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Peer Coaching as a Professional Development Tool for Online Teaching

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ABSTRACT

Peer coaching has emerged as a dynamic and context-sensitive approach to faculty development in online higher education, offering instructors opportunities to collaboratively reflect on and refine their pedagogical practices. This enhanced peer coaching model integrates structured observation cycles, targeted feedback protocols, and guided reflective dialogues, all facilitated through digital platforms that support asynchronous and synchronous engagement. In this study, forty-five online instructors from three distinct universities participated in a six-week peer coaching program designed to address key dimensions of online teaching: course design, learner engagement, technological integration, and assessment strategies. Data collection combined pre- and post-intervention surveys assessing teaching self-efficacy and digital instructional competence, analysis of recorded teaching sessions annotated by peers, reflective journals, and thirty in-depth interviews. Quantitative analyses revealed statistically significant improvements in self-reported confidence and competence across multiple teaching domains, with particularly large gains in using interactive technologies and facilitating online discussions. Qualitative findings elucidated the mechanisms underlying these gains: structured goal setting enhanced focus; the use of time-stamped video comments fostered precise, actionable feedback; and reflective debriefs deepened metacognition. Participants valued the collegial support and accountability that peer coaching engendered, noting that it mitigated isolation and catalyzed innovation. However, logistical challenges—such as scheduling, variable coaching proficiencies, and platform usability issues—highlight the need for robust institutional support and coach preparation.

KEYWORDS

Peer Coaching, Online Teaching, Professional Development, Reflective Practice, Instructional Efficacy

INTRODUCTION

The accelerating shift toward online education across higher education institutions worldwide has underscored the critical need for effective, scalable, and sustainable faculty development models. Traditional professional development approaches—often characterized by one-off workshops or webinars—tend to lack ongoing support, personalization, and mechanisms for deep reflective practice. Peer coaching, rooted in collaborative inquiry and reflective dialogue, offers a promising alternative, leveraging the collective expertise of instructors to enhance teaching quality through mutual observation, feedback, and co-constructed problem-solving. Unlike top-down consultation or formal mentoring, peer coaching situates instructors as both learners and coaches, fostering a bidirectional exchange of insights and fostering communities of practice.

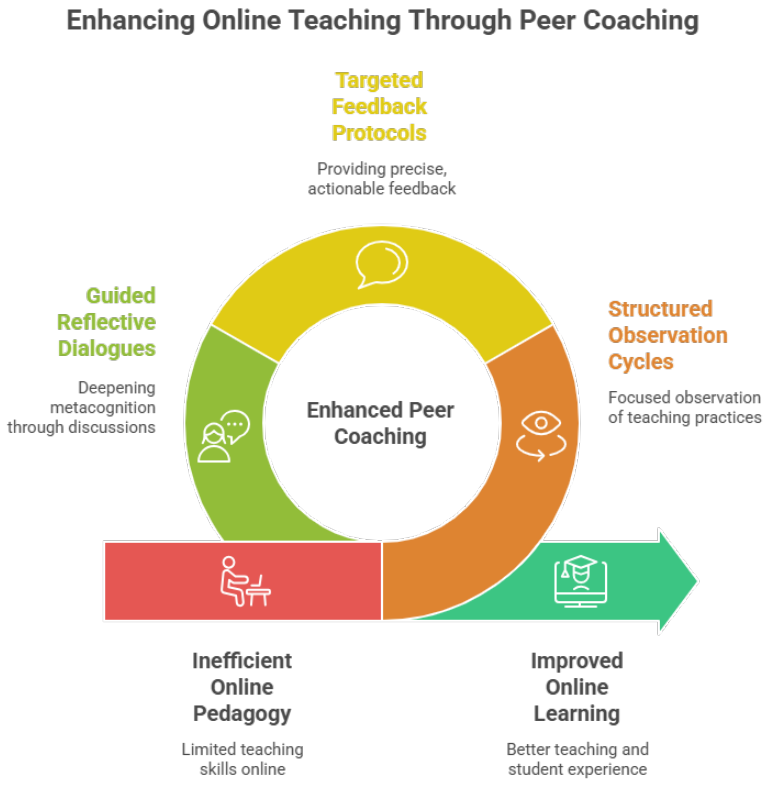

Figure-1.Enhancing Online Teaching through Peer Coaching

This manuscript expands upon existing scholarship by presenting an enhanced peer coaching framework tailored for online teaching contexts. It situates peer coaching within theoretical foundations—social constructivism, reflective practice, and communities of practice—while addressing practical considerations of digital observation and feedback. The study explores how structured coaching cycles, underpinned by goal-setting, video-based observations, and guided debrief protocols, can systematically develop instructors' competencies in course design, student engagement, technology utilization, and assessment. Moreover, it examines how the affordances of digital platforms (e.g., time-stamped annotations, asynchronous reflection forums) can be harnessed to overcome challenges of geographic dispersion and asynchronous schedules.

The primary objectives of this research are threefold: (1) to identify which peer coaching activities and structures most effectively support online teaching enhancement; (2) to measure the impact of participation in a structured coaching program on instructors' self-efficacy and digital pedagogical competence; and (3) to uncover contextual factors—both enablers and barriers—that influence the implementation and sustainability of peer coaching initiatives. By integrating quantitative and qualitative methods, this study provides a comprehensive evaluation of peer coaching as a professional development tool, offering actionable insights for program designers, institutional leaders, and instructional designers committed to elevating the quality of online education.

LITERATURE REVIEW

Peer coaching's theoretical lineage extends to Vygotsky's social constructivism, which emphasizes the co-construction of knowledge through social interaction. In this view, learning transpires within the Zone of Proximal Development (ZPD), where more capable peers scaffold one another's growth. Clarke and Hollingsworth's Interconnected Model of Professional Growth further

explicates how reflection, enactment, and feedback form cyclical drivers of teacher learning. Central to peer coaching is the notion that reflective dialogue—structured conversations about practice—catalyzes metacognitive awareness and professional agency.

Figure-2.Peer Coaching Cycle for Faculty Development

Empirical research in K–12 settings has long demonstrated that coaching cycles—comprising goal setting, observation, feedback, and reflection—yield measurable improvements in instructional methods and student outcomes. Showers and Joyce's seminal work delineated how collaborative coaching fosters skill transfer and sustained practice change. Yet, translating these insights to higher education, particularly in fully online contexts, presents unique challenges and opportunities. Higher education faculty often operate as autonomous experts, with limited institutional structures for peer collaboration. Online teaching further complicates observational practices, as traditional classroom walkthroughs give way to screen recordings and asynchronous artifacts.

Recent studies highlight the potential of digital tools to facilitate peer coaching in virtual environments. Video capture platforms enable coaches to leave granular, time-stamped annotations on recorded lectures, while collaborative document environments support co-analysis of lesson plans and assessments. Trust and Whalen's research underscores how professional learning networks (PLNs) and online communities can scaffold continuous learning and technical mastery. However, challenges persist: coaches and coachees frequently report difficulties aligning schedules for synchronous observation, disparities in technological proficiency can skew power dynamics, and insufficient training for coaches can limit the specificity and utility of feedback.

Furthermore, the affective dimension of peer coaching—emotional support, collegial validation, and reduced isolation—emerges as a critical factor in online faculty development. Qualitative inquiries reveal that instructors value non-evaluative, supportive feedback

spaces where experimentation is encouraged. Yet, institutional buy-in remains inconsistent; programs with strong administrative endorsement and clear structures report higher participation and impact. Despite these promising findings, there is a dearth of rigorous mixed-methods evaluations that connect coaching activities to quantifiable changes in self-efficacy, digital competence, and instructional innovation over sustained periods.

This study seeks to fill these gaps by implementing and examining a structured, technology-enhanced peer coaching program across three universities, assessing short-term outcomes and exploring mechanisms of change. It draws on the literature to design coaching protocols that balance structure with flexibility, integrate digital affordances, and foreground reflective practice as the engine of professional growth.

METHODOLOGY

Research Design and Participants

This investigation employed a convergent parallel mixed-methods design to capture the multifaceted effects of peer coaching on online teaching. Forty-five tenure-track and adjunct faculty members teaching fully online courses at three accredited universities were recruited via departmental calls and informational webinars. Participants represented diverse disciplines—humanities, social sciences, STEM, and professional programs—and varied levels of online teaching experience. All volunteers completed informed consent processes and agreed to adhere to program protocols.

Enhanced Peer Coaching Framework

The coaching intervention spanned six weeks and comprised three core cycles: (1) collaborative goal setting and planning; (2) observation and feedback; and (3) reflective synthesis. Prior to initiating cycles, participants attended a two-hour virtual workshop covering: the theoretical basis of peer coaching; the SMART goal framework; effective feedback strategies (e.g., "I-We-You" progression); and technical training on video recording, annotation tools, and shared document platforms.

- **Cycle 1: Goal Setting and Planning**
  Each coaching pair conducted a joint session to articulate specific, measurable targets for instructional improvement. Goals focused on areas such as enhancing discussion facilitation, integrating formative assessments, or leveraging multimedia elements.
- **Cycle 2: Observation and Feedback**
  Coachees recorded a live online teaching session using a standardized protocol. Recorded videos were uploaded to a secure platform enabling coaches to insert time-stamped comments, categorize feedback (e.g., pedagogy, technology, student engagement), and suggest alternative strategies.
- **Cycle 3: Reflective Synthesis**
  Following observation, coaches and coachees convened for debriefs—either synchronously or asynchronously via shared documents—to review annotated videos, discuss insights, and refine action plans. Participants maintained individual reflective journals to capture evolving understandings and future action steps.

Data Collection Instruments

- **Surveys**: Pre- and post-program instruments measured teaching self-efficacy (adapted from Tschannen-Moran & Hoy, 2001) and digital instructional competence (aligned with the European DigCompEdu framework).
- **Observation Artifacts**: Annotated video recordings and coaching logs documented feedback content, strategies proposed, and duration of sessions.
- **Reflective Journals**: Participants submitted weekly reflective entries, guided by prompts exploring what was learned, challenges encountered, and planned adjustments.
- **Interviews**: Semi-structured interviews with thirty participants (balanced across institutions and disciplines) probed lived experiences, perceived benefits, and contextual barriers.

Data Analysis

Quantitative survey data were analyzed using paired-samples t-tests to determine pre-post changes in self-efficacy and digital competence scores. Effect sizes (Cohen's d) were calculated to gauge practical significance. Qualitative data—including interview transcripts, reflective journals, and coaching logs—underwent thematic analysis following Braun and Clarke's six-phase procedure: familiarization, initial coding, theme development, theme review, theme definition, and reporting. Coding triangulation between two researchers enhanced reliability, and member checking with select participants validated thematic interpretations.

RESULTS

Quantitative Outcomes

Of the forty-five participants, forty-two completed both pre- and post-surveys, yielding a 93.3% response rate. Self-efficacy scores increased from a mean of 3.2 (SD = 0.6) pre-intervention to 4.1 (SD = 0.5) post-intervention ($t(41) = 7.82$, $p < .001$, $d = 1.21$). Digital instructional competence rose from 2.9 (SD = 0.7) to 3.8 (SD = 0.6) ($t(41) = 6.94$, $p < .001$, $d = 1.07$). These large effect sizes indicate substantial improvements in participants' confidence and ability to design and deliver online learning experiences.

Qualitative Themes

1. **Deepened Reflective Practice**
   Participants consistently reported that reviewing recorded sessions facilitated heightened self-awareness. Instructors noted newfound insights into their pacing, use of wait time, and verbal cues, which led to deliberate modifications in subsequent sessions. Reflective journals revealed an iterative cycle of noticing, planning, and experimenting that extended beyond the formal coaching sessions.
2. **Adoption of Innovative Strategies**
   Coaches and coachees exchanged practical techniques—such as employing breakout rooms for problem-based learning, embedding interactive polls to gauge understanding, and crafting multimodal explanation videos. Many participants integrated these strategies into their courses, noting positive student feedback and increased engagement analytics.
3. **Strengthened Collegial Bonds**
   The non-evaluative, reciprocal nature of the coaching relationships fostered a sense of community and mutual accountability. Several instructors formed ongoing support duos or triads, scheduling regular check-ins post-study to sustain momentum and explore emerging teaching challenges.

4. **Implementation Barriers**
   Time constraints emerged as a pervasive obstacle, with participants juggling coaching activities alongside heavy teaching loads and service commitments. Technical glitches—such as upload errors or incompatible video formats—occasionally disrupted observation workflows, necessitating workaround solutions. Additionally, novice coaches sometimes struggled to provide targeted feedback, defaulting to generic praise rather than constructive critique.
5. **Institutional Context Matters**
   Where departmental leadership explicitly endorsed coaching—allocating release time or acknowledging participation in evaluation criteria—engagement and outcomes were stronger. Conversely, in units where coaching was perceived as voluntary "extra work," scheduling conflicts and lower completion rates occurred.

CONCLUSION

The findings of this study underscore peer coaching's transformative potential as a professional development mechanism in online higher education, offering a multifaceted pathway to enhance both instructor capabilities and institutional teaching cultures. Quantitative data demonstrated robust gains in self-efficacy and digital competence—key precursors to sustained instructional innovation—while qualitative insights revealed how the coaching process catalyzes reflection, experimentation, and collegial solidarity. Participants described a marked shift from isolated, task-oriented teaching toward a more reflective stance, engaging in deliberate cycles of observation, feedback, and iterative refinement.

Crucially, the use of video-based observations with time-stamped annotations emerged as a linchpin of this model. By enabling coaches to pinpoint specific moments—whether an effective probing question or a hesitancy around technological tools—feedback transcended generic praise and became deeply actionable. Coachees, in turn, reported heightened agency: empowered to test new strategies, monitor their impact, and share outcomes with their peers. This iterative loop of practice and reflection aligns with adult learning theories emphasizing self-directed growth and continuous improvement.

Equally significant was the affective dimension of peer coaching. Faculty often experience online teaching as a solitary endeavor; the peer coaching framework fostered empathy, reduced isolation, and cultivated a sense of shared purpose. In several cases, coaching pairs evolved into ongoing professional partnerships, extending beyond the study period to co-design courses, co-facilitate workshops, and co-author scholarly outputs. Such emergent communities of practice not only reinforce individual learning but also lay the groundwork for institution-wide cultures that value collaboration and reflective inquiry.

Nevertheless, the study highlights that peer coaching's promise is contingent on well-designed support structures. Dedicated time allocation—whether through workload adjustments, stipends, or formal recognition in promotion criteria—signals institutional commitment and alleviates the perennial barrier of competing responsibilities. Comprehensive coach preparation, encompassing both pedagogical feedback techniques and technical fluency with recording tools, ensures that all participants can engage effectively, regardless of prior experience. Investing in user-friendly, stable platforms for video capture and annotation mitigates technical disruptions that could otherwise undermine coaching efficacy.

In sum, enhanced peer coaching represents a scalable, cost-effective model for professional development in online education. By intertwining structured protocols with flexible digital affordances, it cultivates reflective practitioners who continually evolve their teaching repertoires. As higher education institutions seek to sustain high-quality online offerings, embedding peer coaching within

broader faculty development strategies can yield dividends in instructional excellence, collegial cohesion, and ultimately, student learning outcomes.

SCOPE AND LIMITATIONS

Scope

This study's scope is deliberately centered on fully online undergraduate and graduate courses within three geographically and disciplinarily diverse higher education institutions. By focusing on fully online modalities, the research captures the unique affordances and challenges of digital instruction—ranging from asynchronous discussion facilitation to multimedia integration—without conflating these dynamics with in-person or blended environments. The enhanced peer coaching framework implemented here targets four core domains of online pedagogy: course design, learner engagement, technological integration, and assessment strategies. While these domains encompass a broad swath of instructional practice, they do not exhaustively represent all facets of online teaching (e.g., accessibility design, cross-cultural communication) and thus delimit the study's applicability to contexts prioritizing these primary dimensions.

Furthermore, the six-week duration of the coaching intervention provides a concentrated window into short-term shifts in educator confidence and competence. This timeframe aligns with typical academic mid-semesters, facilitating integration with existing course schedules but inherently limiting exploration of longitudinal impacts, such as sustained skill retention, evolution of coaching partnerships over multiple terms, or downstream effects on student performance metrics. The study's emphasis on peer-to-peer interactions—as opposed to top-down mentorship or external coaching—highlights the potential for grassroots, faculty-led development but also excludes comparative analyses with other professional development modalities.

Limitations

Several limitations temper the generalizability and interpretive breadth of these findings. First, the volunteer sample introduces self-selection bias: instructors motivated to join a peer coaching program may differ systematically in openness to innovation, reflective orientation, or baseline technological confidence compared to the broader faculty population. This predisposition could inflate observed efficacy gains and obscure challenges that less intrinsically motivated instructors might encounter.

Second, the reliance on self-reported survey measures for teaching self-efficacy and digital competence, while validated in prior research, is subject to social desirability and response-shift bias. Coaches and coachees may overestimate improvements due to heightened awareness of study aims or a desire to present themselves favorably. Triangulation with objective teaching artifacts—such as independent course evaluations, student performance data, or third-party observations—would strengthen claims of actual practice change.

Third, the technical infrastructure and institutional culture varied across the three participating universities. While this diversity offers a realist texture to the findings, it also means that coaching experiences were uneven: participants at institutions with robust instructional design support and enterprise-level video platforms reported smoother implementations than those contending with ad-hoc software or limited IT assistance. Consequently, outcomes may reflect both the coaching framework and the surrounding ecosystem of resources and policies.

Finally, the study's qualitative component—though rich in thematic depth—depends on interviews and journals from a subset of participants, which may privilege more articulate or engaged voices. Coaches less comfortable with reflective writing or expressing challenges candidly might have under-represented experiences and insights.

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