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Integrating the Experiential Learning Cycle with Educational Supervision

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Abstract

Kolb's experiential learning cycle includes concrete experience, reflective observation, abstract conceptualization, and active experimentation. This paper first examines some preliminary questions concerning the rationale for exploring the use of Kolb's experiential learning in supervision. Kolb's experiential learning theory, as well as four supervision models compatible with his learning cycle, are reviewed. Guidelines are suggested for integrating the experiential learning cycle with clinical supervision, collaborative action research, lesson study, and the collegial support group. Different types of research are recommended for studying the integration of the experiential learning cycle with supervision.

Keywords

experiential learning cycle; clinical supervision; collaborative action research; lesson study; collegial support group

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Introduction

This paper is focused on the integration of Kolb's experiential learning cycle with educational supervision. After addressing some preliminary questions that revolve around the rationale for exploring this topic, I provide a brief overview of experiential learning theory, followed by overviews of four supervision models. These models include clinical supervision, a well-established form of direct assistance, as well as three models of group supervision: collaborative action research, lesson study, and the collegial support group. In the next part of the paper, I describe how the experiential learning cycle can be integrated with each of the four supervision models.

Kolb's theory includes the proposition that most adults are more comfortable learning through one or two of his four learning orientations or modes, but also that the most powerful learning takes place when the learner cycles through all four learning orientations. This creates the issue of how the supervisor can assist a teacher moving through the learning cycle to best navigate those orientations that are not the teacher's preferred mode of learning. I suggest different types of scaffolding that the supervisor conducting clinical supervision can provide to assist a teacher engaged with unfamiliar learning modes. This paper also recommends that the supervisor providing group supervision encourage teachers with particular learning orientations to provide scaffolding for colleagues who are not comfortable with those same learning modes. I close the paper with suggestions for research on the integration of experiential learning with supervision.

Preliminary Questions

Before providing overviews of Kolb's experiential learning theory and the four supervision models, consideration of some preliminary questions is in order. First, why is the exploration of using the experiential learning cycle with teachers important? The improvement of instruction and student learning are based on teacher learning. If we accept that supervision is assistance for the enhancement of teaching and learning (Glickman, et al., 2018), it only makes sense that supervision should be concerned with assisting teachers as adult learners. Whether or not integrating the experiential learning cycle with different models of supervision will assist teacher learning is an open question, but given the success that the experiential cycle has had in other fields of professional study, it will be well worth the time and effort to theorize how it can be applied, and then conduct research on its usefulness.

Aren't principals already too busy to coordinate the aforementioned models of supervision, let alone application of the experiential learning cycle? First, on a personal note, I have worked with too many principals successfully coordinating one or more of the supervision models discussed in this paper to agree with the lack-of-time argument. Carraway and Young (2015), while agreeing that time is a problem, argue, "principals do not engage in instructional leadership because they lack the requisite knowledge, skills, dispositions to do so" (p. 232). These authors recommend professional learning and district support as the solution to this problem. Also, when considering the problem of the principal's time, we need to remember that supervision is not a position, it is a process. Thus, while the principal needs to support and monitor all of the supervision that takes place in the school, providing supervision should be a collegial endeavor. With the appropriate professional learning, assistant principals, lead teachers, department chairs,

instructional team leaders, and grade-level leaders all can provide supervision; and over time, more and more teachers can assume leadership roles.

Why are these four supervision models—clinical supervision, collaborative action research, lesson study, and collegial support groups—the models selected for integration with the experiential learning cycle? Each of the four models already includes a learning cycle that, to a limited extent, involves using Kolb’s four learning orientations. Each involves concrete experiences in the classroom and calls for reflection, analysis, and action to improve teaching. Although modification of each model would be needed, no radical changes in the structure of any of the four models would be necessary. It is true that, despite their proven success, none of these models are used extensively in schools. To paraphrase my colleague Carl Glickman, rather than abandoning successful models that have yet to be widely adopted in our schools, we should work to move those models from the margins to the center of school life.

What evidence do we have that Kolb’s experiential learning cycle can enhance any of the four supervision models? Most of the research on Kolb’s theory has been done in higher education. Variations of the Kolb model have enhanced the learning of university students in the fields of organizational psychology, marketing, management, engineering, law, information technology, and math (Kolb & Kolb, 2017b). Research also has shown positive benefits in the supervision of social work field education (Raschick, et al., 1998), the supervision of professional psychology (Calvert et al., 2016), and both counseling and the supervision of counseling (Abbey et al., 1985). Closer to home, experiential learning has shown promise in the supervision of student teachers (McGlenn, 2003) and the supervision of school counseling (Gruman & Purgason, 2019). None of this literature, of course, proves that the experiential learning cycle will improve the supervision of teaching in PK-12 schools, but it does provide a basis for theorizing how we could go about applying Kolb’s theory to supervision, and for conducting research testing such application and its effects.

Theoretical Framework

David Kolb’s (2015) popular theory of experiential learning includes his work on learning orientations or modes, learning styles, and the experiential learning cycle. Kolb’s learning orientations include concrete experience, reflective observation, abstract conceptualization, and active experimentation. The learner with a *concrete experience orientation* is focused on immediate experiences that occur in a specific time and place. A concrete experience can take place in the present or by “reliving” a recent event. Feelings and interpersonal relationships are important to the concrete experience learner. The learner with a *reflective observation orientation* takes an inductive approach and values contemplating an experience and viewing that experience from different perspectives. The reflective observer examines inconsistencies between their initial impression of an experience and the reality of that experience. They identify connections between experiences and relate current issues to larger, long-term issues. The learner with a reflective-observation mode searches for meaning.

The learner with an *abstract conceptualization orientation* takes a deductive approach and values analysis and precision. The abstract conceptualizer seeks to link theory to experience, explain connections between experiences, draw conclusions, consider alternatives, and develop a

hypothesis for the future. The learner with an *active experimentation orientation* learns through acting, including creating a specific action plan, implementing that plan, and discovering what happens. The active experimenter prefers to define their own learning goals, solve practical problems, influence their environment, and establish their own criteria for success.

Kolb's original Learning Style Inventory (LSI) yields scores on each of the learning orientations or modes, and those scores are used to calculate an individual's learning style. The intersection on a grid of two "combinations scores" – the difference between the abstract conceptualization score and the concrete experience score, along with the difference between the active experimentation score and the reflective observation score—indicates the individual's learning style, with each quadrant of the grid representing one of four learning styles. The four original learning styles are:

- *Convergent*, with an emphasis on abstract conceptualization and active experimentation; "The greatest strength of this approach lies in problem solving, decision making, and practical application of ideas" (Kolb, 2015, p. 114).
- *Divergent*, with an emphasis on concrete experience and reflective observation; "The greatest strength of this orientation lies in imaginative ability and awareness of meaning and values" (Kolb, 2015, p. 115).
- *Assimilation*, with an emphasis on abstract conceptualization and reflective observation; "The greatest strength of this orientation lies in inductive reasoning and the ability to create theoretical models" (Kolb, 2015, p. 115).
- *Accommodative*, with an emphasis on concrete experience and active experimentation; "The greatest strength of this orientation lies in doing things, in carrying out plans and tasks, and getting involved in new experiences" (Kolb, 2015, p. 115).

Based on continued research, Kolb and Kolb (2017a) have expanded the number of learning styles to nine, with the Kolb LSI 4 now used to determine an individual's learning style. Despite the expanded number of possibilities, one's learning style is still based on which of the four learning orientations or modes they primarily rely on. The expanded list of learning styles includes:

- *Experiencing*, with an emphasis on concrete experience;
- *Imagining*, with an emphasis on concrete experience and reflective observation;
- *Reflecting*, with an emphasis on reflective observation;
- *Analyzing*, with an emphasis on reflective observation and abstract conceptualization;
- *Thinking*, with an emphasis on abstract conceptualization;
- *Deciding*, with an emphasis on abstract conceptualization and active experimentation;
- *Acting*, with an emphasis on active experimentation;
- *Initiating*, with an emphasis on concrete experimentation and active experimentation;
- *Balancing* the four learning modes.

Kolb's experiential learning cycle, as noted earlier, calls for the learner to journey through all four learning orientations: concrete experience, reflective observation, abstract conceptualization, and active experimentation:

Learning arises from the resolution of creative tension among the four learning modes. This process is portrayed as an idealized learning cycle or spiral where the learner “touches all the bases” . . . in a recursive process that is sensitive to the learning situation and what is being learned. (Kolb, 2015, p. 51)

In response to some scholars who have criticized the experiential learning cycle as a purely cognitivist and an overly simplified approach to learning, Kolb argues that the cycle enables interaction between the learner and their social environment, fosters dialectical and critical thinking, and encourages mindfulness. Additionally, Kolb portrays the learning cycle as a spiral of continuous learning rather than a simple four-step process. A common misperception of Kolb’s experiential learning cycle is that the learner begins the cycle with concrete experience and then journeys through reflective observation, abstract conceptualization, and active experimentation in that order, but Kolb and Kolb (2017a) state that the cycle can begin with any of the learning modes.

Literature Review

There are a number of supervision models that can be vehicles for moving through the experiential learning cycle. Four models particularly appropriate for experiential learning are clinical supervision, collaborative action research, lesson study, and the collegial support group. Each of these models call for some level of concrete experience, reflective observation, abstract conceptualization, and active experimentation. We will focus on the integration of the experiential learning cycle with each of the four supervision models later in this paper, but first let’s do a brief review of each of these models.

Clinical Supervision

Clinical supervision is focused on direct, nonevaluative, classroom-based instructional assistance (Anderson & Snyder, 1993; Cogan, 1973; Costa & Garmston, 2016; Garman, 1982; Goldhammer, 1969; Mosher & Purpel, 1972; Pajak, 1993; Smyth, 1985). Such assistance is data-based, and involves analysis of those data as well as reflective dialogue on their meaning. The successful clinical supervisor displays both the skills and professional ethics needed to effectively facilitate the teacher through the clinical cycle. The supervisor respects the teacher, is nonjudgmental, and treats the teacher as an equal. The teacher and clinical supervisor maintain a collegial relationship based on mutual trust and shared decision making, with both parties contributing to the improvement process. The goals of clinical supervision are both the improvement of teaching behaviors in the short term and the long-term development of the teacher’s reflective practice and autonomy.

There are a number of different structures for clinical supervision, with each structure consisting of a series of steps. Four different structures are summarized in Table 1. Although the steps in the four structures vary, they are fairly consistent with each other. Depending on the structure, the preconference may place more emphasis on planning teaching, more emphasis on planning the observation of teaching, or equal emphasis on both. Depending on the structure, the analysis of observation data may be done by the supervisor between the observation and the

postconference, by both the teacher and supervisor between the observation and the postconference, or by the teacher and supervisor as part of the postconference. In all four structures, the postconference includes discussion of the observation data and the improvement of teaching in the future. The “expanded structure” in Table 1 includes a specific step following the postconference and preceding the critique in which the supervisor assists the teacher in the instructional improvement effort planned in the postconference. Three of the four models in Table 1 include a post-analysis or critique of the clinical cycle that includes the teacher providing feedback to the supervisor. All of the authors represented in Table 1 urge flexibility in the structure of the clinical cycle, with variations in the structure depending on the needs of the individual teacher.

Table 1. *Alternative Structures for Clinical Supervision*

<p>Goldhammer (1969)</p> <ol style="list-style-type: none"> 1. Preobservation conference (includes lesson rehearsal and revisions) 2. Observation 3. Analysis and strategy for post-conference 4. Supervision conference (includes sharing observation data and planning for future teaching) 5. Post-conference analysis (“post-mortem”) 	<p>Cogan (1973)</p> <ol style="list-style-type: none"> 1. Establishing teacher-supervisor relationship 2. Planning lesson, series of lessons, or unit 3. Planning observation 4. Observation 5. Analysis 6. Planning for the conference 7. Conference 8. Renewed planning
<p>Glickman et al. (2018)</p> <ol style="list-style-type: none"> 1. Preconference (includes discussing lesson and planning for the observation) 2. Observation 3. Analysis and planning 4. Postconference (includes discussion of observation data, improvement plan, and plan for follow-up) 5. Critique (includes teacher feedback on each step of clinical cycle and discussion of how to improve clinical supervision) 	<p>Expanded Structure</p> <ol style="list-style-type: none"> 1. Preconference (includes placing lesson in context of recent teaching, reflection on and revision of lesson plan, and planning observation) 2. Observation 3. Analysis and planning 4. Postconference (includes discussion of lesson, observation data, improvement plan, and plan for follow-up) 5. Follow-up (includes assistance with implementing and assessing improvement effort) 6. Critique (includes teacher feedback on each step of clinical cycle and discussion of how to improve clinical supervision)

Although clinical supervision should be a regular experience for the teacher, the time and energy a supervisor must devote to a clinical cycle and the number of teachers a supervisor typically works with could mean that it is not feasible to schedule a second clinical cycle soon after an improvement plan is designed in a postconference. Should this be the case, the teacher and supervisor may agree on alternative ways for the supervisor to assist the teacher to

implement and assess the improvement effort. Examples of such alternatives are the supervisor providing feedback to the teacher based on video clips of the teacher's instruction, the teacher meeting with the supervisor to review artifacts of student learning, or the supervisor reviewing and responding to the teacher's reflective journal on improvement activities and their effects. Adopting such alternative follow-ups, provided they are in harmony with the spirit of clinical supervision, are consistent with the scholars' call for flexibility in implementing the clinical model.

The original versions of clinical supervision (Cogan, 1973; Goldhammer, 1969; Mosher & Purpel, 1972) all considered the improvement of instruction to be the primary benefit of clinical supervision, and the early scholars also were fairly consistent regarding a number of other intended benefits related to instructional improvement. One of these benefits is the reduction of teacher isolation based on the forming of a collegial relationship with the supervisor, with a positive supervisor-teacher relationship leading to more positive teacher-student relationships. Another benefit, based on supervisor-assisted teacher analysis of classroom teaching, is a more reflective teacher. Teacher reflectivity leads to a better understanding of student behaviors as well as why some teaching practices work, and others don't. Clinical supervision, according to the early scholars, eventually can lead to autonomous teacher decision-making, including self-critique, self-improvement, and a highly creative teaching style. The early authors also maintained that the improvement of instruction through clinical supervision includes the improvement of classroom curriculum and student assessment.

Collaborative Action Research

In collaborative action research a team of teachers agrees on a focus area they wish to investigate, gathers and analyzes needs assessment data, reviews outside sources of information on the focus area, develops an action plan, implements the plan, and assesses results. The supervisor has a critical role to play in teachers' collaborative action research. Teachers who have not previously engaged in action research need the supervisor to provide or arrange professional development on the action research cycle as well as group process, data collection, data analysis, planning, and implementation skills. The supervisor needs to facilitate the formation of an action research team, help the team organize for action research, and provide needed resources and materials. The supervisor should meet with the team regularly, modeling reflective inquiry, assisting with barriers that may arise, and mediating among team members as necessary. Supervisors who are most successful facilitating action research develop positive interpersonal relationships with teachers, practice collaborative leadership, and display flexibility throughout the action research process.

In successful collaborative action research, teachers are given a choice concerning whether or not they wish to participate in the research as well as the research focus. Teachers consider productive action research as relevant to their needs, and typically those needs are centered on their classroom practice. Successful action research teams practice shared leadership, and members support one another. Effective teams have a well-defined focus area and research question, and are given adequate time to do conduct and in-depth study. Successful collaborative research gathers needs-assessment and outcome data from a variety of data sources (students, teachers, classrooms, parents, documents and artifacts, etc.) using a variety of data

gathering methods (direct observation, videotaping, surveys, interviews, etc.). Team members engage in reflective dialogue throughout the action research—on needs assessment data, planning, improvement efforts, and evaluation data. In successful research projects, the supervisor welcomes teacher feedback on the progress of the research and displays the flexibility necessary for teachers to revise the action research in order to address problems that emerge. Rather than being forced to meet artificial deadlines, teachers are allowed the time and space to make meaningful change in their practice. Effective collaborative action research programs typically allow teachers to present the results of their research to other teachers and provide opportunities for teachers from different teams to discuss each other's research. These presentations and discussions not only recognize the teachers who have completed the research, they also provide their colleagues ideas for changing their own practice.

Research on collaborative action research indicates positive effects concerning teachers' attitudes, skills, behaviors, and professional relations. Regarding attitudes, teachers who engage in successful collaborative action research report increased self-worth, self-efficacy, commitment to meeting student needs, professional identity, and a sense of empowerment. Teachers also report enhancing their interpersonal, leadership, inquiry, decision-making, and leadership skills. Teachers who participate in sound collaborative action research are described as more analytical, reflective, flexible, creative, experimental, and effective in their teaching. Finally, teachers who carry out successful collaborative action research characterize their professional relationships as more collaborative, collegial, and mutually supportive, with a collective focus on student learning (Gordon & Solis, 2018; Gordon et al., 2008; Solis & Gordon, 2019).

Lesson Study

In lesson study, a group of teachers decides on a topic for a unit of instruction and analyzes literature on that topic. The teachers establish both a long-term, higher-level goal and a broad content-based goal for the unit. The group designs the unit, including a "research lesson." One teacher teaches the research lesson while the rest of the group and other interested parties observe the lesson. During the observation, the group members who are observing gather data on student behaviors and learning, including notes, photographs, and lesson artifacts such as examples of student work. In a post-lesson analysis, the group shares observation data and discusses the quality of the lesson and student learning in relationship to the higher-level and content-based goal. The group prepares a research-lesson report, including summaries of data gathered during the lesson, lesson artifacts, and notes on the post-lesson analysis. The report often is disseminated to other members of the school community. Based on the analysis of the lesson, the group plans a revised lesson, to be taught by a different group member, and a second cycle of the lesson study is carried out.

Beyond the structure for lesson study, there are a number of guiding principles underlying the model (Elliott, 2019; Stigler & Hiebert, 2009). First, the purpose of lesson study is to identify and address problems in curriculum, teaching, and student learning through planning, teaching, observation, and reflective analysis. As Elliott (2019) states,

... the main purpose of lesson study is to deepen insights into the problems that teachers identify in their classrooms and propose and test possible solutions in the light of them.

Such a purpose is not about perfecting a particular lesson plan. Rather, it is about deepening practically significant insights into a problematic aspect of teaching. (p. 178)

The supervisor and teacher colleagues need to focus on the processes of teaching and learning and their improvement rather than judging the individual teacher delivering the research lesson. There is a need for collaboration throughout the lesson study. Since one cannot separate curriculum from teaching, those participating in lesson study need to simultaneously engage in curriculum development and instructional improvement. Finally, the results of lesson study should be shared with other members of the educational community as input for their own reflection and experimentation.

The supervisor has a critical role to play in lesson study. First, for teachers who have not previously participated in lesson study, the supervisor needs to facilitate professional learning on the purpose, underlying principles, and process of lesson study. The supervisor also needs to work with others to change the working conditions for teachers—to provide time and space for collaborative learning, research, curriculum development, and instructional improvement. The supervisor needs to provide ongoing support and encouragement for, and recognition of, such efforts (Elliott, 2019; Özdemir, 2019; Schipper et al., 2020).

Beyond facilitating professional learning on lesson study and creating an environment supportive of lesson study, the supervisor can join teachers as a member of a lesson study group, helping to plan a unit and research lesson, teaching or observing the lesson, and engaging in the post-lesson analysis as an equal partner with teachers (Lee & Madden, 2019; Lewis et al., 2011). Lee and Madden (2019) argue that by joining a lesson study as an equal partner the supervisor shifts from an “outsider” to an “insider,” expands their pedagogical knowledge, and improves their understanding of teachers and students. Finally, the supervisor can help to place lesson study in a larger context by working with teachers to connect lesson study to the school vision and curriculum reform (Schipper, et al., 2020), by sharing the results of lesson studies with educators from outside the school, or by inviting outside educators to the school to observe research lessons or attend forums on lesson study (Lee & Madden, 2019).

The literature on lesson study indicates a wide variety of benefits (Gordon, 2016; Lee & Madden, 2019; Lewis et al., 2011; Lewis et al., 2004; Özdemir, 2019; Schipper et al., 2020). For the individual teacher, lesson study can result in increased content and pedagogical knowledge, self-efficacy, instructional skills, perceived autonomy, perceived supervisor support, connection of daily practice to long-term goals, motivation, and understanding of students and their needs. For teacher groups, lesson study can lead to increased collaboration and collegiality, collective inquiry, shared knowledge about teaching, availability of quality lesson plans, networking, seeing situations and issues from others’ viewpoints, mutual support, building upon others’ work, dissemination of lesson content and teaching strategies, and linkage of classroom practice to schoolwide goals. Finally, and most importantly, lesson study can lead to improved student learning.

Collegial Support Group

There are a variety of types of collegial support groups, and here I refer to a model developed by Keedy (Keedy, 1999; Keedy & Robbins, 1993; Keedy, et al., 2001) and expanded by Solis (Solis, 2015, Solis & Gordon, 2020). The Keedy model maintains that teachers can best improve their instruction through a combination of individual experimentation and peer interaction, with peers providing both support and critique to one another. Keedy maintains that participation in a collegial group should be voluntary, with the teacher choosing the focus of the instructional improvement effort. Keedy also holds that improvement efforts should be informed by both theoretical knowledge and teachers' practice.

In Keedy's model of collegial support, each teacher in the support group chooses a focus area for a yearlong improvement effort, and is assisted in that effort through reviewing and critiquing journal articles on the focus area, a series of game plans, feedback and encouragement from the group, and reflective writing on the progress of the improvement effort. The collegial group meets approximately every three weeks for member presentations and dialogue. In the meeting each member reviews their focus area and latest game plan, shares data on game-plan implementation they have summarized in a reflective journal, and analyzes their successes and challenges with implementation. Other members of the collegial group share their own analyses of the presenting teacher's data, provide feedback on the teacher's progress, and recommend changes for the next game plan. Each member of the group then creates a new game plan to be implemented prior to the next collegial-group meeting.

Effective supervision of collegial groups that Keedy and colleagues studied included establishing a collaborative, supportive environment, with attention to group dynamics. The effective supervisor perceived themselves as a learner, and encouraged teachers in the group to be inquisitive and to practice self-critique. The supervisor also encouraged members of the collegial group to analyze peers' improvement efforts and provide feedback. The supervisor kept the group process focused on instructional improvement, made sure that teachers gathered classroom data on the progress of their game plans, and assisted teachers as they made their presentations and provided each other feedback during group meetings. Teachers in a successful collegial group reported (a) decreased teacher isolation; (b) increased teacher collegiality, reflection on teaching, experimentation, analysis, and problem solving; and (c) a sense of empowerment.

Solis's expanded version of the collegial support group includes the game plans, reflective journals, and group meetings from Keedy's version, but adds several new components, including teacher platforms, classroom observations by the supervisor, and individual meetings with the supervisor in addition to meetings of the collegial support group. A teacher's platform is their personal philosophy of teaching (Glickman et al., 2018). In their platform, a participating teacher reflects on a number of topics, including their beliefs about the aims of education, the significance of school, the roles of the teacher and the student, and what it means to teach and learn. A central feature of Solis's model is teacher reflection on consistencies and inconsistencies between their teaching platform and their teaching behaviors, and choosing a focus area aimed at bringing about congruence between their platform and behaviors. In addition to facilitating teachers in the collegial support group as they assist each other to address their focus area, the supervisor also conducts classroom observations of each group member and shares the

observation data with each teacher in order to assist the teacher to assess and improve their game plan. Teachers also may choose to discuss data from their classroom observations in collegial support group meetings. The Solis model also provides for individual meetings between the supervisor and teacher to assist the teacher with creating their platform, articulating their focus area, preparing their game plan, and assessing and revising their game plan as the process continues.

Early in the process, each teacher shares with the collegial support group their platform, a comparison of their platform with their teaching behaviors, a focus area concerned with making their platform and teaching behaviors more congruent with each other, and their initial game plan. The group engages in reflective dialogue on all of these components. As the meetings continue, the teachers' game plans, implementation efforts, reflective journals, and classroom observation data all provide input for the group's conversations, which include peer analysis, feedback, and support. After each collegial support group meeting teachers reflect on the dialogue that took place in the meeting, revise their game plans, and continue their improvement efforts.

Solis's study found that the supervisor's facilitation of a collegial support group was critical to the success of the group. The supervisor developed an environment of trust and a culture of learning within the group. As a result of comparing their teaching platforms to their teaching behaviors and finding some inconsistencies, teachers in the collegial support group developed cognitive dissonance, which motivated them to change teaching behaviors in order to overcome that dissonance. The participants disclosed that examining their beliefs and their teaching reconnected them to their reasons for becoming teachers and gave them a sense of professional renewal. The teachers reported that reviewing objective observation data and reflective writing in their journals assisted them in the improvement process, but the greatest source of assistance was the reflective dialogue within the collegial support group.

This concludes introductory overviews of four supervision models (clinical supervision, collaborative action research, lesson study, and collegial support group) appropriate for integration with the experiential learning cycle described in the previous section. The following four sections describe how experiential learning can be integrated with each of these models of supervision.

Integrating the Experiential Learning Cycle with Clinical Supervision

Cogan (1973) recommended that the supervisor meet with the teacher prior to their first clinical cycle. Purposes of preliminary interaction include establishing a personal relationship, better understanding the teacher's teaching style, and introducing the teacher to the collegiality and analysis that characterize clinical supervision. To this list the supervisor can add determining the teacher's preferred learning orientation. It is important that the supervisor not consider this a *diagnosis*. Rather, it is about helping the teacher to decide which learning orientation they prefer. The teacher completing one of the relevant learning inventories certainly can be part of the process, but each of the learning orientations should be explained by the supervisor, and the teacher should be allowed to make the final decision as to which orientation they prefer. From the outset it should be made clear that, if at some point the teacher decides they actually are of a

different learning orientation than the one they initially decided upon, they will be allowed to declare that and request a different supervisory approach.

The clinical cycle can provide two cycles of experiential learning, as shown in Table 2. The first cycle of experiential learning begins in the preconference and extends through the teaching of the lesson to be observed. *Concrete experience* is addressed at the beginning of the preconference and consists of the supervisor asking the teacher to place the lesson to be observed in the context of the teacher's recent teaching experience. The supervisor asks the teacher to review one or more concrete experiences from the recent past that relate to the lesson to be observed. An experience might involve the teaching of particular content in the past similar to the content to be taught in the lesson to be observed, an individual or group in the class that the teacher is concerned about, or a teaching strategy used in the past the teacher would like to improve upon in the upcoming lesson. Important elements here are that the teacher be asked to review one or more specific, concrete experiences, and that the experiences be related to a concern the teacher has about the lesson to be observed.

Reflective observation in the preconference consists of review of and reflection on the teacher's lesson plan. This is a rehearsal of the lesson rather than the mere sharing of the written plan (Goldhammer, 1969), with the supervisor asking questions to clarify the lesson's objectives, teaching and learning activities, student assessment, and the relationship of those components. It is also an opportunity for the teacher to ask the supervisor for their perspective on various aspects of the lesson plan. Another part of reflective observation in the preconference is the supervisor and teacher comparing relevant aspects of the lesson plan to the concrete experience shared by the teacher at the beginning of the preconference, and reflecting on whether the concern that arose from that concrete experience is addressed in the lesson plan.

Abstract conceptualization in the preconference involves the teacher and supervisor drawing conclusions about the lesson plan, including predicting the lesson's effectiveness (Cogan, 1973) in light of the teacher's previous concrete experience and the reflective observation the teacher and supervisor have engaged in. Most likely, this will include agreeing on the need to revise some parts of the plan. Although the typical preconference does not allow time for the supervisor to share literature on the type of lesson the teacher is preparing to teach, part of the dialogue in this phase of the preconference could involve the supervisor sharing insights from the literature with the teacher that will assist the teacher to improve the lesson plan.

The first phase of *active experimentation* begins in the preconference and extends to the teaching of the lesson. Based on conclusions drawn during abstract conceptualization, the teacher and supervisor make specific revisions to the lesson plan. The two then decide what data the supervisor will gather during the observation and select or design a data collection system. The supervisor gathers the agreed-upon data during the lesson. Data might be gathered on teacher behaviors, student behaviors, teacher-student interactions, or other aspects of the lesson. Teaching a lesson, of course, is about student learning, but it also can be a source of teacher learning through active experimentation, as the teacher self-monitors and adjusts their teaching during the lesson (Costa & Garmston, 2016).

Table 2. *Clinical Supervision as Experiential Learning*

Stage	Activity Involving Teacher as Learner	Teacher's Experiential Learning Cycle
Pre-observation conference	Placing lesson in context of recent teaching	Concrete experience
	Reviewing and reflecting on lesson plan	Reflective observation
	Drawing general conclusions concerning how to improve lesson plan	Abstract conceptualization
	Revising lesson plan	Active experimentation
	Planning observation	
Classroom observation	Teaching lesson	
Supervisor's analysis and planning	-----	-----
Postobservation conference	Discussing lesson	Concrete experience
	Reviewing and reflecting on observation data	Reflective observation
	Drawing conclusions regarding lesson	Abstract conceptualization
	Decision-making on desired changes in teaching and learning	
	Action planning	Active experimentation
Follow-up	Teacher efforts to improve teaching based on clinical cycle	
Critique	Teacher provides supervisor feedback on the clinical supervision	-----

Analysis of the observation data and planning for the postconference typically is considered a separate stage of clinical supervision, and the supervisor certainly should review the observation data and plan their general approach to the postconference. Goldhammer (1969), however, recommended that the supervisor have the latitude to delay in-depth analysis of data until the

postconference, and this option would work well when integrating experiential learning with clinical supervision.

A new experiential learning cycle would begin in the postconference with a “reliving” of the teacher’s *concrete experiences* during the observed lesson along with teacher comments, concerns, or questions about what the teacher considered important aspects of the lesson. This capturing of the teacher’s description of experiences in the lesson before the sharing of observation data is supported by the earliest text on clinical supervision, in which Goldhammer (1969) shares three transcripts of postconferences. In all of these transcripts, discussion of some concrete aspect of the lesson, the teacher’s instruction, or students in the class precede the sharing of observation data. More recently, Costa and Garmston (2016) recommend that the supervisor ask the teacher to share their perceptions of the lesson while providing concrete experiences on which those perceptions are based.

The next part of the postconference involves *reflective observation*, in particular, review of and reflection on the observation data. One purpose of the data review is to compare the teacher’s intentions for the lesson to what actually took place, and this often includes the review of data on activity the teacher was not aware of while teaching. Part of reflective observation is looking for patterns in teacher and student behavior, relationships of those patterns, and their effects on lesson outcomes (Cogan, 1973; Costas & Garmston, 2016; Goldhammer, 1969; Mosher & Purpel, 1972). The supervisor and teacher engage in collaborative reflection on the observation data to determine what happened in the lesson and why it happened (Acheson & Gall, 1992).

The *abstract conceptualization* part of the postconference involves two related types of decision making. First, conclusion drawing about the strengths and weaknesses of the lesson (Krajewski, 1993) and an instructional problem (in the scientific, not deficit, sense) the teacher would like to work on (Goldhammer, 1969; Mosher & Purpel, 1972); and second, conclusion drawing about methods that will build on the teacher’s existing strengths to solve the agreed-upon problem. The supervisor and teacher rely on a variety of information in reaching these conclusions, including the observation data, both parties’ past experience, and research or theory related to the problem at hand (Fitzgerald, 1993). Selecting the problem to focus on includes deciding what improvement effort is likely to have the most significant impact on student learning (Mosher & Purpel, 1972). Deciding how to solve the problem involves considering alternative actions and deciding on the best alternative or combination of alternatives (Acheson & Gall, 1992; Costa & Garmston, 2016; Fitzgerald, 1993; Goldhammer, 1969; Mosher & Purpel, 1972). In short, the teacher and supervisor develop a working hypothesis concerning the need for and path toward instructional improvement (Cogan, 1973; Goldhammer, 1969; Mosher & Purpel, 1972).

The second round of *active experimentation* in clinical supervision begins in the postconference and extends through the follow-up. In the postconference, the teacher and supervisor design a specific action plan for instructional improvement. The action plan includes objectives, activities, resources needed, and follow-up (Glickman, et al., 2018). Depending on the improvement strategies to be tested, the action plan might cover a single or a few lessons, or could be a longer-range plan combining professional learning with classroom application. The postconference includes a commitment by the teacher to implement the plan (Cogan, 1973) and a commitment by the supervisor to participate in follow-up assistance and assessment of the improvement

effort. After the postconference, the teacher's implementation of the action plan begins. Supervisory follow-up might consist of another clinical cycle, providing the teacher with instructional resources to assist the action plan, arranging for third-party assistance, meeting with the teacher to review the teacher's progress, or a variety of other types of assistance agreed upon in the postconference.

A stage of clinical supervision not yet discussed in this section is the critique, in which the supervisor requests teacher feedback on the clinical cycle and the supervisor's performance during the cycle. The critique typically takes place either at the end of the postconference or in a separate meeting soon after the postconference. One option for the supervisor integrating experiential learning with clinical supervision is to delay the critique until the teacher has implemented the action plan.

One way the supervisor can assist teachers not comfortable with all learning orientations is to provide scaffolding to teachers when they are presented with a learning mode during clinical supervision with which they are ill at ease. There are at least three ways of providing such scaffolding. The first type of scaffolding involves adjusting the interaction between supervisor and teacher so that it matches the teacher's learning orientation. The supervisor can make this adjustment by emphasizing certain types of dialogue and decision making in the preconference, postconference, and improvement efforts that emerge from the clinical cycle.

The second way to provide scaffolding is to match the type of observation data that will be gathered to the teacher's learning orientation. Teachers with a particular orientation will be more comfortable and responsive co-designing some types of observation systems than others. Likewise, in the postconference, the teacher of a particular learning orientation will be better able to work with the supervisor to interpret and reflect upon certain types of observation data than with others. The specific type of observation data to be gathered, of course, should depend not only on the teacher's learning orientation but also on the lesson to be observed and the teacher's concerns about that lesson.

The third type of scaffolding is focused on the teacher's efforts to improve instruction after the postconference. Although the improvement effort primarily takes the form of active experimentation, for teachers who are not comfortable with that learning orientation, linking selected aspects of the improvement effort to the teacher's own learning orientation will help the teacher succeed.

In summary, the proposed model of clinical supervision calls for all teachers to journey through two cycles of experiential learning, with each cycle addressing all four learning modes, and with the supervisor providing scaffolding for teachers with a dominant learning orientation. As the teacher gains experience navigating all of the learning orientations, eventually scaffolding may no longer be necessary. In the remainder of this section, we consider clinical supervision applied to teachers with each of the four learning orientations, and how the supervisor can provide scaffolding for each type of teacher.

Scaffolding for Teachers with a Concrete Experience Orientation

Although developing rapport is important in the clinical supervision of all teachers, because of the emphasis they place on interpersonal relationships, it is especially important for teachers with a concrete experience orientation. Also, feelings are important to these teachers, thus the supervisor should emphasize the affective dimension of teaching and tend to the emotions of these teachers during clinical conferences. When asking a teacher to recall a classroom experience, it is important for the supervisor to ask the teacher to describe both the event and the feelings that accompanied that event.

Observation systems should be those that will allow the teacher to “relive” concrete experiences that occur during the observed lesson. For example, a participant open-ended observation—in which the supervisor is actually part of the lesson—allows the supervisor to not only share data but also relive important parts of the lesson with the teacher. Videotaping the lesson allows the teacher and supervisor to experience the lesson again during the postconference. Another advantage of videotaping is being able to stop the recording whenever the teacher or supervisor wishes to discuss a particular segment of the lesson. Another type of observation focused on concrete experiences consists of written descriptions of critical incidents that occur during the lesson. If the observation system chosen is critical incidents, it is important that the teacher and supervisor discuss in the preconference the general type of critical incident the teacher believes may occur during the lesson. Another type of observation that allows the teacher to recall and discuss concrete experiences during the lesson is the gathering of artifacts directly related to the lesson. Such artifacts might include photographs of key moments in the lesson, instructional materials used during the lesson, or samples of student work from the lesson.

Improvement efforts planned in the postconference and implemented after the clinical cycle should be related to concrete experiences, and in some cases involve the supervisor participating in those experiences. The supervisor and teacher might engage in a role-play with the goal of helping the teacher to prepare for some type of interaction that will be part of the improvement effort. For example, Cogan (1973) recounts a story of a role-play in which the supervisor played the role of the teacher and the teacher played the role of a student. The supervisor could co-teach a lesson with the teacher during which the teacher would try out a new teaching method, or the supervisor could arrange for the teacher to co-teach a lesson with a colleague. One concrete experience that can be used to assess the progress of an improvement plan is the teacher interviewing students to assess their reaction to a new teaching strategy. Also, modern technology makes it easy for a teacher to videotape their own teaching, then review the video to relive the teaching experience in order to assess the progress of improvement efforts. Given the need of the teacher with a concrete experience orientation for interpersonal interaction, it is important that the supervisor maintain regular contact with that teacher throughout implementation of the improvement plan.

Scaffolding for Teachers with a Reflective Observation Orientation

The supervisor working with a teacher with a reflective observation learning orientation should ask questions throughout the clinical cycle helping the teacher to reflect on such things as teacher expectations versus reality, what is going well and not going well with their teaching,

relationships among different issues they have identified, and the discovery of patterns in teacher and student behavior. Part of this supervisor-assisted reflection involves examining issues from different perspectives (the teacher's, students', and supervisor's) and considering alternative explanations for issues being considered.

Observation data for teachers with a reflective observation orientation should be in-depth descriptive data that the teacher and supervisor can reflect upon and examine from different perspectives as they search for patterns in teacher and student behaviors and interactions. A verbatim or selective verbatim record of the class would provide this type of "thick" data, as would a detached open-ended narrative. Although some discussions of these types of observations call for extensive analysis of the data by the supervisor prior to the postconference, in the case of the teacher with a reflective observation orientation it is best for the supervisor to wait for the postconference to engage in deep analysis, and to collaborate with the teacher in such analysis. This would allow the teacher to take advantage of the supervisor's expertise in data analysis, but also allow the teacher to engage in the type of reflective analysis that is characteristic of this learning orientation. A rich, poetic description and interpretation of the lesson as proposed in Eisner's (1982) artistic approach to supervision also would be appropriate for the teacher with this orientation, provided the teacher was invited to probe the supervisor's interpretation and propose their own interpretation of the lesson.

Efforts to improve teaching for the teacher with a reflective observation orientation could include the observation of expert teachers, and once the improvement effort was in full swing, observation of the teacher's improvement strategies by expert teachers or the supervisor. A teacher with this orientation appreciates both input and feedback from the supervisor, other teachers, and students. This type of teacher benefits from ongoing reflection on improvement efforts, which could take the form of reflective journal writing or reflective dialogue with colleagues.

Scaffolding for Teachers with an Abstract Conceptualization Orientation

Teachers with an abstract conceptualization orientation combine a theoretical and scientific approach to learning. On the theoretical side, they are open to new ideas and theories from the supervisor or educational literature. On the scientific side, they are comfortable with technology, quantitative data, and precise analysis. These teachers combine the theoretical and scientific as they define problems, consider alternatives, and choose solutions. In the clinical cycle, the supervisor should use a combination of supervisor expertise, outside expertise, theory building and testing, and teacher's natural inclination to seek explanation to help the teacher to draw conclusions concerning what is going on in the classroom and how to improve the teacher's instruction.

Abstract conceptualizers are well matched with quantitative observation systems, or observation data that can be converted to numbers. Such observation systems include categorical frequency instruments, such as those that record the types and numbers of questions the teacher asks, or comments the teacher makes. Interaction analysis systems, like those that measure the types and numbers of teacher-student or student-student interactions, also are included in this category. Visual diagramming, for example, tracking a teacher's or student's movements and locations

from moment to moment during a lesson, also is a type of observation appropriate for this type of teacher. The teacher with an abstract conceptualization orientation often is well matched with technology-enhanced observations like those that utilize software to convert audio recording to written transcripts as well as webcam technology (Glickman et al., 2018).

Because teachers with an abstract conceptualization orientation tend to appreciate theory and the application of theory to practice, these teachers often benefit from the supervisor sharing theoretical readings and case studies relevant to the area of teaching they wish to improve. If the supervisor decides to share such readings with the teacher, it is best to delay a discussion of the readings and action planning until a point in time beyond the postconference in order for the teacher to have time to read and reflect upon the readings. In a follow-up meeting, the supervisor and teacher can then discuss the readings and incorporate insights from the readings into the teacher's action plan. Another process consistent with abstract conceptualization is the creation of a conceptual map. One type of conceptual map can be used to illustrate the relationships of different variables in the current classroom situation and assist the teacher and supervisor to draw conclusions concerning the causes of an instructional problem the teacher is experiencing. Another type of conceptual map can help teacher and supervisor construct a theoretical model of what needs to be done to solve an instructional problem. Both types of conceptual maps are aids in constructing theory: the former assists in creating a theory concerning the problem to be addressed and its causes, the latter in developing a theory of how the problem can be solved.

A helpful approach to instructional improvement for the teacher with an abstract conceptual orientation is to view the improvement effort as a test of the "theory of improvement" developed by the teacher and supervisor. As the improvement effort proceeds, the teacher and supervisor ask if the theory is being applied with fidelity, and, if so, whether its application is having the predicted effects. If the effects are not as intended, the supervisor and teacher need to revise the theory and continue with the improvement effort guided by the modified theory.

Scaffolding for Teachers with an Active Experimentation Orientation

Teachers with an active experimentation orientation are results-oriented. They are interested in trying out new ideas in the classroom to see if they work. These teachers are practical but also willing to take risks if they believe a new teaching strategy has the potential to improve their teaching. Teachers with this orientation prefer to establish their own criteria for success and to self-assess whether or not they are meeting those criteria. The supervisor of the teacher with an active experimentation orientation should actively listen to the teacher's concerns and ideas, and share advice when the teacher requests it.

Since teachers in the active experimentation mode typically are clear on what they want to accomplish in a lesson, the best type of observation system for them is one that will help the teacher decide if they have accomplished their instructional goals. The supervisor can assist as the teacher constructs their own observation system, or the supervisor can share potential observation systems, with the teacher then selecting one of those systems. A performance indicator instrument is well suited for an observation of this type. Some models of teaching, such as direct instruction and cooperative learning, call for specific elements in a lesson, and a performance indicator instrument allows the supervisor to indicate whether each element is

present in the lesson and to make open-ended comments on the delivery of that element (Glickman, et al., 2018). Other, more broadly defined models, such as constructivist and culturally sensitive teaching, have quality indicators that can be noted as present or not on the observation instrument, which also provides space for qualitative comments (Glickman et al., 2018).

The teacher may create their own observation instrument based on criteria for teacher or student performance decided on in the preconference. For example, the behavior-response questionnaire is well suited for a teacher who wants the supervisor to record responses to predicted teacher or student behaviors discussed in the preconference. Using this type of instrument, the supervisor records student responses to particular teacher behaviors, teacher responses to specific student behaviors, and/or student responses to certain peer behaviors.

Since a teacher with this orientation typically knows what they want the supervisor to look for, a focused questionnaire observation (Glickman et al., 2018) also can be quite useful. In a focused questionnaire, the teacher and supervisor list questions about the lesson the teacher is interested in exploring, and then during the observation the supervisor takes open-ended notes on classroom behaviors relative to each question.

In general, the best approach to an instructional improvement effort for a teacher with an active experimentation orientation is to encourage the teacher to treat the endeavor like a scientific experiment, with an action plan, classroom implementation, gathering of data on effects, and reporting of results to the supervisor. The teacher can collect their own data through activities like observing individuals or groups of students and completing checklists or taking notes on student behaviors, tracking student progress over an agreed-upon period of time, or reviewing self-made videos of selected lessons. The teacher also can write periodic self-critiques of their progress and share those critiques with the supervisor.

Integrating the Experiential Learning Cycle with Collaborative Action Research

Teachers facilitated by a supervisor as they engage in collaborative action research can progress through several cycles of experiential learning, as summarized in Table 3. The first cycle begins with individual team members engaged in the *concrete experience* of sharing recent classroom experiences and their perceptions of needed change based on those experiences. Next, the team participates in *reflective dialogue* concerning those experiences. *Abstract conceptualization* consists of the team drawing conclusions about a common need the group wants to address and defining the focus of the action research. *Active experimentation* in the first experiential learning cycle consists of the team designing tools to gather target data for the purpose of finding out more about the focus area, gathering the data (from students, classrooms, teachers, documents, the school environment, parents, the community, etc.), then organizing and summarizing the data.

The second experiential learning cycle starts with the *concrete experience* of teachers sharing the extent to which the target data relates to their own teaching, students, and/or school life. The team then transitions to *reflective observation*, taking a deeper look at the target data by

Table 3. Collaborative Action Research as Experiential Learning

Phase	Action Research Activities	Experiential Learning Cycle
1	Individual members of team share perceptions of classroom experiences and perceptions of needed change based on those experiences	Concrete Experience
	Team engages in reflective dialogue on perceptions/concerns	Reflective Observation
	Team draws conclusions on a common need of team members and their students and selects focus area for action research	Abstract Conceptualization
2	Team designs tools for gathering target data	Active Experimentation
	Team gathers target data from classrooms, school environment, students, other teachers, parents, other community members	
	Team organizes and summarizes target data	
3	Team members connect target data to personal classroom experiences	Concrete Experience
	Team takes a deeper look at target data, viewing focus area from other stakeholders' perspectives, examining patterns across the data, searching for cause-and-effect relationships	Reflective Observation
4	Team reviews readings/videos on focus area, engages in dialogue on how information from those sources relates to the focus area, considers alternative actions to address focus area	Abstract Conceptualization
5	Team designs action plan: goals, improvement activities, evaluation activities	Active Experimentation
6	Team implements action plan, including ongoing gathering of evaluation data	
7	Team engages in ongoing dialogue concerning members' experiences, concerns, discoveries, feelings during their participation in the action research	Concrete Experience
8	Team analyzes evaluation data, tests for congruence of action plan and implementation, compares intended effects with actual effects	Reflective Observation
9	Team draws conclusions on results of the action research, what has been learned, whether the action research should conclude or continue	Abstract Conceptualization
10	If action research is continued, a revised plan is designed and implemented (The cycle continues)	Active Experimentation

comparing teacher perspectives on the meaning of the data, searching for patterns cutting across the data, and identifying cause-and-effect relationships. Next, the team engages in *abstract conceptualization*, reviewing articles, chapters, or videos on the focus area, discussing ways information from the outside sources relates to the focus area, and considering alternative actions to address the focus area. The team then collaborates in *active experimentation* by designing an action plan, including goals, improvement activities, and evaluation activities. Active experimentation continues with implementation of the action plan, including the gathering of evaluation data.

Cycle three of experiential learning begins with the *concrete experience* of team members discussing their participation in the action research, including their actions, concerns, discoveries, and feelings during that participation. The team next carries out *reflective observation* as it (a) analyzes the evaluation data, including comparison of different types of data; (b) reflects on the level of congruence between the action plan and its implementation; and (c) compares actual effects of the action research with its intended effects. *Abstract conceptualization* in this cycle consists of the team drawing conclusions on the level of success of the action research, what has been learned, and whether or not the action research should conclude or continue. If the decision is to continue, the team discusses potential revisions to the research. And, if the action research continues, *active experimentation* will include making specific revisions to the action plan and implementing the revised plan. As with other versions of collaborative action research, at the conclusion of the research the team should have the opportunity to present its findings to a larger audience.

The idea of scaffolding has a somewhat different meaning when providing group supervision rather than direct assistance such as clinical supervision. Provided the group being supervised includes teachers who, across the group, possess each of the four learning modes, the supervisor can facilitate teachers with different learning modes assisting each other through the experiential learning cycle. The discussion below provides some examples of how the supervisor can encourage teachers employing different learning modes to assist each other during collaborative action research.

Scaffolding by Teachers with a Concrete Experience Orientation

Teachers with a concrete experience orientation can foster interpersonal relationships among team members. In the initial phase of action research, these teachers can share experiences that could point to the need for instructional change and encourage others to do the same. Once target data is gathered, concrete-experience teachers can assist colleagues to make connections between different types of data and group members' day-to-day experiences. During and at the conclusion of the action research, teachers with a concrete experience orientation can take the lead in sharing personal experiences while participating in the action research, and spur others to share their experiences. Teachers employing this learning mode are concerned about the feelings of others as well as their own, so they can be relied on to provide emotional support for their colleagues during the action research.

Scaffolding by Teachers with a Reflective Observation Orientation

Teachers with a reflective observation orientation can assist colleagues to “step back” and reflect more deeply on experiences, perceptions, and concerns as well as data, readings, and videos on the focus area. These teachers can encourage other members of the team to look for inconsistencies between the initial understanding of their experiences and new understanding revealed by data, outside sources, and reflective dialogue. Teachers employing reflective observation can encourage and assist colleagues to recognize patterns and identify cause and effect relationships in teaching experiences, classroom and school data, and the action research process itself.

Scaffolding by Teachers with an Abstract Conceptualization Orientation

After adequate team reflection, teachers employing an abstract conceptualization orientation can assist colleagues to move from examination of experiences and concerns to agreement on a common need and selection of a focus area for action research. Working with the supervisor, these teachers can locate, preview, and introduce readings and videos on the focus area to colleagues, prepare a guide for discussion of outside sources, and facilitate that discussion. Teachers who emphasize abstract conceptualization tend to be comfortable with technology and, if such is the case, they can use technology to assist the team in gathering and displaying relevant data. These teachers also tend to have an affinity for quantitative data, enabling them to assist with the analysis and explanation of such data gathered during the action research. Teachers with an abstract conceptualization orientation also can assist the team in drawing conclusions during various phases of the research.

Scaffolding by Teachers with an Active Experimentation Orientation

Although all of the teachers on the action research team should participate in decisions about what types of data to gather and what tools will be used to gather those data, teachers employing an active experimentation mode can coordinate the specific design of the data gathering tools for both target and evaluation data. These teachers also can coordinate the team’s gathering and analysis of data. All of the teachers in the group should participate in creating and implementing the action plan, but the teachers with this learning orientation can use input from the other teachers to map out a draft of the action plan for review by the team, revise the plan as necessary, and facilitate other members of the team in the implementation of activities called for by the plan.

Integrating the Experiential Learning Cycle with Lesson Study

Lesson study can involve several cycles of experiential learning, as summarized in Table 4. The first cycle of experiential learning in lesson study begins with teachers discussing their *concrete experiences* with students for the purpose of selecting an instructional unit that will include the research lesson. This unit could be within a specific content area or could be an interdisciplinary unit. Next, the teachers engage in *reflective observation* by analyzing literature and other information on the unit topic to better understand the topic and the teaching of that topic. The study group then displays *abstract conceptualization* as it chooses two goals; a long-term goal

Table 4. *Lesson Study as Experiential Learning*

Phase	Activities	Experiential Learning Cycle
1	Group discussion of teaching experiences and selection of a unit topic based on those experiences	Concrete Experience
2	Group analysis of literature and other information on the unit topic	Reflective Observation
3	Group establishes a higher-level, long-term goal as well as a broad, content-based unit goal	Abstract Conceptualization
	Group designs the unit, including research lesson 1	Active Experimentation
4	One teacher teaches research lesson 1; other teachers in group and guests observe and gather different types of data on the lesson	
	Group members share experiences teaching or observing	Concrete Experience
	Group reviews and reflects on data gathered during research lesson 1	Reflective Observation
	Group draws conclusions regarding strengths and weaknesses of research lesson 1	Abstract Conceptualization
	Group revises research lesson 1 (which becomes research lesson 2)	Active Experimentation
5	A different teacher teaches research lesson 2 while other teachers in the group and guests observe and gather different types of data on lesson	
	Group members share experiences teaching or observing	Concrete Experience
	Group reviews and reflects on data gathered during research lesson 2	Reflective Observation
	Group draws conclusions regarding strengths and weaknesses of research lesson 2	Abstract Conceptualization
	Group revises research lesson 2 (Active experimentation may continue with teaching and observation of the revised lesson; another cycle of experiential learning may follow)	Active Experimentation

focused on higher-level learning and a broad, content-based unit goal. Through *active experimentation*, the study group designs the unit, including the research lesson. Active experimentation continues as one member of the group teaches the research lesson while the rest of the group and invited guests observe and collect different types of data on the lesson.

The second experiential learning cycle begins with study-group members sharing their *concrete experiences* while they taught or observed the research lesson. *Reflective observation* then takes place as the study group reviews and reflects on the data gathered during the research lesson. Next, *abstract conceptualization* involves the study group drawing conclusions about the strengths and weaknesses of the lesson. The study group then engages in *active experimentation*, first by revising the research lesson, and then through another teacher delivering the revised research lesson (lesson 2) while the group and guests again observe and gather data on the lesson. Most versions of lesson study culminate after the revision of the second research lesson, but in other versions, additional rounds of teaching, observation, reflection, and revision continue. If additional rounds of lesson study are called for, additional cycles of experiential learning would be integrated with the continued lesson study. After the last round of lesson study (last cycle of experiential learning), the study group develops a report on what was learned from the process and shares that report with a larger audience.

Scaffolding by Teachers with a Concrete Experience Orientation

As with collaborative action research, teachers in a concrete experience learning mode who are engaged in lesson study should be encouraged by the supervisor to foster interpersonal relationships among colleagues, share their teaching experiences, and encourage others to share their experiences. In the case of lesson study, all of these actions should begin early in the process with an eye toward the group coming together to agree on an instructional unit and research lesson. Later in the process, teachers with a concrete experience orientation can share—and invite others to share—experiences when teaching or gathering data during the research lesson. Although the need for attending to others' concerns and fostering positive interactions during the planning of units and lessons by teachers from different content areas seems obvious, in my own experience the variety of viewpoints and teaching practices *within* a particular content area also necessitates such attention.

Scaffolding by Teachers with a Reflective Observation Orientation

Teachers with a reflective observation orientation can assist the group in examining patterns across teaching experiences, academic content, student behaviors and learning needs, literature on the selected unit, and data gathered during research lessons. Teachers who emphasize reflective observation can help their colleagues make connections between content and student interest, short-term and long-term goals, and teaching practices and student behaviors. Teachers in this learning mode are able to examine content and pedagogy from different points of view, and assist other members of the study group to consider the unit and research lesson from different perspectives.

Scaffolding by Teachers with an Abstract Conceptualization Orientation

After the study group has had an adequate discussion of potential goals, teachers with an abstract conceptualization orientation can assist the group to choose a long-term, higher-level goal and a broad, content-based goal for the unit. After the study group completes its analysis of the data gathered during the research lesson, these teachers can help the group draw conclusions on the strengths and weaknesses of the lesson and explanations for student behaviors and learning outcomes observed by the group. Teachers in the abstract conceptualization mode can assist their colleagues to develop general ideas for improving the research lesson and the overall unit, with those ideas to be fleshed out in the revised research lesson plan. Finally, these teachers can assist the study group to identify important issues in curriculum, teaching, and learning that resonate beyond the research lesson or unit, and ideas for how the study group and other educators can address those issues.

Scaffolding by Teachers with an Active Experimentation Orientation

Teachers with an active experimentation orientation should be at the center of detailed planning of the unit and the research lesson. Teachers in this learning mode are concerned with practical application and enjoy testing new ideas, so they are good candidates to teach the research lesson, although the overall context of the lesson and make-up of the group should be considered when deciding who will deliver the lesson. These teachers not only are interested in trying out new ideas, they also are open to putting what has been learned from previous experience into practice. Teachers in active experimentation mode, thus, also should be intimately involved revising the research lesson and be considered for delivery of the revised lesson. It should be noted that data gathering during a research lesson also is a form of active experimentation, thus teachers with this learning orientation are well suited for that activity as well.

Integrating the Experiential Learning Cycle with the Collegial Support Group

The collegial support group can include teachers from the same or different content areas. A summary of two experiential learning cycles carried out by a collegial support group facilitated by a supervisor is provided in Table 5. Before the first meeting, the supervisor assists each teacher in the group to prepare their educational platform. Meeting 1 begins with each teacher sharing their platform, followed by a group discussion of the platform. *Concrete experience* is initiated in the same meeting, with each group member recalling and sharing recent teaching experiences they believe are potentially consistent and potentially inconsistent with their educational platform. The supervisor and teachers in the group facilitate individual sharing through active listening, questions, and feedback. Concrete experience continues between Meetings 1 and 2 as the supervisor coordinates group members' peer observations focused on comparison of teachers' instruction with their platforms. *Reflective observation* begins in Meeting 2 when, with the aid of the observation data, the group assists each member to reflect on potential discrepancies between platform and teaching as well as possible reasons for suspected discrepancies. *Abstract conceptualization* begins between meeting Meetings 2 and 3 as each

Table 5. *Collegial Support Group as Experiential Learning*

Group Meetings	Activities	Experiential Learning Cycle
-----	• Group members prepare individual educational platforms	-----
Meeting 1	• Each group member shares and discusses their platform with group	-----
	• Based on recent teaching experiences, each group member shares potential consistencies and inconsistencies between their platform and teaching	Concrete Experience
-----	• Peer observations of group members' teaching	
Meeting 2	• With the aid of peer observation data, the group assists each member to reflect on potential discrepancies between their platform and teaching	Reflective Observation
-----	• Each group member draws conclusions about discrepancies between platform and teaching, and prepares tentative game plan to address discrepancies	Abstract Conceptualization
Meeting 3	• Each group member shares conclusions regarding chosen discrepancy • Each group member shares tentative game plan to address the discrepancy • Group members suggest modifications to the game plan	
-----	• Supervisor shares readings selected for individual group members to assist them as they draw conclusions concerning needed modifications to game plans	
-----	• Group members make specific modifications and commit to game plans • Group members begin to implement game plans	Active Experimentation
-----	• Peer observations of group members' teaching	Concrete Experience
Meeting 4	• Based on recollections of concrete teaching experiences, each member shares perceived progress and problems with implementing game plan	
	• With the aid of peer observation data, the group assists each member to reflect more deeply on progress and problems with implementing game plan	Reflective Observation
	• Teachers consider observation data, readings provided by supervisor, and colleagues' suggestions to draw general conclusions concerning progress of change efforts and need for modifications to game plan	Abstract Conceptualization
-----	• Teachers modify game plans • Teachers implement revised game plans	Active Experimentation
Collegial support group meetings and experiential learning cycles continue for the remainder of school year		

teacher draws conclusions about discrepancies between their platform and teaching behaviors and prepares a tentative game plan to address those discrepancies. In Meeting 3, abstract conceptualization continues with each teacher sharing their conclusions regarding discrepancies between their platform and their teaching and then sharing their tentative game plan. Colleagues ask questions about and suggest modification to the game plan. Between Meetings 3 and 4, the supervisor shares readings with each teacher intended to further assist them in making conclusions about needed modifications to their game plan. The group members then begin *active experimentation* by making specific modifications to their game plan, committing to the plan, and beginning to implement the plan.

The second cycle of experiential learning begins with *concrete experience*, as group members observe each other's teaching for the purpose of gathering data on teachers' implementation of their game plans and the effects of that implementation on teachers' efforts to resolve conflict between their platforms and teaching behaviors. The concrete experience phase continues in the first part of Meeting 4, with each group member recalling their classroom experiences while attempting to implement their game plan along with perceived progress and problems with the game plan. Meeting 4 then shifts to *reflective observation*: with the aid of the data gathered in the second round of peer observations, the group helps each member to reflect further on progress and problems with game-plan implementation and needed modifications. The last part of Meeting 4 turns to *abstract conceptualization*, as each group member considers the observation data, readings provided by the supervisor, and colleagues' suggestions to draw conclusions concerning the progress of their change efforts and the need for a modified game plan and/or increased fidelity to the game plan. The last phase of the second cycle consists of *active experimentation*, with the group members modifying their game plans as necessary and implementing their new plans.

The experiential cycle repeats every few weeks throughout the school year. From year to year, teachers can revise their educational platforms, identify discrepancies between their new platforms and teaching behaviors, and develop new game plans.

Scaffolding by Teachers with a Concrete Experience Orientation

As with the other models of group supervision, the supervisor should encourage teachers with a concrete experience orientation to foster positive interpersonal relationships among members of the collegial support group as they attend to the emotional and cognitive aspects of reflective inquiry and change. Teachers in the concrete experiential mode can lead off sharing their teaching experiences and comparing those experiences to their educational platforms in concrete ways. For example, these teachers can share video segments of their teaching or artifacts from their classrooms that will bring their teaching experiences into the collegial support group. Teachers with a concrete experience orientation can initiate the sharing of progress and problems in implementing game plans, facilitate colleagues' sharing their classroom experiences, and encourage group discussion of those experiences.

Scaffolding by Teachers with a Reflective Observation Orientation

In Meeting 2, teachers with a reflective observation orientation can model reflecting on classroom observation data and potential discrepancies between data and educational platforms. Teachers in a reflective observation mode also can encourage other members of the group to engage in the same types of reflection. Similarly, in Meeting 4, teachers with a reflective observation orientation can model using new observation data to identify and reflect on progress and problems with game plans and their implementation, then facilitate other group members as they do the same.

Scaffolding by Teachers with an Abstract Conceptualization Orientation

Teachers with an abstract conceptualization orientation can lead off Meeting 3 by sharing their personal conclusions on discrepancies between their educational platforms and teaching behaviors as well as their tentative game plans for addressing those discrepancies. These teachers then can ask colleagues for suggestions for improving their game plans. Next, teachers in an abstract conceptualization mode can facilitate each colleague sharing conclusions about their own discrepancies and their tentative game plans for addressing those discrepancies, with each teacher provided group feedback. In Meeting 4, these teachers can take the lead in drawing general conclusions about the progress of their change efforts, needed modifications to their game plans, and/or the need for increased fidelity to their game plans. Finally, teachers with an abstract conceptualization orientation can facilitate other teachers as they draw their own general conclusions about their progress, need for game-plan modifications, and/or need for increased fidelity to their game plans.

Scaffolding by Teachers with an Active Experimentation Orientation

Teachers with an active experimentation orientation are willing to take risks and try out new ideas, and they wish to have an impact on the school and their colleagues. Therefore, it makes sense that teachers with this orientation would be willing to provide prototypes of improvement efforts for their colleagues. One way these teachers can do this is to prepare their tentative game plans ahead of other teachers and place them online for review by the supervisor and the collegial support group. This does not mean that the tentative game plans developed by teachers in active experimentation mode would be considered exemplars for other teachers. Rather, the tentative plans would be considered initial efforts to be analyzed and critiqued by the group for the sake of learning how to develop viable game plans. Another way that teachers with an active experimentation orientation could provide scaffolding to other members of the collegial support group would be to share videos of classroom implementation of their game plans. Such sharing would provide other members of the group assurance that the implementation of game plans can narrow the gap between a teacher's beliefs and actions, and that missteps along the way can be learning experiences leading to teacher growth.

Conclusion

Each of the models of supervision described in this paper has the potential to engage supervisors and teachers in reflective inquiry aimed at identifying needed change and bringing that change

about. Another potential benefit of these models of supervision occurs when the educators involved share the results of such reflective inquiry with other educators. This sharing can take place at the school level, district level, and beyond. With this said, research by outside scholars on the integration of the experiential learning cycle with supervision would increase the field's understanding of how this type of supervision can best be implemented and its impact on teachers, students, and schools. Such research could be quantitative, qualitative, or mixed methods, with different types of research on the integration of experiential learning with various models of supervision expanding the knowledge base.

One type of research could focus on the supervisor's performance in facilitating the experiential learning cycle. If only a small percentage of adults balance all four orientations in their learning, then we can assume that the same is true of educational supervisors. Research needs to investigate whether a supervisor who emphasizes one or two of the four orientations in their own learning can effectively facilitate teachers operating in different learning modes. Research also could determine if supervisor professional learning on the four orientations and on how to assist teachers through the experiential learning cycle could prepare supervisors for more effective facilitation of experiential learning.

Another potential line of research concerns scaffolding for teachers engaged in learning orientations they are not comfortable with. How effective are the recommended types of scaffolding in assisting teacher growth within such learning modes? Over time and repeated experiential learning cycles, does scaffolding assist the teacher to become more comfortable and successful with leaning orientations they initially have difficulty navigating?

Research on teachers' reactions to experiential learning applied to supervision also would be an important focus of scholarly research. If teachers do not react positively to a particular type supervision, there is little hope that it will facilitate any type of lasting improvement. Research also can investigate whether integrating the experiential learning cycle with any of the four supervision models discussed in this paper improves such things as teachers' commitment to students, motivation to improve their teaching, inquiry, reflection, and self-efficacy. An obvious "bottom-line" research questions is "Do teachers improve their instruction as a result of the supervision?"

Research can help us determine whether the integration of clinical supervision with the experiential learning cycle improves relational trust, collaboration, and collegiality between teachers and supervisors. Research also is necessary to determine whether integrating experiential learning cycle with group supervision (collaborative action research, lesson study, collegial support group) leads to increased teacher collaboration and collegiality.

Finally, research is needed on the impact of supervising teachers' experiential learning on students. Are intended effects on teachers—improved collaboration, inquiry, reflection, and problem solving—transferring to students? Are students improving in their academic, social, and emotional learning? It will be important that such research go beyond a review of test results and include the gathering of data on students' work products, attitudes, relationships, and applications of learning beyond the classroom. It also is important to include student voice when investigating the impact of this approach to supervision.

Although proposing detailed research designs for the research outlined above is beyond the scope of this paper, there are a number of data gathering methods that are especially appropriate for research on the experiential learning cycle. These methods cut across the four suggested models of supervision and the five areas of research recommended above. One critical method is the researcher's *direct observation* accompanied by field notes. Observation allows the gathering of real-time data on supervisors' efforts to match their approach to teachers' learning orientations, or to scaffold teacher growth in modes of learning they are not comfortable with. Observation of teachers' efforts to help other teachers through different phases of the experiential learning cycle also can provide valuable data. Classroom observation can yield data on the effects of experiential learning on teacher or student performance.

Another important type of data can be gathered through *video or audio recordings* of interactions of supervisors and teachers involved in experiential learning cycles. Such recorded data can be used for in-depth interaction analysis to determine whether supervisors are able to change their approach from teacher to teacher, and the reactions of different teachers to different supervisory approaches. Analysis of supervisor interactions with teachers with different learning orientations than the supervisor would be especially important. Such analysis also allows researchers to determine whether supervisors change their behaviors with individual teachers over time; for example, as teachers become more comfortable with different modes of learning. Recording teacher-teacher interactions in meetings within one of the models of group supervision described in this paper allows for analysis of group process and group progress over time. Video or audio recording of classroom interaction enable in-depth analysis of teacher and student behaviors and interactions, which in turn assists the researcher to determine the effects of the experiential learning cycle on teachers and students.

Surveys can be used to gather data from supervisors and teachers on their perceptions of both the supervision model being implemented and the experiential learning cycle. Perceptions of teacher growth in knowledge, skills, and dispositions as well as changes in teacher behaviors and relationships can be measured through surveys. A series of brief surveys can track progress of supervisors and teachers through different stages of a supervision model and different phases of the experiential learning cycle. Surveys also can track changes in supervisor-teacher and teacher-teacher relationships over time. Student surveys can document student perceptions of changes in teacher behaviors; teacher-student relationships; and student learning, including application of that learning beyond the classroom.

Reflective journals can reveal unique insights of supervisors and teachers during experiential learning, and help explain other data gathered through observations, recordings, and surveys. Through open-ended journal writing during their journey through the experiential learning cycle, participants can record important experiences and reactions the researcher may not have contemplated when designing the study. Supervisor and teacher reflections on critical incidents that take place in meetings or in the classroom can be especially important to the study of experiential learning.

Documents and artifacts used by supervisors and teachers during experiential learning can be an important part of the research data base. Instructional units and lesson plans, classroom

observation data gathered by supervisors or peer teachers, and action plans for instructional improvement all can be useful. Meeting agendas, readings shared as part of the learning process, minutes of meetings, and the contents of shared electronic folders all can help shed light on the experiential learning cycle and its results. Student projects, portfolios, and presentations can be analyzed by the researcher investigating the effects of teacher experiential learning on student learning. Photos of teachers in group meetings, and of teachers and students working together inside and outside the classroom, can be used to verify and illustrate research findings.

Interviews of supervisors and teachers can not only gather new data but also help to verify and link data gathered through other methods. The researcher can ask interviewees to clarify initial responses to interview questions and thus gain a more accurate understanding of their perceptions. In less-structured interviews, the researcher can delve more deeply into unexpected interviewee perceptions that emerge. Whether interviews should be individual or group, structured or unstructured, and include many or few questions will depend on the specific purpose of the research.

No single research study, of course, will prove or disprove the value of applying Kolb's experiential learning theory to educational supervision. A variety of studies are necessary, using different methods to examine the experiential learning cycle applied to different models of supervision, in different schools, with different supervisors and teachers. Regarding the potential of Kolb's theory as a supervision strategy, I would extend Kurt Lewin's famous quote, "There is nothing so practical as a good theory," and say, there is nothing so practical as a good theory, confirmed by good research.

References

- Abbey, D. S., Hunt, D. E., & Weiser, J. C. (1985). Variations on a theme by Kolb: A new perspective for understanding counseling and supervision. *The Counseling Psychologist*, 13(3), 477-501. <https://doi.org/10.1177/0011000085133016>
- Acheson, K. A., & Gall, M. D. (1992). *Techniques in the clinical supervision of teachers: Preservice and inservice applications*. Longman.
- Anderson, R. H., & Snyder, K. J. (1993). *Clinical supervision: Coaching for higher performance*. Technomic Publishing.
- Calvert, F., Crowe, T. P., & Grenyer, B. F. S. (2016). Dialogical reflexivity in supervision: An experiential learning process for enhancing reflective and relational competencies. *The Clinical Supervisor*, 35(1), 1-21. <https://doi.org/10.1080/07325223.2015.1135840>
- Carraway, J. H., & Young, T. (2015). Implementation of a districtwide policy to improve principals' instructional leadership: Principals' sensemaking of the skillful observation and coaching laboratory. *Educational Policy*, 29(1), 230-256. <https://doi.org/10.1177/0895904814564216>
- Cogan, M. L. (1973). *Clinical supervision*. Houghton Mifflin.
- Costa, A. L., & Garmston, R. J. (2016). *Cognitive coaching: Developing self-directed leaders and learners*. Rowman & Littlefield.
- Eisner, E. W. (1982). An artistic approach to supervision. In Sergiovanni, T. J. (Ed.), *Supervision of teaching* (pp. 53-66). Association for Supervision and Curriculum Development.
- Elliott, J. (2019). What is lesson study? *European Journal of Education*, 54(2), 175-188. <https://doi.org/10.1111/ejed.12339>
- Fitzgerald, J. H. (1993). Cognition and metacognition in coaching teachers. In R. H. Anderson & K. J. Snyder (Eds.), *Clinical supervision: Coaching for higher performance* (pp.183-204). Technomic Publishing.
- Garman, N. B. (1982). The clinical approach to supervision. In T. Sergiovanni (Ed.), *Supervision of Teaching* (pp. 35-52). Association for Supervision and Curriculum Development.
- Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (2018). *Supervision and instructional leadership: A developmental approach* (10th ed.). Pearson.
- Goldhammer, R. (1969). *Clinical supervision: Special methods for the supervision of teachers*. Holt, Rinehart, and Winston.
- Gordon, S. P. (2016). Expanding our horizons: Alternative approaches to practitioner research. *Journal of Practitioner Research*, 1(1), Article 2.
- Gordon, S. P., & Solis, R. D. (2018). Teacher leaders of collaborative action research: Challenges and rewards. *I. E.: Inquiry in Education*, 10(2), Article 3. <https://digitalcommons.nl.edu/ie/vol10/iss2/3>
- Gordon, S. P., Stiegelbauer, S. M., & Diehl, J. (2008). Characteristics of more and less successful action research programs. In S. P. Gordon (Ed.), *Collaborative action research: Developing professional learning communities* (pp. 79-94). Teachers College Press.
- Gruman, D. H., & Purgason, L. L. (2019). A brief experiential school counseling site supervisor training approach. *The Clinical Supervisor*, 38(2), 243-261. <https://doi.org/10.1080/07325223.2019.1635061>
- Keedy, J. L. (1999). Examining teacher instructional leadership within the small group dynamics of collegial groups. *Teacher and Teacher Education*, 15(7), 785-799.

- Keedy, J. L., Gordon, S. P., Newton, R. M., & Winter, P. A. (2001). An assessment of school councils, collegial groups, and professional development as teacher empowerment strategies. *Journal of In-service Education*, 27(1), 29-50.
- Keedy, J. L., & Robbins, A. D. (1993). Teacher collegial groups: A culture-building strategy for department chairs. *The Clearing House*, 66(3), 185-188.
<http://www.jstor.org/stable/30188993>
- Kolb, D. A. (2015). *Experiential learning: Experience as the source of learning and development* (2nd ed.). Pearson.
- Kolb, A. Y., & Kolb, D. A. (2017a). *The experiential educator: Principles and practices of experiential learning*. EBLS Press.
- Kolb, A. Y., & Kolb, D. A. (2017b). Experiential learning theory as a guide for experiential educators in higher education. *Experiential Learning & Teaching in Higher Education*, 1(1), 7-44. <https://nsuworks.nova.edu/elthe/vol1/iss1/7>
- Krajewski, R. J. (1993). The observation cycle: A methodology for coaching and problem solving. In R. H. Anderson & K. J. Snyder (Eds.), *Clinical supervision: Coaching for higher performance* (pp. 99-111). Technomic Publishing.
- Lee, V., & Madden, M. (2019). "We're in this together": Principals and teachers as partners and learners in lesson study. *NASSP Bulletin*, 103(1), 51-64.
<https://doi.org/10.1177/0192636519826717>
- Lewis, C., Perry, R., Foster, D., Hurd, J., & Fisher, L. (2011). Lesson study: Beyond coaching. *Educational Leadership*, 69(2), 64-68.
- Lewis, C., Perry, R., & Hurd, J. (2004). A deeper look at lesson study. *Educational Leadership*, 61(5), 18-21.
- McGlenn, J. M. (2003). The impact of experiential learning on student teachers. *The Clearing House*, 76(3), 143-147. <https://doi.org/10.1080/00098650309601991>
- Mosher, R. L., & Purpel, D. E. (1972). *Supervision: The reluctant profession*. Houghton Mifflin.
- Özdemir, S. M. (2019). Implementation of the lesson study as a tool to improve students' learning and professional development of teachers. *Participatory Educational Research*, 6(1), 36-53. http://www.perjournal.com/archieve/issue_6_1/Per_19_4_pdf.pdf
- Pajak, E. (1993). *Approaches to clinical supervision: Alternatives to improving instruction*. Christopher-Gordon.
- Raschick, M., Maypole, D. E., & Day, P. A. (1998). Improving field education through Kolb learning theory. *Journal of Social Work Education*, 34(1), 31-42.
<https://doi.org/10.1080/10437797.1998.10778903>
- Schipper, T. M., de Vries, S., Goei, S. L., & van Veen, K. (2020). Promoting a professional school culture through lesson study? An examination of school culture, school conditions, and teacher self-efficacy. *Professional Development in Education*, 46(1), 112-129. <https://doi.org/10.1080/19415257.2019.1634627>
- Smyth, W. J. (1985). Developing a critical practice of clinical supervision. *Journal of Curriculum Studies*, 17(1), 1-15.
- Solis, R. (2015). *Teachers' experiences of learning through a reflective inquiry process focused on the relationship between teaching beliefs and behaviors*. [Doctoral dissertation, Texas State University]. Digital Collections, Texas State University.
<https://digital.library.txstate.edu/handle/10877/5544>
- Solis, R. D., & Gordon, S. P. (2019). Supervisor facilitation of action research: Fostering teacher inquiry. *Journal of Practitioner Research*, 4(2), Article 2.

Solis, R., & Gordon, S. P. (2020). Integrating multiple professional learning frameworks to assist teachers' reflective inquiry. *I.E.: Inquiry in Education*, 12(1), Article 12.

<https://digitalcommons.nl.edu/ie/vol12/iss1/12>

Stigler JW, & Hiebert J. (2009). Closing the teaching gap. *Phi Delta Kappan*.;91(3), 32-37.

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