Author for correspondence:
Chris Wilcoxen
✉ cwilcoxen@unomaha.edu
✉ University of Nebraska Omaha, United States
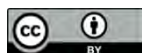
A Coaching & Mentoring Tool Anchors Support and Collaboration

Chris Wilcoxen, Riley Newman, Morgan Wulff

Abstract

Background/Purpose. This study examines the use of the Interactive Growth Guide, a structured coaching tool, within a year-long high-intensity induction program for beginning teachers. Specifically, the study investigates how the Interactive Growth Guide was integrated into the mentoring relationship between a beginning teacher and her coach and identifies elements that supported practical application for enhancing mentoring and coaching practices.

Materials/Methods. Using a triangulated mixed-methods design, data were collected from 29 completed Interactive Growth Guides, 16 written reflections, two semi-structured interviews, and student achievement records. The sampling focused on one beginning teacher and her assigned coach, selected for their active participation in the induction program. Data were analyzed thematically, supported by qualitative coding and quantitative data comparisons to identify key patterns of use and impact.

Results. Analysis revealed two primary themes: the Interactive Growth Guide (1) anchored mentoring support and (2) fostered collaboration. Subthemes indicated the Interactive Growth Guide facilitated goal setting, progress tracking, reflective practices, and data-driven discussions. Additionally, the tool promoted shared responsibility through joint action planning, collaborative data analysis, and continuous dialogue about instructional improvement and professional growth.

Conclusion. Findings highlight the Interactive Growth Guide's value as a structured framework for mentoring, capable of anchoring support and fostering collaboration. The study suggests its adaptable application in other coaching contexts to improve teacher development and instructional outcomes.

1. Introduction

Transitioning from learning teaching to teaching within one's classroom can be a challenging experience. New teachers often find themselves in classrooms that are far from stress-free. They grapple with balancing new experiences, meeting growing content demands, and managing limited time, constantly pushing to prioritize one amidst the other (Joseph, 2000; Kutsyuruba et al., 2019). These challenges, coupled with emotional exhaustion and low self-efficacy (Betoret & Artiga, 2010; Collie et al., 2015; Skaalvik & Skaalvik, 2018; Wilcoxen et al., 2020), can lead to high teacher turnover (Boogren, 2018; Ingersoll et al., 2014; Kutsyuruba et al., 2019).

Effective induction programs are crucial in supporting new teachers during their transition into the classroom. These programs bridge the gap between theoretical knowledge learned in teacher preparation programs and the realities of applying that knowledge in a real-world setting (Kearney, 2017; Ingersoll & Strong, 2011; Bell et al., 2022). This support empowers new teachers to build confidence, develop effective instructional practices, and establish a strong foundation for their careers, ultimately influencing retention rates within the profession (Kutsyuruba et al., 2019). High-intensity induction programs offer a targeted approach to help new teachers adapt to professional demands. Although the benefits of effective induction programs are well-documented, there is a lack of empirical research identifying the most effective tools for practical implementation. This study explores how a beginning teacher (Ricki) and her coach (Marni) utilized the Interactive Growth Guide, a specific coaching tool, throughout a year-long high-intensity induction program. Specifically, the study addresses the following research questions:

1. How was the Interactive Growth Guide used within the mentoring and coaching relationship?
2. What aspects (if any) supported its practical application and had implications for improving mentoring and coaching practices?

2. Literature Review

2.1. High-Intensity Induction Support

Research consistently demonstrates that high-quality induction programs significantly enhance teacher quality, student learning, and teacher retention (Aaronson et al., 2007; Darling-Hammond, 2010; Madda et al., 2012). High-intensity induction, characterized by robust support, resources, content, structure, and duration during early teaching years, surpasses low-intensity approaches (Dishena & Mokoena, 2016; Glazerman et al., 2010). These intensive programs positively impact teacher effectiveness (Dishena & Mokoena, 2016; Moore & Swan, 2008) and their overall well-being (Wilcoxen et al., 2022).

High-intensity induction offers a targeted approach to supporting new teachers' transition into the profession. It often incorporates elements of educative mentoring (Feiman-Nemser, 2001; Stanulis & Bell, 2017) and diverse coaching practices (Costa & Garmston, 2015; Knight, 2017; Young et al., 2023). Educative mentoring fosters mutual growth and development, shifting focus from acclimation to professional advancement. Steiner et al. (2022) advocate for a blended approach, combining mentoring and coaching to address individual teacher needs.

Core components of high-intensity induction include mentoring, coaching, professional learning, networking, and problem-solving. Collaborative platforms and networking opportunities facilitate peer learning and experience sharing, while personalized mentoring and coaching support teachers in overcoming challenges.

2.2. The CADRE Project & High-Intensity Induction

The Career Advancement for the Development and Recruitment of Experienced teachers Project (CADRE Project) is a high-intensity, 14-month induction program for beginning teachers. The program

is designed to assist with the obstacles beginning teachers face and uses a framework that blends mentoring and coaching through high-intensity induction. Grounded in the core components of high-intensity induction, the 14-month program provides teachers time to complete a master's degree in a designated area while working full-time as a first- or second-year teacher. This collaboration between one midwestern university and nine local school districts assigns each beginning teacher an induction partner called an Associate from within the district. Time together links weekly mentoring and coaching with professional development sessions focused on immediate needs. Monthly seminars address specific topics in-depth, and graduate coursework provides additional content knowledge and skills.

Associates serve as both mentors and coaches to support instructional needs, co-teach, co-plan, help cope with challenging behaviors, support team interactions, and serve as social-emotional support for their assigned teachers. Associates engage in weekly professional development (PD) opportunities to address mentoring and coaching strategies, engage in problem-solving, and spend at least five hours each week supporting individual teacher needs in the classroom. Additionally, teachers and associates engage in weekly reflections through conversations via an Interactive Growth Guide. Conversation parameters for the Interactive Growth Guide include at least 30 minutes of uninterrupted time per week discussing and reflecting on the goals within the five-hour timespan together. The design of the Interactive Growth Guide is closely aligned with reflection research.

2.3. Reflection Research

Over the years, multiple reflective frameworks have existed for teacher reflection. Beginning with Dewey (1933) and continuing through today (e.g., Davis, 2006; Korthagen & Wubbels, 2001; Schön, 1983; Tonna et al., 2017), teacher reflection is necessary for teacher growth. In 1983, Schön contributed to this quest with the concepts of reflection-on-action and reflection-in-action. Reflection-on-action occurs immediately after the teacher performs an action, while reflection-in-action requires simultaneous changes in the action while it continues to be performed. Hatton & Smith (1995) expanded on Schön's work, suggesting that reflection is developmental, and outlined five progressive components of reflection (i.e., technical, descriptive, dialogic, critical, and contextualization of multiple viewpoints). Korthagen and Wubbels (2001) also promoted five phases of reflection. However, they were cyclical and included reflecting on action (actual experiences in the classroom) as opposed to reflecting on theoretical experiences or scenarios. This was like Gibbs's cyclical framework, which included a description, feelings, evaluation, analysis, conclusion, and development of an action plan (Devet, 2020).

Larrivee (2008) refined the framework into a continuum. This included four stages of reflection: pre-reflective, surface, pedagogical, and critical. Pre-reflective teachers refuse to accept the problems witnessed, whereas, at the surface level, teachers focus on tasks where a strategy leads to an outcome but may be focused more on teacher needs or wants. In pedagogy, the teacher considers how a choice impacts students and can articulate why strategies are selected. In the final stage, the teacher's decisions examine equity, social justice, and the ethical implications (Larrivee, 2008).

Effective professional development can be "salient, clearly articulated, and implemented with supportive structures" to benefit both teachers and students (Lim et al., 2022, p. 3). Embedding reflection into these professional development frameworks can support both individuals and organizations.

2.4. Theoretical Framework

Rigney et al. (2019) encouraged induction programs to identify the type of framework, the appropriate tool, and the purpose for reflection. Using a specific tool can help teachers focus their teaching practices and support the development of critical reflection skills (Rigney et al., 2019). This

is the purpose behind the Interactive Growth Guide. Table 1 outlines the key components of the Interactive Growth Guide designed with this research in mind.

Table 1. Components of Interactive Growth Guide

Component	Guiding Questions
Reflection on a previous goal	• What was successful? How do you know? • What further enhancements can be made? How do you know? • Are you moving on to a new goal or continuing with the same goal?
If creating a new goal …	• What will this enhance? • What do I need to prepare and pre-plan for this to be successful? • What are students able to do? What approaches will best meet student needs (i.e., instructional/ engagement/ assessment)? • What will my evidence be?
*Support Structures	• Co-planning • Collecting evidence through observation • Guidance in navigating professionalism within the school culture • Guidance in maintaining a professional reputation in and out of the classroom • Jointly analyzing student data • Problem-solving classroom management concerns • Planning for routines & procedures • Social-emotional support • Tasks (involve no students)

* Note: Support structures denote the Associate's (Marni's) actions. These may include indicating the type of data they will gather during an observation, co-planning, co-teaching, suggestions for additional resources, etc.

Reflection itself is a complex mental process that can feel abstract (Clarà, 2015; Jay & Johnson, 2002). For teachers to get the most out of reflective practices, it is crucial that they understand the purpose behind them. Without a clear understanding of a tool's goals and the value of reflection, teachers may struggle to connect the activity to their teaching practice (Rigney et al., 2019). As Loughran (2002) aptly states, "Simply being encouraged to reflect is likely to be as meaningful as a lecture on cooperative group work" (p. 33). In other words, just telling teachers to reflect is not enough. They need to understand the 'why' behind reflection so that it has a positive impact on their teaching. Therefore, the tool was designed to scaffold collaboration, action, and reflection so teachers could see development over time.

3. Methodology

This study used a triangulated mixed methods design to examine the use of the Interactive Growth Guide within the induction relationship. To allow for triangulation, the authors employed multiple data sources, which included 29 Interactive Growth Guide entries, 16 reflections, two interviews, and student achievement data. Authors used multiple research methods to triangulate findings, increase validity, and inform theory development (McGrath, 1982; Turner et al., 2017). This study explored how one beginning teacher (Ricki) and her coach (Marni) utilized the Interactive Growth Guide throughout a year-long high-intensity induction program. Specifically, how was the Interactive Growth Guide used within the mentoring and coaching relationship? What aspects (if any)

supported its practical application and had implications for improving mentoring and coaching practices?

3. 1. Participants

The authors used purposive sampling and selected participants because the teacher's work within the Interactive Growth Guide showcased complete progression across Larrivee's (2008) continuum and included evidence of student growth. Researchers wanted to understand better how the two utilized the Interactive Growth Guide within the partnership to determine what aspects (if any) supported practical application and implications to improve mentoring and coaching practices. Attribute codes (Saldaña, 2016) can be found in Table 2 for the Associate (Marni) and the teacher (Ricki).

Table 2. Participant Attributes

Pseudonym	Marni	Ricki
Role	Induction Program Associate (Mentor/Coach)	First Grade Teacher
Context	Urban District	Urban District
Experience	Two years as an Associate Nine years in the district	First-year teacher First-year in state/district
Gender	Female	Female
Race/Ethnicity	White	White
Data Format	Interactive Growth Guide, semi-structured interview, reflections	Interactive Growth Guide, semi-structured interview, reflections
Data Collection Timeframe	2022-2023	2022-2023

Triangulation can help explore "complex human behavior using a variety of methods to offer a more balanced explanation to readers" (Noble & Heale, 2019, p. 67). Therefore, the authors employed data triangulation over time to mitigate weaknesses found in single methods. The first data source included 29 Interactive Growth Guide entries. This served as a communication tool between Marni and Ricki during each mentoring/coaching session based on the teacher's needs. As a second source, the authors conducted interviews with both Ricki and Marni at the program's conclusion to gather additional perspectives and contextual clues. An additional data source included monthly reflections from Ricki and Marni between September and April. Ricki's eight reflections focused on successes, areas for improvement, and supporting evidence within the Interactive Growth Guides. Marni's eight reflections addressed coaching strategies, evidence of impact, and future steps.

The data analysis employed a qualitative thematic approach using open coding. The approach combined inductive (open coding to derive themes) and deductive reasoning. This method was chosen to explore the complex interactions and outcomes associated with the Interactive Growth Guide, allowing for an integrated understanding of its impact.

Data were collected from multiple sources, coded to identify initial patterns and themes, and subsequently categorized into overarching themes and subthemes (Eisenhardt, 1989; Lawrence & Tar, 2013; Orlikowski, 1993). This abstraction process helped explain the observed actions and outcomes within the mentoring and coaching framework to support the exploration of patterns across different data sources and enhance the depth of understanding. The authors used a four-step process (Lawrence & Tar, 2013):

1. Collection of data from all sources (Interactive Growth Guide, interviews, reflections)

2. Open coding to identify initial patterns and emerging themes

3. Categorization of themes (and subthemes) to provide organization of findings

4. Data abstraction to synthesize findings and understand the broader implications

This process explored both the actions and outcomes observed in the mentoring and coaching relationship throughout the year.

Authors used collaborative coding (Smagorinsky, 2008) to establish consistency and determine the categorization of themes and subthemes. The coding process involved three coders. Authors 1 and 2 collaboratively coded the first month's data to identify initial patterns and develop a codebook for consistency in coding. They then independently coded subsequent data. Collaboration supports a comprehensive interpretation of the data, minimizing the risk of individual bias. Author 3 reviewed the coded data, identified discrepancies, and participated in collaborative discussions to resolve disagreements. This iterative approach ensured inter-coder reliability and the validity of the identified themes (Campbell et al., 2013). Authors 1 and 2 then coded the reflections and interviews separately, and discrepancies were reviewed using the same method. These additional sources helped explain what was witnessed and why within the context of the year. As a final source, the authors referenced the student achievement data from 21 students.

All data collection and storage procedures were approved by the university's Institutional Review Board as an exempt study for program improvement. Participant identifiers were removed to ensure anonymity.

4. Results

4. 1. Interactive Growth Guide Goals

The use of the Interactive Growth Guide varied depending on the time of year. It was clear that Ricki's capacity and specific areas of need drove the entries. See Table 3 for an example of goals and evidence collected as identified by Ricki in the Interactive Growth Guide over the year.

Goals recorded in September focused on classroom management and setting routines, while goals in March increased in complexity and centered on student learning. For example, Ricki began pulling reading small groups in September and October but wanted a targeted approach to increase her students' literacy needs. In September, actions focused on getting groups started and ensuring routines and procedures for small groups were in place. In October, Ricki worked on refining those routines.

Table 3. Example Goals and Evidence Collected

September Goal	November Goal	March Goal
Create small groups for reading based on skills	Assess high-frequency words and winter English language arts screeners to effectively group and target students in small-group instruction. Determine which students need decoding skills versus moving on to comprehension.	Write a well-written paragraph independently when given a prompt. The paragraph should include a topic sentence, multiple (3) details in the middle, and a closing sentence.
September Evidence	November Evidence	March Evidence
Students will engage in both a small group teacher-led setting and a small group independent work setting.	I will know that students are responding positively when their small skill/objective, and all students in those groups are similar in ability.	Students will produce a five-sentence opinion paragraph, including a topic sentence, three details, and a concluding sentence. Students will also have transition words.

By November, Ricki had begun to narrow down her action steps to focus on specific academic needs through differentiation in small groups. For example, "Assess high-frequency words and administer winter English language arts screeners to effectively group and target students in small group instruction" and "Determine which students need decoding skills versus moving on to comprehension." During this goal, Ricki planned and implemented the differentiated small group lessons while Marni collected quantitative data, video evidence, and observational notes. Marni reflected in November,

> "All of our goals so far on the Interactive Growth Guide have been mostly content-driven to impact student growth and achievement. When we discuss these goals, we look at data and make decisions based on this data. We have assessed content, engagement, and behavior, all intending to impact student growth and achievement. I am hopeful this habit of data driving the instruction will transfer to [Ricki] this year and in future years as she continues to impact students."

This goal lasted four weeks. At the end of the goal, five of the ten students who began below proficiency showed growth in their high-frequency word data from the beginning to the end of the goal. Meanwhile, those knowing 80% or more of the designated high-frequency words increased by 10%. It was evident that the execution of this goal and outcomes were successful. Ricki reflected in December on the partnership, "We began to utilize our time together to analyze resources to implement reading strategies, create scaffolded writing units, and improve reading fluency. Not only did this increase my students' efficacy, but my efficacy as a teacher." Marni added, "With repeated practice of implementing goals based on student achievement anchored with the Interactive Growth Guide, [Ricki] showed a higher capacity to reflect, analyze data, and intentionally plan with colleagues, which further enhanced this process and student achievement."

Each week during coaching meetings Ricki and Marni would analyze the collected data to build on what was already accomplished. They would then adapt the goal for deeper success or add other components for the following week. This created a concrete instructional plan and a weekly schedule to implement. It was evident in the analysis that Marni was consistent in meeting with Ricki to discuss goals but varied her support times based on the goal each week. This allowed the two to delegate roles within the action steps for shared expertise and resources.

By February, the depth of the goals, evidence collected, and collaboration shifted to Ricki taking the lead within the conversation and approaching the Interactive Growth Guide from a student-

centered mindset. For example, as mentioned previously, a March goal stated, "By the end of 1st grade, the goal for students is to write a well-written paragraph independently when given a prompt. The paragraph should include a topic sentence, multiple (3) details in the middle, and a closing sentence." Table 4 outlines the action steps taken, the support structures (Marni's role), and the data discussion during the first week of implementation.

Table 4. Action Steps, Dialogue, and Support Structures within the Interactive Growth Guide

	Action Steps	Support Structures	Data Discussion
Tuesday, March 28	Create transition word anchor charts and model use for students.	Collect video evidence on modeling how to use anchor charts.	Discussed how the students started to lose focus around the third detail.
Wednesday, March 29	Collect and analyze baseline data on the writing informational text lesson.	Model individual conferences with students following the lesson.	Discussed how some students lost focus throughout the lesson.
Thursday, March 30	Students practice assessing others' writing and then assess themselves using a bookmark (created by Marni and Ricki).	Collect video data on instruction and provide individual student support.	Discussed how Ricki shared student writing and had students help assess whether it was a 1, 2, 3, or 4.

It was evident in the Interactive Growth Guide entries that Marni often started by questioning or providing resources. For example, "Could this be an opportunity for a collaborative conversation, including movement? Perhaps you could have them discuss the anchor chart during the movement? Ex: Hand up/Pair up, Designated 'green' partners, etc." or

"Is there a way to incorporate some sort of 'reset' or brain break in between the story and the explanation of the writing? I am wondering if it would refocus them before you give instructions or model the task. This may help them focus/increase stamina for independent writing and conferences. What are some ideas for this?"

At other times, Marni offered encouragement but always connected it back to students, "This was so powerful, and the students were extremely engaged! Plus, the activity showcased student work. Students are also now motivated to have theirs read by you next time." This March writing goal lasted five weeks, and student data showed growth from start to finish. Ricki gave a writing assessment before the goal began and one following. There was a significant difference in scores prior to the use of the Interactive Growth Guide (M=2.6, SD=0.9) and after implementing (M=2.9, SD=1.1) t(19) = 2.90, p =0.010. The observed effect size was medium (.64). Overall, 40% of students moved up one proficiency level or more.

4. 2. Analyses of the Data Sources

The framework of the Interactive Growth Guide kept the partnership on track to create an explicit plan with a focused goal. Marni and Rick both described the Interactive Growth Guide as a running record that was consistently completed together during their interviews. Additionally, both reflected that it kept the partnership on track to create an explicit plan with a focused goal and

encouraged dialogue as to what actions both would take before, during, and after instruction. These concepts were reflected throughout the Interactive Growth Guide as well.

In reviewing all the data sources, two themes emerged from the analyses: the Interactive Growth Guide anchored support and fostered collaboration. Subthemes included how the Interactive Growth Guide provided a framework to set and track goals, reflect on progress, and facilitate data-driven conversations. The tool also fostered collaboration through shared action steps, joint analysis of data to inform instruction, and ongoing dialogue about student learning and teacher growth.

Ricki stated that the Interactive Growth Guide "kept the process collaborative in the implementation stage by laying out opportunities for partnership. For example, [Marni] might model strategies, collect evidence, co-teach, or problem-solve classroom behaviors during the week." This collaboration led to increasingly complex goals and Ricki's growth as a teacher. Table 5 outlines the themes discovered throughout all three sources.

Table 5. Themes and Subthemes

The Interactive Growth Guide Anchored Support	The Interactive Growth Guide Fostered Collaboration
Provided a framework to set and track goals • Anchored planning, coaching, and reflecting • Always completed together	Shared action steps • Created an explicit plan focused on goals • Delegated roles
Provided a framework to reflect on progress • Focused action steps • Recorded success	Jointly analyzed data to inform instruction • Determined data to collect in advance • Varied support times
Provided a framework to facilitate data-driven conversations regarding learning (for both teachers and students) • Required weekly conversations • Shared expertise and resources	Continued dialogue about student learning and teacher growth • Consistent weekly meetings

4. 3. The Interactive Growth Guide Anchored Support

The Interactive Growth Guide provided a framework for setting and tracking goals. It kept the partnership on track by creating an explicit plan with a focused goal through shared action steps. Given that it was always completed together, it anchored Marni's planning, mentoring, and coaching support and provided evidence to reflect on.

One key component of the Interactive Growth Guide was its use as a running record of success. Ricki reflected on the use of the tool to "prove" student and teacher success. "This aided in my development as a reflective practitioner, as I had months of data and observations to look back on." Marni also referenced the Interactive Growth Guide as a document to track growth over time. Ricki could "look back on her growth and students' growth over the course of the entire year." This resource also supported reflection by providing easy access to a comprehensive record of observations, feedback, and outcomes. The Interactive Growth Guide also provided an opportunity to reflect on goals and challenges inside the classroom and scaffolded Marni's support. For example, if the teacher's goal was to improve engagement during whole group math instruction, Marni intentionally dedicated time to be present for as much math instruction as possible throughout the week. The varied support times allowed Marni to scaffold support as needed. This also provided a

well-rounded understanding of the classroom to best assist with goals. Each new goal created in the Interactive Growth Guide emulated a mini-coaching cycle personalized to the class and teacher.

Due to consistent weekly meetings and focused action steps, there were clear roles assigned to both Ricki and Marni. This provided a framework to facilitate data-driven conversations regarding learning (for both teachers and students). For example, one week, Ricki's action steps focused on 1) consistently stating expectations during math clearly, 2) explicitly modeling or scaffolding while teaching concepts, and 3) creating engaging opportunities for students to respond and participate to increase engagement. Marni collected data on these actions through video and observational notes, using this to guide the conversation the following week. It was evident that the Interactive Growth Guide was cyclical, with data driving the teacher each week to make alterations to the current goals or to create a new goal. Marni reflected in September, "[Ricki] and I have been working hard to create authentic and meaningful goals for her teaching and her students. She can take on whatever tools and strategies presented to her, which is increasing her teacher efficacy every week." Whereas the Ricki reflected during her interview,

> "Our planning time and reflective conversations were some of the most helpful discussions of the year. I felt confident about implementing new ideas, knowing that Marni would thoroughly discuss them with me and schedule intentional time throughout the week to support me during that specific goal."

4. 4. The Interactive Growth Guide Fostered Collaboration

The Interactive Growth Guide encouraged dialogue regarding shared action steps focused on a specific goal, and the action steps determined what data to collect and what actions both educators would take before, during, and after instruction. The tool was the foundation, but the conversations instigated action. Conversations regarding data took goals and action steps beyond the scope of the Interactive Growth Guide, further refining learning for teachers and students. Reflection was a key component of the dialogue and served as the starting point for either beginning a new goal or continuing a past goal. The guiding questions centered on conversations around student and teacher success. The dialogue that developed from these questions led to explicit action steps to attain the goal. This made tackling long-term goals manageable by delegating roles and action steps in small increments. Ricki stated, "While the Interactive Growth Guide was an essential tool in our partnership, the dialogue that stemmed from it was an invaluable component to our partnership." For example, she reflected on creating rubrics and data analysis strategies together throughout the year. These opportunities "allowed me to pull valuable information from student work. I quickly became confident in myself as not just a teacher but as a researcher, implementing appropriate strategies and having the research and data to defend my decisions."

5. Discussion

The Interactive Growth Guide required weekly conversations regarding goals, progress, and needs. These weekly conversations and reviews of data prompted consistent reflection as goals and evidence were revisited. Both teachers emphasized the tool's role in building trust, setting high expectations, and focusing on student success. Marni shared that the foundation of the Interactive Growth Guide's success was the "mutual trust, hard work, high expectations of one another, and understanding that both of us valued her students' success." Ricki noted, "The Interactive Growth Guide was the foundation, but [Marni's] mentorship and collaboration took me beyond the Interactive Growth Guide through goal setting, dialogue, and physical support." Marni acknowledged that both students and Ricki's success was due to "our shared buy-in and growth mindset throughout the year."

The goals listed in the Interactive Growth Guide, coupled with intentional conversations regarding growth, required collaboration. This was needed both as an entrance point and to advance

Marni and Ricki's work together through a shared space. This aligns with research on effective collaboration practices. Collaboration between and amongst teachers has significant positive outcomes for teacher satisfaction, retention (Boyce & Bowers, 2018), and student achievement (Charner-Laird et al., 2016; Ketterlin-Geller et al., 2015; Ronfeldt & McQueen, 2017). This study's results support previous findings on the power of effective collaboration, such as co-planning (Eisenschmidt & Oder, 2018; Lockton, 2019; Martin et al., 2015), co-teaching (Lockton, 2019), professional development (Voogt et al., 2016), and reviewing student data together (Ketterlin-Geller et al., 2015; Martin et al., 2015).

Both Marni and Ricki mentioned the importance of the Interactive Growth Guide in their continued partnership. The guide's cyclical structure supported reflection and goal refinement. Reflection-on-action (Schön, 1983) was witnessed in the increasing complexity of goals in tandem with the increased impact on students. As Ricki's confidence grew, so did goal complexity and ownership. The tool further supported communication in a shared space, which grounded collaboration between Marni and Ricki. In addition, the two set high expectations for each other and committed to intentional work toward the needs of both students and teachers within the Interactive Growth Guide.

This study suggests that tools that anchor support and collaboration can positively influence coaching and mentoring partnerships. Mentors and coaches adopt varied approaches to inform teachers where they are developmentally. The framework of the tool can guide communication, reflection, and data analysis. As the findings show, clear, supportive structures can enhance learning for both students and teachers (Lim et al., 2022). The Interactive Growth Guide provided this opportunity through timely, guided professional learning.

The Interactive Growth Guide served as a cornerstone for mentoring and coaching, providing a structure for goal setting, reflection, and data-driven dialogue. By anchoring support and fostering collaboration, the tool contributed to the overall growth of both teachers and students. In considering the implications for other partnerships, other fields could find such tools advantageous in strengthening mentoring and coaching partnerships and guiding conversations to improve outcomes.

6. Conclusion

High-intensity induction through mentoring, coaching, discussion, networking, and problem-solving has proven effective (Darling-Hammond, 2010; Dishena & Mokoena, 2016; Madda et al., 2012). This study examined the Interactive Growth Guide, a structured coaching tool, within a year-long high-intensity induction program for beginning teachers. Specifically, the study investigated how the Interactive Growth Guide was integrated into the mentoring relationship to support its practical application. Findings from this study indicate that the Interactive Growth Guide positively anchored support and fostered collaboration. By providing support and encouraging collaboration, the tool played a key role in fostering the growth of both teachers and students. Tools like the Interactive Growth Guide could prove valuable in other partnerships and fields, offering a practical resource to enhance mentoring and coaching relationships while guiding discussions to drive improved outcomes.

7. Implications and Limitations

These findings are not without limitations. This study explored the use of this tool only within one partnership. Continuing to find ways to support relationship development and the ability to reflect critically would be one area to consider as the tool continues to be developed. Furthermore, expanding the research to include a larger sample and researching how the instrument can work with

other mentoring and coaching systems would contribute to the development of the relevant concepts.

Declarations

Author Contributions. All authors have read and approved the published version of the article.

Conflicts of Interest. The authors declare no conflict of interest.

Funding. The authors received no financial support for this research.

Ethical Approval & Data Availability Statement. All data collection and storage procedures were approved by the Institutional Review Board as an exempt study for program improvement. Participant identifiers were removed to ensure anonymity.

References

Aaronson, D., Barrow, L., & Sander, W. (2007). Teachers and student achievement in the Chicago public high schools. *Journal of Labor Economics, 25*, 95–135. http://dx.doi.org/10.1086/508733

Bell, J., Wilcoxen, C., and Steiner, A. (2022), Mentoring and coaching through induction to develop reflective practices in beginning teachers, *The New Educator, 281- 305*. https://doi.org/10.1080/1547688x.2022.2104982

Betoret, F., & Artiga, A. G. (2010). Barriers perceived by teachers at work, coping strategies, self-efficacy and burnout. *The Spanish Journal of Psychology, 13*(1), 637–654. https://doi.org/10.1017/s1138741600002316

Boogren, T. H. (2018). *The beginning teacher's field guide: embarking on your first years*. Solution Tree Press.

Boyce, J., & Bowers, A. J. (2018). Toward an evolving conceptualization of instructional leadership as leadership for learning. *Journal of Educational Administration*, *56*(2), 161–182. https://doi.org/10.1108/JEA-06-2016-0064

Campbell, J. L., Quincy, C., Osserman, J., & Pedersen, O. K. (2013). Coding in-depth semi-structured interviews: Problems of unitization and intercoder reliability and Agreement. *Sociological Methods & Research, 42*(3), 294–320. https://doi.org/10.1177/0049124113500475.

Charner-Laird, M., Kirkpatrick, C. L., Szczesiul, S., Watson, D., & Gordon, P. (2016). From collegial support to critical dialogue: Including new teachers' voices in collaborative work. *The Professional Educator, 40*(2), 1–17.

Clarà, M. (2015). What is reflection? Looking for clarity in an ambiguous notion. *Journal of Teacher Education, 66*(3), 261–271. https://doi.org/10.1177/0022487114552028

Collie, R. J., Shapka, J. D., Perry, N., & Martin, R. (2015). Teacher Well – Being: Exploring its components and a practice-oriented scale. *Journal of Psychoeducational Assessment, 33*(8), 744–756. https://doi.org/10.1177/0734282915587990

Costa, A. L., & Garmston, R. J. (2015). *Cognitive coaching developing self-directed leaders and learners*. Rowman and Littlefield.

Darling-Hammond, L. (2010). *The flat world and education*. Teachers College Press. https://doi.org/10.1007/s10833-010-9137-7

Davis, E. A. (2006). Characterizing productive reflection among preservice elementary teachers: Seeing what matters. *Teaching and Teacher Education, 22* (3), 281–301. https://doi.org/10.1016/j.tate.2005.11.005

Devet, B. (2020). Gibbs' Reflective Cycle for Writing Center Training. *WLN: A Journal of Writing Center Scholarship, 44*(9/10), 18–25. https://doi.org/10.37514/wln-j.2020.44.9.04

Dewey, J. (1933). Why reflective thinking must be an educational aim. In J. Dewey (Ed.), *How we think: A restatement of the relation of reflective thinking to the educative process* (pp. 212-228). D.C. Health. https://doi.org/10.2307/1415632

Dishena, R., & Mokoena, S. (2016). Novice teachers' experiences of induction in selected primary schools in Namibia. *Eurasian Journal of Educational Research, 66*, 335-354. http://dx.doi.org/10.14689/ejer.2016.66.19

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review, 14*(4), 532-550. https://www.jstor.org/stable/258557

Eisenschmidt, E., & Oder, T. (2018). Does mentoring matter? On the way to collaborative school culture. *Educational Process: International Journal*, *7*(1), 7-23. http://dx.doi.org/10.22521/edupij.2018.71.1

Feiman-Nemser, S. (2001). Helping novices learn to teach: Lessons from an exemplary support Teacher. *Journal of Teacher Education, 52*(1), 17-30. https://doi.org/10.1177/0022487101052001003

Glazerman, S., Isenberg, E., Dolfin, S., Bleeker, M., Johnson, A., Grider, M., & Jacobus, M. (2010). Impacts of comprehensive induction: Final results from a randomized controlled study. http://ies.ed.gov/ncee

Hatton, N., & Smith, D. (1995). Reflection in teacher education: Towards definition and implementation. *Teaching and Teacher Education, 11*(1), 33–49. https://doi.org/10.1016/0742-051X(94)00012-U

Ingersoll, R. M., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research, 81*(2), 201–233. https://doi.org/10.3102/0034654311403323

Ingersoll, R., Merrill, L., & Stuckey, D. (2014). Seven trends: The transformation of the teaching force (Research Report # RR-80). Consortium for Policy Research in Education. https://doi.org/10.1037/e579212012-001

Jay, J. K., & Johnson, K. L. (2002). Capturing complexity: A typology of reflective practice for teacher education. *Teaching and Teacher Education, 18*(1), 73–85. https://doi.org/10.1016/S0742-051X(01)00051-8

Joseph, R. (2000). *Stress free teaching: A practical guide to tackling stress in teaching, lecturing and tutoring*. Routledge. https://doi.org/10.4324/9780203016404

Kearney, S. (2017). Beginning teacher induction in secondary schools: A best practice case study. *Issues in Educational Research, 27*(4), 784–802. http://www.iier.org.au/iier27/kearney.pdf

Ketterlin-Geller, L. R., Baumer, P., & Lichon, K. (2015). Administrators as advocates for teacher collaboration. *Intervention in School and Clinic, 51*(1), 51-57. https://doi.org/10.1177/1053451214542044

Knight, J. (2017). *The Impact Cycle: What instructional coaches should do to foster powerful improvements in teaching*. Sage Publications.

Korthagen, F. A. J., & Wubbels, T. (2001). Learning from practice. In F. A. J. Korthagen, J. Kessels, B. Koster, B. Lagerwerf, & T. Wubbels (Eds.), *Linking practice and theory: The pedagogy of realistic teacher education* (pp. 32–50). Lawrence Erlbaum Associates. https://doi.org/10.4324/9781410600523

Kutsyuruba, B., Walker, K. D., Stasel, R. S., & Al Makhamreh, M. (2019). Developing resilience and promoting well-being in early career teaching: Advice from Canadian beginning teachers. *Canadian Journal of Education, 42*(1), 285-321. https://journals.sfu.ca/cje/index.php/cje-rce/article/view/3511

Larrivee, B. (2008). Development of a tool to assess teachers' level of reflective practice. *Reflective Practice, 9*(3), 341–360. https://doi.org/10.1080/14623940802207451

Lawrence, J., & Tar, U. (2013). The use of grounded theory technique as a practical tool for qualitative

data collection and analysis. *The Electronic Journal of Business Research Methods, 11*(1), 29–40.

Lim, J., Fickel, L., & Greenwood, J. (2022). Mapping the landscape of professional inquiry as a form of teacher learning in New Zealand: A narrative inquiry into one teacher's experience. *Professional Development in Education, 48*(1), 120–133. https://doi.org/10.1080/19415257.2019.1689526

Lockton, M. (2019). Chasing joint work: Administrators' efforts to structure teacher collaboration. *School Leadership & Management, 39*(5), 496–518. https://doi.org/10.1080/13632434.2018.1564269

Loughran, J. J. (2002). Effective reflective practice: In search of meaning in learning about teaching. *Journal of Teacher Education, 53*(1), 33–43. https://doi.org/10.1177/0022487102053001004

Madda, C., Skinner, E., & Schultz, B. (2012). Community insiders as justice-oriented teachers: Creating new educators through a collaborative approach to teacher preparation. *New Educator, 8*(4), 361-379. https://doi.org/10.1080/1547688x.2012.726594

Martin, K. L., Buelow, S. M., & Hoffman, J. T. (2015). New teacher induction: Support that impacts beginning middle-level educators. *Middle School Journal, 47*(1), 4–12. https://doi.org/10.1080/00940771.2016.1059725

McGrath, J. E. (1982). Dilemmatic: The study of research choices and dilemmas. In J. E. McGrath, J. Martin, & R. A. Kulka (Eds.), *Judgment Calls in Research* (69–102). Sage Publications. https://doi.org/10.1177/000276428102500205

Moore, L. L., & Swan, B. G. (2008). Developing best practices of teacher education. *Journal of Agricultural Education, 49*(4), 60–71. https://doi.org/10.5032/jae.2008.04060

Noble, H., & Heale, R. (2019). Triangulation in research, with examples. *Evidence-Based Nursing 22,* 67–68. https://doi.org/10.1136/ebnurs-2019-103145

Orlikowski, W. J. (1993). CASE tools as organizational change: Investigating incremental and radical changes in systems development. *MIS Quarterly, 17*, 309-340. https://doi.org/10.2307/249774

Rigney, J., Ferland, T., & Dana, N. F. (2019). Understanding teacher reflectivity in contemporary times: A (re)review of the literature. *The New Educator, 15*(4), 305-326. https://doi.org/10.1080/1547688X.2019.1631923

Ronfeldt, M., & McQueen, K. (2017). Does new teacher induction really improve retention? *Journal of Teacher Education, 68*(4), 394–410. https://doi.org/10.1177/0022487117702583

Saldaña, J. (2016). *The Coding Manual for Qualitative Researchers* (3rd ed.). Sage Publications. https://doi.org/10.1177/0092055x18760362

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. Jossey-Bass.

Skaalvik, E. M., & Skaalvik, S. (2018). Job demands and job resources as predictors of teacher motivation and well-being. *Social Psychology of Education, 21*(5), 1251–1275. https://doi.org/10.1007/s11218-018-9464-8

Smagorinsky, P. (2008). The method section as conceptual epicenter in constructing social science research reports. *Written Communication, 25*(3), 389-411. https://doi.org/10.1177/0741088308317815

Stanulis, R. N., & Bell, J. (2017). Beginning teachers improve with attentive and targeted Mentoring. *Kappa Delta Pi Record, 53*(2), 59-65. https://doi.org/10.1080/00228958.2017.1299543

Steiner, A., Bell, J., and Wilcoxen, C. (2022), Mentoring blended with coaching: a recipe for teacher growth, *Delta Kappa Gamma Bulletin, 88*(3): 27-34. https://taudeltastate.weebly.com/uploads/1/1/9/1/11916115/2022-jour_88-3_educatorschoice-compressed.pdf

Tonna, M. A., Bjerkholt, E., & Holland, E. (2017). Teacher mentoring and the reflective practitioner approach. *International Journal of Mentoring and Coaching in Education, 6*(3), 210-227.

https://doi.org/10.1108/IJMCE-04-2017-0032

Turner, S. F., Cardinal, L.B., & Burton, R.M. (2017). Research design for mixed methods: A triangulation-based framework and roadmap. *Organizational Research Methods, 20*(2) 243–267. https://doi.org/10.1177/1094428115610808.

Voogt, J. M., Pieters, J. M., & Handelzalts, A. (2016). Teacher collaboration in curriculum design teams: Effects, mechanisms, and conditions. *Educational Research and Evaluation, 22*(3-4), 121-140. https://doi.org/10.1080/13803611.2016.1247725

Wilcoxen, C., Bell, J., and Steiner, A. (2020), Empowerment through induction: supporting the well-being of beginning teachers, *International Journal of Mentoring and Coaching in Education, 9*(1), 52-70. https://doi.org/10.1108/ijmce-02-2019-0022

Wilcoxen, C., Steiner, A., and Bell, J. (2022), New teachers thrive with induction support through the phases of a first-year teacher, In *The Educator Continuum and Development of Teachers* (pp. 289-312). IGI Global. https://doi.org/10.4018/978-1-6684-3848-0.ch015

Young, A. K., Julien, A. B., & Osborne, T. (2023). *The Instructional Coaching Handbook: 200+ Troubleshooting Strategies for Success*. ASCD.

About the Contributor(s)

Chris Wilcoxen is the teacher education graduate chair, director of the CADRE Project, and assistant professor at the University of Nebraska at Omaha (USA). Her research focuses on teacher development, induction, mentoring, coaching, instructional leadership, clinical practice, and field-based preparation.
Email: cwilcoxen@unomaha.edu
ORCID: https://orcid.org/0000-0001-7872-9430

Riley Newman is an elementary teacher who is working to improve instructional strategies and positively impact learners. She recently earned her master's degree through the University of Nebraska Omaha.
Email: rileyhope34@outlook.com
ORCID: https://orcid.org/0009-0005-8636-3447

Morgan Wulff is a mentor and coach within a metropolitan school district who adjuncts for the University of Nebraska Omaha. Her research focus is on action research, coaching and mentoring.
Email: mwulff@unomaha.edu
ORCID: https://orcid.org/0009-0003-1214-6533