful insights into planned educational practice change, this proof-of-concept study suggests it is important to explore how goals are implemented in the workplace and whether practice change achieves positive outcomes for educators and students. We experienced challenges obtaining follow up data through an anonymous survey and have considered whether supplementary activities may be needed to enhance knowledge translation. For example, communication from the facilitators post-workshop to reflect upon goal attainment and to re-engage with the university if further support is needed may facilitate and maintain post-workshop practice change. CEs could also be encouraged to consider participating in post-workshop peer support to manage factors impacting goal implementation.

The validation of robust outcome measures to provide insights into the translation of knowledge from clinical education workshops remains a priority for future research. Our follow up approach using goal attainment and survey questions may provide authentic outcomes that complement CEs perceptions of confidence and insights from existing approaches such as interviews, surveys, and focus groups (Attrill et al., 2020; Steinert et al., 2016).

Limitations

Participants in this study comprised one third of educators attending the workshop and a small sample of three participants completed the follow up questionnaire. While these participants' experiences have informed our understanding of the complexity of the process and outcomes when these individuals translated their knowledge, a larger study would aid transferability to other individuals or broader educational contexts. This study approach relied on CE's self-reported workshop outcomes on their own supervisory practices as well as the impact on students or their patients/ clients. Those implementing similar measures would need to consider the possibility that CE perceptions may under- or over-estimate the impact of workshop learning and practice change on other stakeholders such as students or patients/ clients. The sustainability of reported post-workshop behavioural changes as well as shifts in the culture of CE workplaces is also not explored in this approach.

Conclusion

Exploring CE goal creation and tracking goal attainment can inform understanding of knowledge translation and the impact of CPD workshops for CEs. Our study showed that CEs immediate

post-workshop goals predominantly focused on acquiring knowledge on how to effectively support students who presented with complex learning needs. CEs were also motivated to develop proactive educational approaches and to foster students' critical reflection. However, development of CE's personal attributes was rarely identified in post workshop goals, and this is an area that may warrant more attention in CPD workshops. In relation to medium term CE outcomes, some CEs perceived they attained their learning goals and achieved practice transformation. However, others reported that translation of workshop goals to workplace practice was challenged by individual CE, student and contextual factors. A formalised process for post-workshop follow-up may encourage CEs to persist with knowledge translation related to their clinical education goals despite workplace challenges. This study provides proof of concept data to support future workshop evaluations using similar approaches to guide and enhance the development of CEs in the workplace.

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Appendix A: Goal Document Exemplar

Please detach this page and hand in separately as instructed by the workshop facilitators.

What are 3 SMART goals for you to work on to improve your skill in clinical supervision?

These could be new techniques to adopt or focused on behaviours you want to reduce.

An example of a SMART goal might be “To attend course focused on managing mental health issues by [month, year]”

Goal 1:

Goal 2:

Goal 3:

Appendix B: Workshop to Workplace: Online survey questions

About you

1. Please enter the research code you were sent via email
2. What is your profession (drop down list)?
 - Diagnostic Radiography
 - Exercise Physiology
 - Occupational Therapy
 - Physiotherapy
 - Rehabilitation Counselling
 - Speech Pathology
3. How would you best describe your workplace? (tick all that apply)
 - Public
 - Private
 - Hospital
 - Outpatient/ Clinic based service
 - Community based
 - Home based
 - Other (please detail in comments)

Your previous students

4. How many years have you been supervising students?
 - 0-2
 - 3-5
 - 6-9
 - 10+
5. Approximately how many students have you previously supervised?
 - 1-4
 - 5-9
 - 10-15

- 16-24
- 25+

6. Have you supervised any students since the workshop?

- Yes / no / comments
- If yes- continue to next question
- If no- survey ends

7. Did you experience any challenging situations involving:

- You as clinical educator- yes/ no, please explain
- A student- yes/ no/ please explain
- Environmental factors- yes/ no/ please explain

Your goals

The next few questions focus on your progress on your SMART goals you set at the workshop (these were attached to the email inviting you to complete this survey)

- Goal 1.

8. Please summarise the focus of your goal in a few words so we can match up to your plan

9. Please rate your progress using the Goal Attainment scale (GAS)

	Rating description
-2	Much less than expected
-1	Somewhat less than expected
0	expected level of achievement
1	somewhat more than expected
2	+2 Much more than expected

Comments on this rating

- Goal 2.

10. Please summarise the focus of your goal in a few words so we can match up to your plan

11. Please rate your progress using the Goal Attainment scale (GAS)

	Rating description
--	--------------------

-2	Much less than expected
-1	Somewhat less than expected
0	expected level of achievement
1	somewhat more than expected
2	+2 Much more than expected

Comments on this rating

- Goal 3.

12. Please summarise the focus of your goal in a few words so we can match up to your plan

13. Please rate your progress using the Goal Attainment scale (GAS)

	Rating description
-2	Much less than expected
-1	Somewhat less than expected
0	expected level of achievement
1	somewhat more than expected
2	+2 Much more than expected

Comments on this rating

14. What do you think helped your progress on these goals?

15. What do you think hindered progress on these goals?

16. Please describe any other changes in your supervisory practice (not covered by the goals above) attributable to the workshop you attended

Outcomes

17. What have been outcomes of your skill development (or not) since the workshop for:

- Student(s) you have supervised
- Patients/ Clients/ Services provided
- Yourself
- Anything else not covered above?

Future goals

18. What areas of your supervisory skills do you think you'd like to focus on in the next 6 months?
19. What do you need to help you progress in this area?
20. If you listed training as one of your needs, please list any topics of interest below