

Virtual mentoring and coaching for school leaders participating in virtual professional learning communities

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Abstract

Purpose – This study was conducted in the United States of America to identify what practices virtual mentor-coaches perceived to be effective in virtual mentoring and coaching (VMC) within virtual professional learning communities (VPLCs). The authors also sought to determine the ways in which virtual mentor-coaches provided VMC for school leaders within VPLCs.

Design/methodology/approach – The authors used a phenomenological approach in our research, describing the lived experiences of practicing virtual mentor-coaches as they engaged in VMC. Data analysis included video analysis and systematic coding of interview data.

Findings – An in-depth analysis of interview and video data showed that virtual mentor-coaches support school leaders in developing and transforming school leaders' leadership for building teachers' instructional capacity. The authors identified a VMC process model within VPLCs, including four steps as follows: (1) presentation, (2) collaboration, (3) reflection and (4) action plan.

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Practical implications – VMC for school leaders participating in VPLCs is regarded as a transformative model which provides encouragement, reflection and support for instructional leadership actions.

Originality/value – Key steps and components of an effective VMC highlighted in the current research offer practical guidance for future virtual mentor-coaches in conducting and implementing VMC within VPLCs.

Keywords Virtual professional development (VPD), Virtual mentor-coaches, Virtual professional learning communities (VPLCs), Virtual mentoring and coaching (VMC), School leaders, Massive open online professional individualized learning (MOOPIL)

Paper type Research paper

Introduction

School principals in the United States of America are now charged with expanded instructional leadership on their campuses (National Policy Board for Educational Administration, 2015). Instructional leadership is generally equated to principals leading curriculum development and enhancing teachers' pedagogical practices or capacity. Such leadership is among the most important factors influencing school effectiveness (Leithwood *et al.*, 2008; Murphy *et al.*, 2017). To enhance leadership for USA schools, the National Policy Board for Educational Administration (2015) was developed to hold higher levels of accountability for rigorous instruction and student achievement. In particular, school leaders' instructional leadership has been associated with positive student achievement (Alam and Ahmad, 2017; Dutta and Sahney, 2016; Karadag, 2020) and has emerged as a focal point in school leaders' professional development (PD) (Aas and Paulsen, 2019; Thessin, 2019).

One area of research targeting school leaders' leadership capacity is teacher mentoring and coaching (Hulsbos *et al.*, 2016; Zepeda *et al.*, 2014). Tong *et al.* (2015) introduced virtual mentoring and coaching (VMC) and argued that related literature on virtual or online mentoring/coaching is severely lacking. We also introduced and added virtual professional learning communities (VPLCs) to VMC for testing within the U.S. Department of Education Supporting Effective Educator Development Grant Program (SEED grant [#XXXX]), which focused on Texas school leaders who serve a large number of English learners (noted in government documents as students who are designated with a home language other than English; however, we will use the term "emergent bilinguals (EBs)" in this paper) and economically challenged students (ECs; students defined as those who receive free or reduced lunches). The Texas Education Code (TEC) §29.08 designates at-risk students as those who are at risk of dropping out of school, a designation inclusive of EBs and ECs. Schools that serve EB and EC students, as well as students among the categories within TEC §29.08, are generally referred to as high-needs schools or as schools with high-needs students.

While traditional face-to-face (F2F) mentoring and coaching relationships typically are received positively and are related to improved leadership growth (Pariente and Tubin, 2021), inherent disadvantages include limited choices in a mentor or coach, as well as geographic and time constraints that can disproportionately affect individuals from high-needs schools (Johnston *et al.*, 2016). In response, VMC has grown as a viable alternative (Tong *et al.*, 2015); however, this area remains rather underexplored compared to F2F mentoring and coaching, especially regarding possible guidelines for successful VMC and positive outcomes for school leaders. Therefore, to offer some baseline information for guidelines, the purpose of our study was to determine how virtual mentor-coaches provide VMC for school leaders within VPLCs and to perceive the effectiveness of VMC within VPLCs.

Review of literature

In this narrative review (Davies, 2000), we attempted to be inclusive of any type of peer-reviewed research study, theoretical, prior reviews of online instruction or empirical studies.

The inclusion criteria consisted of both quantitative and qualitative studies from peer-reviewed journal articles within the time period 2002 to 2021. Studies published prior to 2002 were excluded since, based on our review of literature, any type of internet-based mentoring appeared and was defined in 2002 by Bierema and Merriam. The search included various disciplines via (1) university digital databases, including EBSCO, JSTOR, PsycInfo, (2) Google, (3) Bing, (4) National Center for Education Statistics, (5) Chronicle of Higher Education and (6) Education Week. We reviewed (1) F2F mentoring and coaching, (2) VMC and (3) VMC for school leaders.

Face-to-face (F2F) mentoring and coaching

Mentoring provides PD opportunities for practitioners, including school leaders. Coaching's contribution to supporting school leaders as they develop their instructional capacity in line with school instructional reforms cannot be overstated. Mentoring and coaching are two interrelated concepts, yet some differences remain. According to Irby (2012), "mentors can coach, but coaches hardly ever mentor" (p. 297). Irby further indicated that coaching focuses more on specific skill improvement and problem-solving, whereas mentoring is considered an ongoing process that helps mentees develop skills relevant to their life-long goals. Thus, we use the term mentor-coach and suggest that both mentoring and coaching are needed for administrators' success since coaches can become mentors over time.

Mentor-coaches, as Augustine-Shaw and Reilly (2017) suggested, embrace opportunities to reflect and empower school leaders by promoting self-reflection. They model instructional practices and ask school leaders questions that prompt self-reflection, create a strong support structure and raise leaders' consciousness about effective leadership. Sciarappa and Mason (2014) provided an example of this by examining the perceived efficacy of leadership mentoring, which suggested that mentoring is critical to the success of novice principals. In addition, Gray (2018) developed a leadership-focused mentoring and coaching model for educational leadership to prepare and sustain leaders for jobs in schools. The model promotes more experiential learning for aspiring leaders. Furthermore, Klar *et al.* (2020) have suggested leadership coaching to be instrumental in improving and developing rural school leaders' leadership capabilities. Nevertheless, coaching and mentoring relationships typically have been studied in F2F contexts.

While there is nothing inherently wrong with F2F mentoring and coaching, it can be restrictive. For example, geographical and financial barriers may prevent some school leaders from receiving these supports (Johnston *et al.*, 2016) or reduce the effectiveness of mentoring and coaching (Tahir *et al.*, 2016). To overcome these barriers, VMC has become a viable alternative for school leaders and offers unique opportunities to reach educational settings regardless of the location (Tong *et al.*, 2015); thus, VMC reinforces equitable practices of mentoring and coaching.

Virtual mentoring and coaching

VMC is the process of providing coaching and mentoring services through electronic means such as online conferencing, email and discussion boards as the main communication platforms to support practitioners, including school leaders (Tong *et al.*, 2015). Irby (2020) defined VMC as live, real-time observation and feedback to the participants; in that project, the virtual mentor-coach was not on site but observed the participants virtually via a live video feed and provided instantaneous feedback. Since the learning experiences are ongoing, school leaders can benefit from stronger levels of support virtually during their busy schedules rather than abbreviated F2F PD support and coaching. As technology improves, the dissemination of information to school leaders and educators as well as the

alignment of instructional priorities with professional responsibilities improves. As such, PD and technological improvement merge and work in harmony to produce an experience that leaders can adjust to their learning needs and schedules. [Sugar and van Tryon \(2014\)](#) indicated that leveraging F2F coaching as a type of PD has been limited because of expenses such as traveling to training venues. Importantly, VMC can deepen the pool of potential virtual mentor-coaches, increasing mentoring opportunities for underrepresented groups and individuals as well as bringing together and promoting diverse and varied experiences, cultures and ideas ([Chong et al., 2020](#); [Haran and Jeyaraj, 2019](#); [Neely et al., 2017](#)).

[Tong et al. \(2015\)](#) conducted Project English Language and Literacy Acquisition-Validation (U.S. Department of Education Grant XXXXX) that included live VMC for teachers across Texas, developing a cost-effective platform to strengthen and sustain VMC involving virtual mentor-coaches at the time of mentoring and coaching sessions. [Tong et al.](#) indicated a positive impact of tiered coaching support on the participants' fidelity of implementation. In addition, [Tong et al.](#) suggested that VMC must include (1) purposeful, supportive observation and feedback sessions with a follow-up session, (2) collaboration and community building, (3) time slots for reflection and practice and (4) appraisal and transformation during the mentoring and coaching sessions. However, further research is needed regarding ways to find high-quality VMC and reduce the cost of implementing effective mentoring and coaching models.

VMC for school leaders

The literature related to school instructional leadership supports mentoring and coaching as developmental tools; however, findings have stemmed largely from studies of F2F mentoring or coaching (e.g. [Barnett et al., 2017](#); [Service et al., 2018](#)). So far, few researchers have examined the role and outcomes of virtual, online or electronic mentoring and/or coaching in this area. Nevertheless, teachers, not principals, have been the target demographic of this community and research line in most studies. What *is* known could be applicable for principals and teachers; for example, competent virtual mentor-coaches share many of the same characteristics and behaviors as F2F mentors or coaches, such as good mentoring relationships, shared leadership and trustworthiness ([Irby et al., 2017](#)). However, there is an added level to becoming a competent virtual mentor or coach due to the very same characteristics that set VMC apart. Namely, virtual mentor-coaches must be able to exude trust, build effective relationships, communicate well and utilize other mentoring and coaching skills and strategies without the aid of traditional F2F settings (e.g. immediate feedback and non-verbal signals), as well as master the technologies used in the online mentoring relationship ([Kumar and Coe, 2017](#); [Kumar and Johnson, 2017](#); [Schichtel, 2010](#)). Nonetheless, there continues to be a paucity of research inclusive of investigations related to VMC for instructional leadership compared to F2F findings, but results suggest virtual coaching as an effective practice. One of the few related studies is that of [Ermeling et al. \(2015\)](#) in which they adapted an F2F program to a virtual coaching framework that supported instructional leadership development and efforts of principals and school leadership teams, revealing that virtual coaching was effective compared to previous F2F efforts, particularly for principals' instructional leadership growth.

Theoretical framework, purpose and research questions

We used the andragogy theory of adult learning originally promulgated by [Knowles et al. \(2015\)](#) and later clarified by [Merriam and Baumgartner \(2020\)](#). Merriam and Baumgartner offered new approaches to adult learning and the development of theory in adult learning

itself. We chose to use the assumption of adult learning that highlights specific features of the learning environment that contribute to advancing engagement of the adult participants, which accordingly improves the intended learning outcomes of specific learning environments. That assumption includes (1) building on the experiences of the adult learners, (2) listening to adult learners and acknowledging their contributions and (3) providing adult learners with opportunities to reflect on their learning (Knowles *et al.*, 2015; Merriam and Baumgartner, 2020); we agree with this assumption as we applied it to VMC. Indeed, these assumptions were used by the virtual mentor-coaches in this VMC study to facilitate leader learning and growth. We considered that leaders engaging with virtual mentor-coaches could build leadership capacity and develop leadership strengths. To this end, this study's purpose was to identify what virtual mentor-coaches perceived to be effective in the VMC within VPLCs and to determine the ways in which virtual mentor-coaches provided VMC for school leaders within VPLCs. To guide this research, we asked two research questions as follows:

- (1) What did virtual mentor-coaches perceive to be effective in the VMC within VPLCs?
- (2) In what ways did virtual mentor-coaches provide VMC for school leaders within VPLCs?

Methodology

Research context and design

This study, which received the university's Institutional Review Board (IRB) approval, was derived from the federally funded research and training grant (#XXXX) under the U.S. Department of Education SEED program, which focused on school leaders working in high-needs schools in Texas. The project incorporated multiple innovative approaches to developing school leaders, including training them to build their instructional capacity at the campus level.

We used a phenomenological approach (Brinkman and Kvale, 2015; Creswell and Poth, 2016; Lincoln, 2000; Smith *et al.*, 2009), which captures lived experiences through relevant and extensive interviews to determine experiences with a particular phenomenon under investigation. A phenomenological approach was adopted for this study as it enabled the exploration of virtual mentor-coaches' perceptions of the effectiveness of VMC within VPLCs.

Participants

Five virtual mentor-coaches with varying years of administrative experience participated in this study. Table 1 depicts their characteristics, illustrating a diverse population of virtual mentor-coaches with a varied range of experience and responsibilities. Two virtual mentor-

	Sex	Race/ethnicity	Degree	Years of experience as an administrator	Years of experience as a mentor and/or coach
Joan	Female	White	PhD	40	20
Liliana	Female	Latina	Master	34	20
Anna	Female	Latina	EdD	24	5
Amanda	Female	Latina	Master	9	2
John	Male	Black	Master	14	12

Table 1.
Virtual mentor-coaches' profile summary

Note(s): In this study, we use the racial or ethnic terms which individuals use to reference themselves. We acknowledge that there is a mix of racial and ethnic terminology, but that is what the individuals call themselves, and we wish to be respectful of the participants

coaches worked as administrators for more than 30 years, and one reported over 20 years of administrator experience. The majority of participants (four of five) were female. Their education ranged from a master's degree to four doctoral degrees in educational administration. With 59 total years of experience as coaches, their range of coaching experience was from 2 to 20 years (12 years average). They worked under the supervision of a lead mentor-coach with whom they shared their concerns and challenges during the sessions. Pseudonyms were used to ensure the virtual mentor-coaches' anonymity.

The school leaders with whom the virtual mentor-coaches worked are inextricably tied to the study, though they are not the focus of the research questions. There were 40 leaders from the elementary school level in 18 districts across Texas involved in the VMC. Ages were 25–55, with 48% ($n = 19$) being White, followed by Latino/a (22.5%, $n = 9$), Black/African American (20%, $n = 8$), Asian (7.5%, $n = 3$) and other (3%, $n = 1$). In terms of experience, 57.5% of leaders ($n = 23$) had less than 5 years as an administrator and 42.5% ($n = 17$) reported more than 5 years in the position.

Description of intervention

We conducted virtual professional development (VPD) via the VPLCs with virtual mentor-coaches. The goal of VMC was to enhance the leadership capacity of participating school leaders by providing them with two research-evidenced-based instructional tools that they could use at their schools to improve their teachers' instructional capacity. Those tools were (1) Massive Open Online Professional Individualized Learning (MOOPIL) and (2) VPLC.

We provided high-quality and sustained VMC through VPLC during the eight-week time period for school leaders. Through LogMeIn GoToMeeting, which is online video conferencing software, the virtual mentor-coaches led the school leaders in a discussion during the VPLC and MOOPIL modules and activities. Specifically, they developed an action plan to work with the leaders, which targeted the improvement of instructional quality to promote learning. They developed strategies to increase success in a virtual environment by providing clear guidance and communication so that the leaders knew what was expected of them during their participation in MOOPILs used in VPLCs. Strategies included reflective, personalized and experience-based content that was relevant and personal to the school leaders.

The virtual mentor-coaches provided guidance as they worked through the content of the MOOPILs with their mentees. The VPLCs were designed to address prevailing issues in developing the leadership capacity of school leaders, and the virtual mentor-coaches used this as a leadership development tool. As displayed in [Figure 1](#), the virtual mentor-coaches coached the leaders through VPLCs, with the following structured mentoring-coaching formulaic outline applied in each MOOPIL – Leading Question, Engagement, Applied Research, Discussion, Example(s), and Reflection, known as L.E.A.D.E.R. (Irby, 2020) – which was flexible to suit the needs of school leaders. The content/topics in MOOPILs used in VPLCs were (1) developing a realistic and actionable school vision, (2) evaluating and

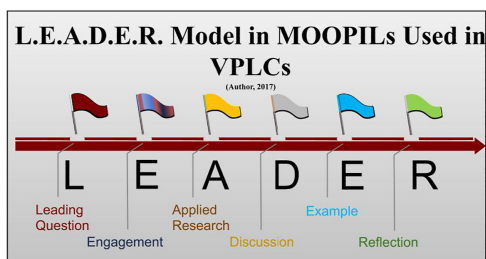


Figure 1. The L.E.A.D.E.R model in MOOPILs used in VPLCs

interpreting student performance, (3) creating a collaborative working environment, (4) building a cultural/ethnic/socioeconomic responsive teaching and learning environment, (5) supporting EBs, (6) multi-task management and (7) teacher supervision.

The L.E.A.D.E.R. model applied to all VPLCs is explained as follows. First, the *Leading Question* helped the virtual mentor-coaches to focus the leaders on the topic with a deep, probing question. Second, *Engagement* gave the virtual mentor-coaches an example, a video or a visual representation of the issue/topic. Next, *Applied Research* provided scientific research-based evidence that supported the MOOPIL topic and was critical for the mentor-coach to bring this into the discussion. Without the applied research in a VPLC (or Professional Learning Community/ies [PLCs]), the discussion is not enriched; rather, it may be only a rehash of experiences. Experiences can assist in learning and are important, but new informational bases need to be incorporated into the mentoring and coaching within the MOOPIL topic or discussion used during VPLCs. Then, the *Discussion* section consisted of thoughtful, insightful questions from the mentor-coach that built on the leading question(s) and research section of the VPLC; the mentor-coach engaged each leader in the discussion. The *Example* section gave leaders a concrete example they could take away to improve their instructional leadership practice; additionally, the mentor-coach encouraged leaders to share examples of the topic being discussed in the MOOPIL. The final step the mentor-coach used with the leaders was *Reflection*, which employed the reflection cycle (Brown and Irby, 2001).

The reflection cycle is important to be included in mentoring and coaching. The mentor-coach asked the leaders to select a part of the new knowledge gained in the VPLC or a former experience related to the VPLC topic. Then, the leaders described that experience with who, what, when and where questions. Afterward, virtual mentor-coaches took the mentees through the analysis step of reflection and asked *why* questions about their experiences. Next, the leaders appraised their experiences by assessing all the information they reflected upon to determine the impact of the experience on their leadership. In the final step in the reflection cycle, the virtual mentor-coaches encouraged the leaders to consider how they could transform their practices or develop a next goal or action to improve their leadership skills.

Instruments

We included an interview protocol for data collection. We also used videos and analyzed their content. We shared the interview protocol and data analysis, including the video analysis technique employed.

The interview protocol. The semi-structured interview protocol consisted of five questions. The interviews were recorded, transcribed and analyzed. Each participant was interviewed individually via the GoToMeeting. Interviews lasted about 20 min for each participant via the online platform. The five interview questions were included as follows: (1) What experience have you had with the VMC? (2) What experience have you had with the VPLC? (3) What differences do you observe related to virtual as opposed to F2F PLC? (4) What issues have you encountered with the VMC? (5) What types of technological support and help did you observe the leaders needed regarding their leadership career and development? These questions were considered as only a starting point for a discussion in which virtual mentor-coaches were encouraged to express their views and concerns about the effective aspects of VMC within VPLCs in our study. To ensure the validity of the interview protocol content, the initial five questions were reviewed and adjusted by two experts in the field of educational administration before they were utilized.

Data analysis

To address the [first research question](#), we adopted a constant-comparative analysis as noted by [Glaser and Strauss \(2017\)](#) and analyzed the data by highlighting significant statements

and quotes from the data (e.g. interview transcriptions). We developed the cluster of meaning by combining the statements deduced from the interviews into themes and sub-themes; we continued to discuss the themes and compare the data against the extracted themes until no changes were observed.

To address the second question, we analyzed recorded sessions of the VMC during VPLCs. Two members of the research team attended the VPLC sessions and observed the virtual mentor-coaches engaging with the leaders. Two other members of the research team reviewed VMC videos for VPLC content analysis. They reviewed three video episodes from each mentor-coach (from the beginning, middle and end of the VMCs), which were played twice and evaluated; each review lasted for about 45–60 min. To reach consensus on emerging categories, the two researchers discussed how the coaches presented the topic, engaged the participant mentees and used strategies for reflection related to transforming and improving the participants' instructional leadership. To increase the rigor of the video analysis and document the rationale behind emerging categories, the entire research team determined to conduct another round of review. They again independently coded the selected episodes from each mentor-coach and shared their coding scheme to check for qualitative inter-rater reliability. To further validate the open-ended coding of VMC videos, researchers compared their codes along with descriptors to check for further agreement, established a consensus where their coding differed and repeated this process for all video episodes. The research team then discussed the final emerging themes and categories from the data until the team reached a mutual agreement.

We used researcher triangulation to establish the credibility of the study (Creswell, 2012). The researchers coded the interviews independently. After completing the coding and rectifying the emerging and final themes, researcher members checked by sharing a summary of the results with the virtual mentor-coaches to review. The virtual mentor-coaches validated that the information was consistent with their experiences. Additionally, we used low-inference descriptors from the data to provide credibility for the study.

Findings

We explored what virtual mentor-coaches perceived to be effective in the VMC within VPLCs. Next, we examined the ways virtual mentor-coaches provided VMC for participating school leaders. Before we provide results to the research questions, we first share information gleaned from the initial five questions from the interviews that were determined to be important related to the virtual mentor-coaches themselves. They indicated that they had always had a mentor themselves throughout their professional career and enjoyed learning from successful mentors and hearing their advice. All of them reported a philosophy of mentoring and coaching that was focused on building teachers' capacity and sustaining teachers' growth. Philosophically, they believed that no educator should feel unsupported and that no school leader should leave the profession due to burnout. They reported that they believed mentors and coaches should share their experiences, research and critical self-reflections with their mentees/coachees. The results per research question are reported as follows.

RQ1. What did virtual mentor-coaches perceive to be effective in the VMC within VPLCs?

To answer the [first research question](#), we present findings from interview data to evaluate what the virtual mentor-coaches perceived to be effective in the VMC within the VPLCs. The findings were categorized into two main themes that the mentor-coaches indicated to be effective in mentoring/coaching school leaders: (1) instructional capacity building and (2) instructional leadership transformation. [Table 2](#) depicts the themes based on the virtual mentor-coaches' responses.

Following are the virtual mentor-coaches' responses to the interview questions. The themes noted in Table 2 that emerged from the interviews are reported and include low-inference descriptors. Each of the two themes is presented with discussions of the sub-themes.

Theme 1: Instructional capacity building

Community building. The virtual mentor-coaches shared best practices in every VPLC session with the school leaders who took part in the VPLC. School leaders had the option to attend virtual mentor-coach sessions in the afternoon or morning of weekdays or weekends. According to the virtual mentor-coaches, the leaders became familiar with them as virtual mentor-coaches and built a sense of community with a variety of leaders from different campuses, grade levels and districts. The virtual mentor-coaches also indicated that the leaders were actively engaged with each other in the VPLC during the VMC sessions. Mentor-coach John commented as follows:

I think what I like the best, you know . . . it's such a varied experience . . . so everybody can learn from each other and even as a leader. Just because you're a leader currently in a preschool, it doesn't mean that you won't be a leader in an elementary school. So, you're still getting that kind of exposure to those different platforms that different levels are using and even high school. . . . So, those kinds of conversations stand out just because it's so different from everybody's perspective.

The virtual mentor-coaches indicated that though there was a focus on building instructional capacity, the VPLC MOOPIL modules and discussions helped the leaders create a social network of support and supervision. This network helped them to know the value of their professional communities and better understand how to use new leadership and/or instructional strategies they had learned in the past but no longer used with fidelity in their current leadership practices.

Opportunities to reflect on leadership practices. By discussing how school leaders can work collaboratively on the issues of learning and teaching that matter to their campuses, the virtual mentor-coaches indicated that the discussion and activities inspired the school leaders to reflect on their own leadership practice. The virtual mentor-coaches' responses indicated a significant positive impact of VPLC for leaders regarding self-regulation, awareness, reflection, and leveraging their strengths. Echoing the same ideas, Mentor-coach Amanda added as follows:

And I think the program with all the [VPLC] meetings that we had really helped to share experiences and to make connections between those experiences and it's going to help principals to make better decisions in the future. But, I think the way that the program was presented was very easy to follow, very easy to understand.

Major themes	Sub-themes	Thematic descriptors
Instructional capacity building	Community building	Networking and connection Interactivity and inquiry Knowledge sharing
	Opportunities to reflect on leadership practices	Reflective modules and discussion Peer coaching
Instructional leadership transformation	Improved instruction for teachers of EBs	Instructional strategies Collective learning
	Implications for future actions	Inspired leadership actions

Table 2.
Qualitative evaluation:
Themes and sub-themes

The virtual mentor-coaches reported that certain practices the leaders learned in the VPLC MOOPIL modules were not practices on their current campus. As the virtual mentor-coaches maintained, the leaders' goals were to reflect and begin transferring what they learned to improve instruction on their campus.

Theme 2: Instructional leadership transformation

Improved instruction for teachers of EBs. Based on the data, virtual mentor-coaches indicated that they coached leaders to reflect on effective instructional strategies employed by the school as well as areas wherein teachers could improve their instruction for EBs. Present in most of the virtual mentor-coaches' responses was a confirmation of how one of the MOOPIL topics for the VPLCs encouraged leaders to use campus-wide lesson plan formats that were geared toward extending learning for EBs; the mentor-coaches indicated this process was well received by the leaders. The mentor-coaches also noted that the leaders described their lesson plan checklist as they discussed and provided examples during the VPLCs. The virtual mentor-coaches agreed that ongoing VMC within VPLCs was needed to transform teachers' instructional practices. Furthermore, the virtual mentor-coaches maintained that providing time for collaboration, as well as some peer coaching opportunities, was necessary for leaders to better improve teachers' instruction for EBs. The virtual mentor-coaches noted that such collaboration and peer coaching helped school leaders grow as instructional leaders within a safe learning environment. Mentor-coach Anna commented, "With peer coaching, as research shows, principals' instructional leadership growth improves when they (a) get feedback from their colleagues and (b) attend PD. When feedback and PD are combined they are better than attending PD courses only."

Implications for future actions. The virtual mentor-coaches regarded the VMC within the VPLC as a tool that provided encouragement, reflection and support for inspired and transformative leadership actions. The virtual mentor-coaches found that successful coaching required fair opportunities for school leaders to refine their instructional leadership and influence and transform their practices. Mentor-coach Liliana, for example, reflected as follows:

That's what coaching is about because we've shared this practice. We've improved that practice in the school. So, you know, it's a balance. And we want to be sharing the artifacts so that all of the coaches have used some interactive-type tools that they can use for reflection and growth.

The virtual mentor-coaches indicated that the VMC began to create a coaching mindset among the school leaders to develop and leverage their skills via VPLCs by mentoring and coaching each other, to advance their awareness of EBs' needs and to incorporate how to lead effective instructional practices for EBs. The mentor-coaches felt the VMC within VPLCs was a good model to help leaders consider their future actions in the area of leading instruction.

RQ2. In what ways did virtual mentor-coaches provide VMC for school leaders within VPLCs?

The video analysis revealed four themes related to the ways that virtual mentor-coaches provided VMC for school leaders within VPLCs: (1) presentation, (2) collaboration, (3) reflection and (4) action plan. Those themes appear as steps in an overarching process of providing VMC within VPLCs. We discuss some general findings observed from the videos, and we then share the four themes or steps as a VMC process model.

Based on the video analysis, we observed that the virtual mentor-coaches shared the process for building collaboration with the school leaders through the VMC in the VPLC and used reflection as a tool to enhance their leadership experiences. We found that they built rapport and established relationships with the school leaders from the beginning of the VPLC

sessions. We observed that the virtual mentor-coaches not only listened to what the leaders were saying but also observed their actions as they went through the VPLC, and the leaders adjusted how they were interacting with each other as a team. In the VPLC, the virtual mentor-coaches also facilitated and modeled for a group of school leaders. We found that the school leaders were learning new content and asking advice from their peers about how to possibly address some of the challenges they were having on their campuses. We found that the virtual mentor-coaches released their coaching role to the school leaders so that they could become the peer coaches within VPLCs. The virtual mentor-coaches rotated the school leaders in leading the VPLC sessions.

Four steps of the VMC process model

The four steps (presentation, collaboration, reflection and action plan) of the VMC process model included in the VPLC that were observed from the virtual mentor-coaches in the videos are noted in Figure 2. Figure 2 presents the VMC process model along with descriptors. Each step of the process is discussed.

Presentation. In the first step of the VMC process model, *Presentation*, the virtual mentor-coaches developed a safe coaching environment by (1) identifying the role of team members, (2) building rapport and (3) creating a positive and safe environment. As these virtual mentor-coaches had worked with practicing school leaders, we found that they addressed several specific needs of the principals, particularly their need for creating relationships, building on trust, respect and growth mindsets. We observed virtual mentor-coaches building up the collegiality and trust within the group. We also observed a change in the leaders around the third video; they started to share best practices from their artifacts online and discussed emailing them to each other.

Identifying the role of team members. In the process of VMC within VPLCs, one of the first steps that virtual mentor-coaches took was to identify the role of team members. The participating school leaders provided in-depth perspectives during the VMC sessions on how they reflected on their roles. As one of the virtual mentor-coaches stated, all the school leaders were working full-time, and some of them were working on their doctorates during the time they were enrolled in the VMC. Therefore, finding possible ways to engage in learning modules and discussions was fundamental to the process of presentation.

Building rapport. Building rapport was also viewed as an important factor that impacted presentation of the VMC. Building rapport referred to the way virtual mentor-coaches engaged the leaders in the VPLC sessions. We observed that the school leaders were less engaged when they were not the facilitators of the sessions, especially in a virtual

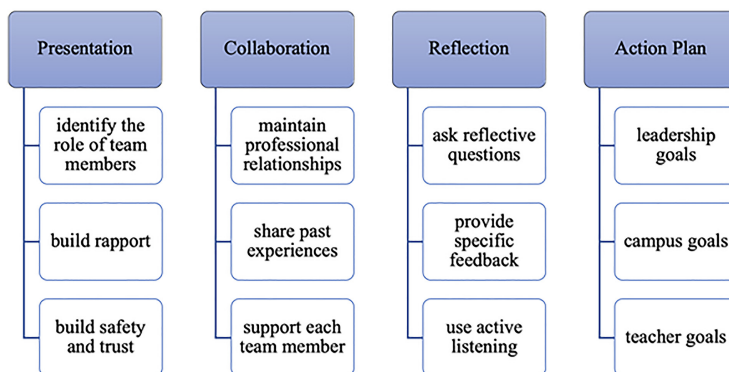


Figure 2.
The four steps of the
VMC process model

environment. We also observed that within VPLCs, the participants rotated leading L.E.A.D.E.R. MOOPIL sections as the virtual mentor-coaches facilitated this meeting. In addition, we noted that there was a consideration that the mentor-coach had to establish a rapport when people were talking in an online format.

Building safety and trust. There were a few reluctant members who were not in tune with what needed to be done and, thus, needed extra coaching support. In order for virtual mentor-coaches to establish trust, we found that they listened attentively while planning ahead to support the administrators and leadership team. Some virtual mentor-coaches contended that the virtual interaction mode provided a safe environment for honest dialog and in-depth discussion.

The virtual mentor-coaches intended to build trust within the group from the beginning of the VPLC sessions. When group members introduced themselves at the beginning of a VPLC, the virtual mentor-coaches showed a photograph of them. It was observed among all virtual mentor-coaches that this practice helped to establish a sense of group identity. We observed that the virtual mentor-coaches helped to build relationships among the school leaders via the VPLC sessions, and they indicated that because of that, some of the participants felt more comfortable sharing their lack of leadership skills and/or knowledge.

Collaboration. With the second step in the VMC process being *Collaboration*, an interactive and collaborative environment was found to be a key in influencing the level of engagement in the VMC. The mentees were encouraged to contribute to the discussion for each component of the VPLC sessions by (1) maintaining professional relationships, (2) sharing past experiences and (3) supporting each team member.

Maintaining professional relationships. Collaboration was the strategy most frequently employed by the virtual mentor-coaches to encourage school leaders to discuss and reflect during the VPLC sessions. The virtual mentor-coaches encouraged interaction and collaboration with other group members and facilitated relationships by asking the leaders to share guidelines and executive plans that benefited their campuses. The virtual mentor-coaches ensured that conversation within VPLCs was collegial and meaningful and was directed toward professional learning. The virtual mentor-coaches provided a safe space for the school leaders to ask questions of each other and their virtual mentor-coaches, thus building and maintaining professional relationships.

Sharing past experiences. The mentor-coaches indicated that because these PLCs were virtual, leaders from across Texas and the nation were able to be together weekly to share their past experiences and obtain feedback. The mentor-coaches encouraged school leaders to share knowledge, lead and build their instructional capacity within a virtual learning environment. We observed the mentor-coaches allowed participants to share their leadership practices and resources and provided them with an opportunity for collaborating and communicating with other school leaders as they proceed. From one video to the next, it was obvious that the school leaders developed an increasingly collaborative relationship with their mentor-coaches and volunteered to share resources, illustrating excellent practices in developing their teachers' instructional capacity.

Supporting each team member. We observed through the conversations that school leaders had contacted each other outside the VPLC to support each other to further enhance their professional learning. The mentor-coaches were effective, consistently supporting participants to structure their discussions and collaboration efforts. The mentor-coaches also promoted a collaborative working environment where school leaders could get their questions answered through discussion and collaboration with their group members. The virtual mentor-coaches moved into a thought partner role when school leaders just needed to talk through issues they were experiencing. They helped the mentees practice relationship building and held intensive discussions about leadership strategies for building multi-tiered systems to foster the promise of equitable learning opportunities for their teachers. The

virtual mentor-coaches were aware of the leaders' needs in developing a support network as the leaders learned together. They felt that the VPLCs provided a frame for mentoring for collaboration to occur.

Reflection. *Reflection*, the third step in the VMC process, occurred not only as the final component of the L.E.A.D.E.R. model, but also throughout the VPLC with intentional critical thought questions from the virtual mentor-coach. The reflection cycle offered by [Brown and Irby \(2001\)](#) provided a structure for practitioners to organize the evidence of their professional growth and identify the areas where they needed improvement. The reflection step was embedded at the end of each MOOPIL module to facilitate school leaders' reflections.

Asking reflective questions. Reflective discussion and questioning was threaded throughout the VPLC by the virtual mentor-coaches. We observed the virtual mentor-coaches provided learning opportunities for the mentees with deep, probing questions and discussions. Probing questions from the virtual mentor-coaches appeared to help the school leaders focus their attention on the pedagogical needs of their teachers. As evidenced by the video episodes, the leaders were engaged in the VPLC and reflected on their own leadership knowledge. We observed that the virtual mentor-coaches credited reflection for the school leaders' leadership growth and learning during the sessions.

Providing specific feedback. The virtual mentor-coaches provided a safe space, allowing the school leaders to share their challenges in instructional leadership and offer suggestions while receiving support and feedback. As virtual mentor-coaches provided feedback, the school leaders began to reflect upon their instruction and support students' learning. This theme, like all the themes, revealed that the program's high-yield instructional practices had been the focus of improvement plans for school leaders, particularly when the learning challenges were high across the campus. To improve school leaders' instructional leadership and reinforce their ability to mentor classroom teachers, they discussed examples of their classroom observations of teachers with the virtual mentor-coaches who were able to provide specific feedback.

Using active listening. We observed that the school leaders were encouraged to listen to many views, take notes, and discuss their takeaways specific to the session's targeted goals as agreed upon by them and their virtual mentor-coaches. The mentor-coaches promoted listening and reflection through meaningful, efficient communication and problem-solving. The virtual mentor-coaches increased active listening by holding structured conversations among participants during the VPLC sessions.

Action plan. We observed that the virtual mentor-coaches helped the leaders map out future leadership plans and develop personal and career goals, which represented the fourth step in the VMC process, *Action Plan*. The virtual mentor-coaches were observed providing school leaders the opportunity to improve their level of professionalism while pursuing their (1) leadership goals, (2) campus goals and (3) teacher goals. The school leaders' progress toward establishing professional leading and learning goals for their action plans was reviewed by the virtual mentor-coaches and their peer colleagues. Guidance, without value judgment, was observed being placed on leaders' action plans.

Discussion

In this study, we examined (1) what virtual mentor-coaches perceived to be effective in the VMC within VPLCs for leaders and (2) the ways virtual mentor-coaches provided VMC for school leaders within VPLCs. We found two major themes related to what virtual mentor-coaches perceived to be effective in the VMC within VPLCs for school leaders – (1) instructional capacity building and (2) instructional leadership transformation – and we determined there was a VMC process model that overarched the content of the VPLCs and was evident in the way virtual mentor-coaches worked with school leaders during VPLCs.

Instructional capacity building

According to [Maza and Rodriguez \(2020\)](#), a collaborator is a coach who works with other professionals to create sustainability and success on campus, but we found neither a coach nor a mentor has to be physically on a campus; rather, in our study, a *virtual* mentor-coach facilitated leaders' understanding of how to build instructional capacity of teachers while being distanced from a specific campus. We found that both virtual mentor-coaches and leaders worked collaboratively to build the leaders' understanding of increasing teachers' instructional capacity, and furthermore, the virtual mentor-coaches provided safe spaces for the principals to virtually peer-coach on how to cultivate teachers' pedagogical capacity in schools. Just as we found that VMC within VPLCs provided opportunities for mentor-coaches to build school leaders' knowledge of instructional leadership in order to improve instruction on their campuses, [Ermeling et al. \(2015\)](#) relatedly found that virtual coaching aided in expanding principals' growth and their ownership in instructional improvement. Though the [National Association of Elementary Principals \(2019\)](#), [Houchens et al. \(2017\)](#) and [Klar et al. \(2020\)](#) referred to F2F coaching, all determined that a collaborative-type coaching with principals can improve their instructional capacity building. We point out that VMC within VPLCs can be instrumental for principals as they build capacity in instruction for teachers on their campuses.

Instructional leadership transformation

Though [Wernick et al. \(2021\)](#) did not study principals, they indicated how teachers' reflection within virtual coaching is a key to creating rich learning opportunities. In our study, we also found that virtual mentor-coaches could create rich learning opportunities with VMC within VPLCs as they worked collaboratively with school leaders to debrief and discuss topics presented via MOOPILs on professional learning activities, and they helped to refine each leader's own thinking and practice as leaders reflected on their own instructional leadership. We determined that the practicing school leaders were provided many opportunities through the VMC within VPLCs to plan for transformation of their instructional leadership practices. The VMC within VPLCs, according to [Irby \(2020\)](#), is the basis of innovations as leaders work together to find problems and determine creative and workable solutions that result in leadership transformation as the virtual mentor-coaches work through the L.E.A.D.E.R. model ([Irby et al., 2017](#)) with leading questions, engagement, applied research, discussion, examples and reflection.

The findings are in line with [von Frank \(2011\)](#), who revealed that school leaders have regularly engaged in instructional rounds through F2F coaching and professional learning activities to identify a problem of practice specific to student learning and build a community of practice with other administrators and educators across the districts. In our study, the participating school leaders developed and reflected on strategies to address the issues they encountered on their campuses with the assistance of the virtual mentor-coaches. In addition, the virtual mentor-coaches pointed to the virtual accessibility of the sessions for leaders from a variety of schools and districts that made the experience convenient, flexible, rich and diverse, while leaders shared across geographic boundaries over the eight weeks of VPLC sessions.

VMC process model

Primarily, we note the paucity of research related to VMC and VPLCs as related to school leaders or principals. As an outgrowth of the analysis of data, we offer a VMC process model for instructional leadership with the following four steps: (1) presentation, (2) collaboration, (3) reflection and (4) action plan. The *Presentation* step includes setting the stage for the MOOPIL content in the VPLC. The first step is consistent with [Gallagher and Bennett's \(2018\)](#)

principles of coaching in a F2F situation that begin with building a trusting relationship with teachers. We found that the VMC within VPLCs was effective in building relationships and trust between the virtual mentor-coaches and leaders (mentees/coachees). Similarly, [Aguilar et al. \(2011\)](#) found that in F2F, continuous PD and interaction with district coaches resulted in building trust and confidentiality in the work and the principal-coach relationship. The second step is *Collaboration*. Collaboration in discussion, planning and group assignments through VPLCs facilitated learning and growth as school leaders worked together to find problems and identify solutions to better serve teachers of EBs. [Flückiger et al. \(2017\)](#) confirmed that F2F group coaching and sharing ideas help participants learn better, and our model indicates the same in a VMC situation. Similarly, [Knight \(2011\)](#) stated that, for coaching success, there should be reciprocity. We submit that virtual mentor-coaches and leaders (mentees/coachees) are learning from each other. *Reflection* is the third step. Reflective dialog in the VPLC sessions encouraged participation and self-reflection. Specifically, virtual mentor-coaches engaged the practicing school leaders in the reflection cycle as a vehicle for collective learning and practice guidance through VPLCs. [Patterson \(2015\)](#) and [Smith and Shaw \(2011\)](#) empirically examined how reflection contributes to leadership capacity but did not describe how this could be made mainstream, particularly in mentoring and coaching and more specifically in VMC for leaders. The last step in the VMC process model is *Action Plans*. The virtual mentor-coaches had the school leaders to develop action plans in which they could implement newly learned information to improve their leadership skills in building teachers' instructional capacity. This step is supported by findings from [Huff et al. \(2013\)](#) who indicated that effective F2F coaching includes goal setting, action planning and ongoing assessment. Finally, the findings indicate that virtual mentor-coaches helped the school leaders improve the application of new skills that they did not use before as they reflected and developed their action plans.

Conclusion

The use of VMC within VPLCs can be beneficial for school leaders as they enrich their leadership skills with virtual mentor-coaches and other leaders across diverse geographic settings in a convenient time and space. Like many of the findings from studies of mentoring and/or coaching in general in F2F conditions, we found that VMC sessions play a significant role in creating a safe and comfortable environment for leaders to share experiences, engage in reflective practice and build trust and relationships. These collaborations, along with the accessibility of virtual mentor-coaches in VMC within VPLCs, provide school leaders flexible and effective assistance for transforming their instructional leadership practice.

Findings from this study are useful in describing the VMC process and, thus, provide empirical evidence for VMC. The findings of our study apply to experienced and novice leaders receiving VMC. In fact, some of the leaders in the video episodes were newly appointed principals; they were engaging with the virtual mentor-coaches and other more seasoned leaders in the VPLCs in positive and supportive discussions. We recommend additional studies on novice leaders and VMC.

Key steps and components highlighted in the current research offer practical guidance for virtual mentor-coaches in conducting VMC within VPLCs. We recommend eight VMC guidelines as follows:

- (1) In a VMC situation, the mentee must be presented with a safe mentoring or coaching environment in order to build rapport and trust;
- (2) VMCs should identify the role of team members if it is conducted in a group session;
- (3) The VMC should open negotiation among participants as they learn from each team member as they share their best practices.

- (4) VMCs should provide time for collaboration, discussion, planning and group assignments;
- (5) VMCs should use reflective practice throughout the VPLCs and should take the group of mentees or the mentee through the reflection cycle with specific feedback that leads participants to the transformation of practice;
- (6) VMCs should provide opportunities for participants to work together to find problems and determine creative and workable solutions for developing action plans with leadership goals, instructional capacity-building goals and campus goals;
- (7) An overarching VMC process model within the VPLC to be followed is (1) presentation, (2) collaboration, (3) reflection and (4) action plan goals and
- (8) VMC within VPLCs provides virtual mentor-coaches with a structure to engage leaders in relevant topics by using MOOPILs that incorporate the L.E.A.D.E.R. model.

Further research is needed to provide evidence of the validation of the VMC process model. In particular, it would be necessary to further quantify the impact of the VMC process model within VPLCs. What requires more research is how leaders transfer their learning from the VMC within the VPLC to practice. It is hoped that the findings from this research will promote better applications of VMC within VPLCs for enhancing school leaders' abilities to transform instruction and improve teachers' instructional capacity. Based on this study, we advocate that since VMC is within a virtual environment with virtual mentor-coaches, many more diverse (i.e. geographic location, time in service, gender and ethnicity) school leaders can be reached and positively impacted in this context, as opposed to participating only in a physical F2F environment. Ultimately, VMC for school leaders is regarded as a transformative model that provides encouragement, reflection and support for instructional leadership actions.

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