# The Rationale for Helping Teacher Candidates Integrate Self-reflection into Chaotic Schedules

Sarah Y.S Tham
*Tabor College*, sarahtham@tabor.edu

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## Abstract

There is no doubt that teachers want to self-reflect. However, given the increasing number of teachers' responsibilities in and out of the classroom, teachers have to set priorities. In teacher education programs, self-reflection is included but often not emphasized. Teacher candidates are encouraged to reflect on their lesson plans, study materials, writing, and teaching experience, but a structured and useable framework is often lacking. In the end, instruction, assessments, diagnosis, and interventions remain at the forefront of teachers' minds, and self-reflection is put on the burner. This paper presents findings of how self-reflection influenced tutors in the classrooms they were tutoring in and suggests that Korthagen's (1985) framework could help teacher candidates and even classroom teachers begin integrating self-reflection into their busy schedules. As teachers continue an era of virtual classrooms, having a workable self-reflection framework might be the extra edge they need presently

## Keywords

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## Dr. Sarah Tham, Tabor College

*Sarah Tham serves in the Education Department at Tabor College. Prior to Tabor College, she was a Fulbright scholar and taught English as a Second Language in high schools. She was a national teacher trainer and examiner for ESL national examinations in Malaysia. Currently, her passion is working with teacher candidates and sharing her experience of literacy issues in her training. She has presented in international, national, and state conferences in functional literacy, teacher self-reflection, and other literacy areas. She continues to contribute to scholarship through collaboration with colleagues in the literacy and teacher education programs.*

### Introduction

Tate & Sills (2004) explained teacher self-reflection as an act of "putting [ourselves] into the experience and exploring personal and theoretical knowledge to understand it and view it in different ways" (p.126). Teachers thinking about something helps them improve practice and cognitive Awareness of the reflective process in itself (McAlpine, Weston, Bethaiume, Fairbank-Roch, & Owen, 2004). Undoubtedly, teacher candidates learn to do all the above. They often reflect on what worked and what did not and culminates in their reflections' written essays. Additionally, when teacher candidates self-reflect on their micro-teaching, lesson plans, and field experiences, it often happens in a vacuum. They are not always required to share their reflections with their peers or ask for feedback. Teacher candidates only receive feedback from their reflections from their instructors.  It is not common for teacher candidates to sit with their instructor and go through the feedback received. It is the onus of the teacher candidate to make sense of the feedback. Bailey (2006) describes it well that teachers, or in this case, teacher candidates benefit the most from reflection when they can critically enquire into their teaching. They do so by studying the information collected in their teaching, interpret the information, and then use the findings to influence their classroom-related decisions. For this to occur, teacher candidates would benefit from having a structured framework for their self-reflections.

### Theoretical framework

A constructivist framework set the foundation for this study, as it provided a lens to explore America Reads (AR) tutors' self-reflection.

From a constructivist perspective, a learner's direct actions, reactions, and interaction with the lesson guide the individual. The individuals collect information about their teaching, then contribute to their construction and reconstruction of knowledge and the adaptive abilities resulting from reflection (Farrell, 2008). Teacher candidates can learn from their experiences by constructing new representations of their meanings and storing them for later revision when they encounter new experiences. Reflective individuals monitor the effects of their actions as well as the cognitive processes employed in decision-making. Then, when faced with novel situations,

these individuals attend to them, make hypotheses, and may even check on the "gut feeling" by examining the relationships of past experiences and directly or indirectly adapt their actions to benefit their respective students. Also, these individuals can consider steps, think of possible consequences before finally choosing and implementing a new course of action with their students, and then with much deliberation, evaluate after the fact. The organized memories in individuals' schemata help them construct a better comprehension of the classroom and have a growing resource of richly connected schemata to draw on when making decisions (Arnold & the Pen Green Team, 2010). Therefore, the more individuals reflect and store their experiences and knowledge, the better they are equipped to make classroom decisions for themselves and their students.

## What is America Reads?

On August 27, 1996, President Clinton launched the America Reads (AR) initiative in Michigan, calling for the United States people to work together so that all students, by third grade, would read independently. This initiative later became incorporated into a "Call to Action for American Education in the 21st Century," introduced during Clinton's 1997 State of the Union Address. Clinton made ten educational reform recommendations, and among them was the AR Challenge (Clinton, 1996, September 12). The AR battle plan was to send "troops" or AR tutors into the classrooms to ensure that children were learning to read (Clinton, 1997, February 28). Many were federal work-study students from university campuses throughout the country.

## Reflection: What is it, and Why do it?

There are many reflective teaching models, yet there is a notable absence of a single definition of reflection (Harrington, Quinn-Leering & Hodson, 1996). At the simplest level, Brookfield (2017) defines critical reflection as "the sustained and intentional process of identifying and checking the accuracy and validity of our teaching assumptions" (p. 3). Reflection has also been described as "the inspection and evaluation of one's thoughts, feelings, and behavior" (Grant, Franklin, & Langford, 2002, p. 821). Korthagen (2001) defines reflection as "the mental process of trying to structure or restructure an experience, a problem, or existing knowledge or insights" and therefore is a form of reflection that is "different from routine action" (p. 58). Finally, reflective practice has been described as an iterative process involving "repeated cycles of examining practice, adjusting practice and reflecting upon it, before trying it again" (Grushka, McLeod &Reynolds, 2005, p. 239) rather than a one-time event.

Kahn and Walsh (2006) also identified action research, learning journals, and portfolios as other ways teachers engage in reflection. In addition to informal and formal ways of reflecting, teachers also reflect on content, processes, and premise. Reflecting on instructional content involves thinking about ways to describe a particular problem in practice. A teacher candidate reflecting on content might ask, "What do I know?" Reflecting on the process occurs when individuals try to determine a method of problem-solving. Thus, a teacher candidate reflecting on the process might ask, If I am an effective practitioner, how do I know my problem-solving approach? Reflecting on the process leads to deeper thinking about the factors or theories upon which the problem is predicated. Reflecting on-premise occurs when a teacher candidate has to

make a judgment on a particular situation. Reflecting on-premise generates questions such as, Why does it matter that I attend to this problem? Does it matter that Julie understands this or not? Does it matter that I chose this problem to guide my continuing competence? Is there an alternative? In short, conscious, reflective practice can be useful in designing sustainable teacher education (and sustainable professional development (Reid & Horvathova, 2016; and Soobik, 2014)

Korthagen (1985) argued that a key element of reflection is making one's concrete experience explicit, looking at the experience from one's frame of interpretation, and adapting this frame to improve one's performance. The ALACT model of self-reflection is systematic and structured and can guide tutors, teacher candidates, and even current teachers to develop their knowledge and skills further and engage in more effective tutoring. Individuals reflect in a manner that can address the beliefs, identity, mission, moral, political, or emotional dimensions of teaching (Korthagen, Kessels, Koster, Lagerwerf & Wubbels, 2001).

Using a structured process such as the ALACT model to reflect on teaching practices may help teacher candidates reach insights into self and practice and support implementing positive changes in their instructional practice (Johns, 2006).

**Model of Reflection-ALACT**

Korthagen's (1985) ALACT model used in this study builds on the assumption that teachers reflect on their experiences by nature but that systematic reflection may lead to more effective instructional practices. While teachers in school may be limited in the type of self-reflection they carry out due to workload and time constraints, teacher candidates may be limited in the type of self-reflection they carry out because of their lack of training self-reflection.

While unstructured self-reflection may be helpful in the short term, there is a danger that teacher candidates' growth may eventually stagnate so that the accompanying strategies become 'run of the mill' solutions (Schön, 1987). The teacher candidate is no longer in the habit of examining these strategies, let alone the analyses he or she once made of the problems they are intended to address. Thus, structured reflection is important in supporting the "development of a growth competence" (Korthagen, Kessels, Koster, Lagerwerf, & Wubbels, 2001, p.47).

Figure 1. The ALACT model

The ALACT model (Figure 1) above aims at structuring reflection and is named after the first letters of the five phases: Action, Looking back at the action, Awareness of essential aspects, Creating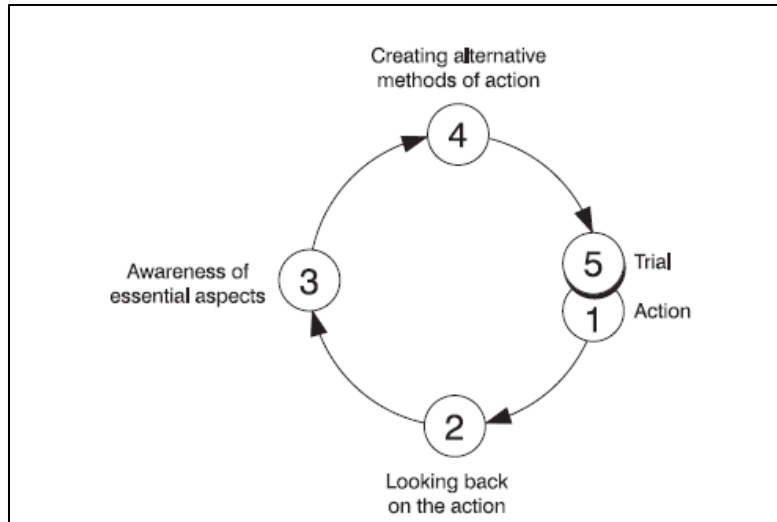 alternative methods of action, and Trial. Using a structured process such as the ALACT model to reflect on teaching practices may help teacher candidates reach insights into self and practice and support the implementation of positive changes in their instructional practice. Like teachers, they need to be reflective practitioners who can analyze a situation, set goals, plan and monitor actions, and evaluate results through their professional thinking. While technical knowledge of teaching strategies is essential, it may not be enough. Self-reflection may allow teacher candidates to develop a more precise language to clarify their thinking and possibly provide more effective instructional support to their students.

The ALACT model favors a gradual release of responsibility. Teacher candidates take responsibility for their learning because many new teachers prefer to take instructions and be told what to do. That is more of a passive attitude that both Rogers (1969) noticed. The resistance to other ways of learning can obstruct growth. Therefore by gradually releasing teachers, there is a higher chance of promoting self-directed learning, which essential to the ALACT structure. Thus, the new teacher is not alone in her teaching; there is always someone who will initially offer more structure, give assignments, and indicate possible choices and feedback to the tutor. Gradually more and more decisions will be left to the tutor, and eventually, the teachers will have complete control of their teaching yet still have the safety and trust to go for help when and where needed.

## Methodology

To answer the research question, "How do America Reads tutors engage in self-reflection data was collected from college students employed as AR tutors at a major university for one academic year (two semesters.) Participants received two rounds of training on how to engage in structured self-reflection. Each session was about two hours. Five tutors were recruited to collect in-depth data about how they engaged in self-reflection. Quantitative data was collected using the Self-Reflection and Insight Scale (SRIS; Grant, Franklin & Langford, 2002) and other

demographic information. Qualitative data came from interviews, general tutoring information (part of the demographic survey), observations, and personal self-reflections produced by the tutors.

This study had two phases: a baseline phase and an intervention/case study phase. The phases are briefly described below:

- Phase I: Baseline data gathered on all AR tutors (Self-Reflection and Insight Scale or SRIS, surveys and pre-intervention interviews)
- Phase II: Intervention provided to all AR tutors and then recruited five tutors to gather more comprehensive qualitative data (e.g., interviews)

## Intervention

This intervention study used case studies to investigate how AR tutors self-reflect and the changes, if any, they made during their tutoring. Based on Korthagen and his colleagues' work, the current study's intervention was designed to help tutors reflect on their mental and physical decisions and their emotional feelings related to their tutoring sessions. Also, tutors learned to reflect before, during, and after each tutoring session systematically. The data collected from the interview with them helped determine whether this was occurring. According to Korthagen, this provides balance to self-reflection (Korthagen et al., 2005).

The intervention was the ALACT model self-reflection training, which provided a tool for tutors to use as they self-reflected. Tutors were not familiar with structure self-reflection, and the training provided them something to base on their self-reflection journeys. The training involved PowerPoint presentations, discussion groups, pair work, real-life case scenarios (videos and written situations), and worksheets. Case study participants also received follow-up guidance and supervision as they used the structured self-reflection models during the biweekly AR meeting.

The study's goal was not to solely determine the ALACT model's effectiveness but to explore how AR tutors self-reflect. Therefore, the case provided the narrative to explain the tutors' self-reflection that explored a "bounded system" or a case over time, through detailed, in-depth data collection involving multiple sources of information and rich in context (Creswell & Maietta, 2002; Merriam, 1988.)

All training and data collection materials were pilot-tested and occurred using guidance, questions, prompts, cue responses, and protocols to ensure integrity.

## Training of the ALACT Model

The training's purpose was to guide tutors through each step of the reflective cycle with emphasis on the third stage. Tutors received guidance on becoming more aware of specific incidents that occurred during a tutoring session. For example, suppose emotions were escalating because the tutor and his/her students were feeling frustrated and annoyed, leading to an unproductive session. In that case, the self-reflection stages could help a tutor put emotions and behaviors into perspective. Consequently, if the trainer empathized with the tutor and even the student,

introduced small theoretical elements, and offered concrete suggestions, it would help the tutor begin seeing the situation from another perspective and take a step back and begin the next phase of developing alternatives. The tutor might choose to accept an alternative perspective and develop a different approach (phase 4) and try it (phase 5). The tutor could become more empathic towards and try to understand the student by listening to him/her more effectively and creating a new working environment that is more positive for other academic tasks.

In the training process, tutors worked through mock situations of different classroom or interaction scenarios. This type of teaching and learning activity is called the "discrepancy analysis" exercise. By discussing positive and negative experiences from tutoring and guided reflection, they re-experienced situations at the levels of their thinking, feeling, and desire. Finally, tutors reflected on the essential difference between positive and negative tutoring situations. They formulated those thoughts they had in one or a few words, writing them down on paper. These words often had a personally significant meaning. Next, the tutors got into pairs and helped each other to finish one of the following sentences, which was aimed at developing Awareness of themselves on the deeper levels:

- I am a person who needs…
- I am a person who views …  with importance.
- I am a person who works hard …

The trainer emphasized the importance of empathy and the concretization of feelings and guided tutors to use these ideas during their reflection. In fact, by their choice of a sentence, tutors had to conceptualize what they saw as an ideal tutoring session and discussed what qualities they believed were needed to achieve those ideal situations. As the trainer worked with the tutors through the phases in the structured reflection model, she helped them focus on aspects of the tutoring environment, student behaviors, beliefs held about a challenging situation, and competencies needed to resolve that situation. However, in their reflection, when tutors faced challenges in teaching reading, analyzing and interpreting assessment data, accessing materials, or other related tutoring issues, the trainer still provided support for them. Korthagen's self-reflection model could help tutors look at a more in-depth reflection of their inner beliefs, perceptions, and even emotions about their tutoring. However, the process of self-reflection is a personal one, and they could address it accordingly.

Group discussions allowed the tutors to learn how to recognize the qualities in each other as tutors. Generally, this needed some modeling and guidance. When discussing professional ideals and core qualities, all kinds of limiting beliefs and images come to the surface. The tutors practiced the promotion of those qualities in achieving the ideal situation they were looking for. Tutors discovered that what we were aiming at was quite a natural process; finding the proper manner of adjusting one's qualities to the environmental requirements was one of the most fundamental human processes. Unfortunately, in the classroom, we had become somewhat alienated from this process because of the emphasis on external behavior norms. It was hoped that the structured reflection would help to regenerate that natural process.

It was expected that phases 2 and 3 of the reflection cycle would require more time to delve into tutors' beliefs and opinions that were often deep-rooted. Tutors needed to work through their self-reflection to look for ideal situations they wanted to see in their tutoring sessions, what qualities they were looking for in themselves to achieve those ideal situations and what limiting aspects of themselves they saw in themselves overcome. The essential thing was for the tutor to take a step backward and become aware that he/she had a choice whether or not to allow these factors to determine his/her behavior. Some questions Korthagen et al. (2005, p. 50) suggest using in Phase 2 to help tutor concretize are:

General

- What was the context?
- What did you want?
- What did you do?
- What were you thinking?
- How did you feel?
- What did the pupils want?
- What did the pupils do?
- What were the pupils thinking?
- How did the pupils feel?


Deeper (core)

- What is the ideal situation—the situation which the teacher wants to bring about?
- What are the limiting factors preventing the achievement of that ideal?
- What limiting behavior am I displaying (e.g., avoiding confrontations)
- What limiting feelings am I feeling (e.g., I feel helpless)
- What limiting images am I seeing (e.g., This student is a mess)
- What limiting belief do I have (e.g., This is not part of my job description)
- What do you think is keeping you back here?


By providing AR tutors with an awareness of structured self-reflection using the ALACT model, they learned that specific thinking and acting patterns were counterproductive. They gained an insight into more constructive patterns of thinking and acting that may influence their tutoring decisions and future behavior. By being aware of their frustrations and limiting patterns, the tutors were empowered to be aware of new possibilities. That was the kind of deeper reflection.

This self-reflection intervention aimed to build on tutors' strengths and the positive feelings often triggered when people feel in touch with positive meanings. This self-reflection section aims to 'going deeper' by exploring the richness of one's inner potential and focusing on the positive feelings connected with this inner potential and inspiration. Such strong positive feelings are often triggered when the learning process only focuses on deep reflection levels rather than surface reflection levels.

For deep levels of reflection to occur, tutors needed opportunities to reflect in an open and relaxed atmosphere that is non-judgmental. Consequently, before training, the trainer spent some time getting to know the tutors and connecting with them on an informal level.

## Data Analysis

In Phase I, a survey was used to gather quantitative data to understand the participants' backgrounds better. The survey was given at the start and the end of the study. The participants also completed a self-reflection inventory, which provided information on themselves and what they felt about self-reflection. That was important to identify potential participants for the case studies. Due to the limited number of an initial pool of tutors, all participants were invited. In Phase II, the participants who agreed to participate completed the inventory at the start and end of the study. Qualitative data (i.e., interviews, observations, and self-reports) was collected to understand how participants engaged in self-reflection. Participants were interviewed before the start of the study and again at the end of the study. They were observed in their respective classrooms multiple times during the study period and provided self-reports of their experiences. All participants received training on self-reflection.

Data were analyzed using a constant comparative approach and triangulation to identify common themes. To determine the credibility of the information and whether it matches reality (Merriam, 1988), four primary techniques were used: (1) triangulation, which is to converge the different sources of information such as interviews, documents, and other artifacts); (2) member checking by getting feedback from the tutors on the accuracy of the identified categories and themes; (3) providing detailed, thick description to convey the findings; and (4) external auditing of asking a person outside the project to conduct a thorough review of the study and report back (Clark, Miller, Creswell, McVea, McEntarffer, Harter& Mickelson, 2002; Creswell, 2002). Furthermore, thick description was facilitated by a systematic documentation of research procedures, activities, decisions, and steps in the process of data collection, analysis, and interpretation (Nastasi & Schensul, 2005). Procedures were explicated as an ongoing process to depict the research process post hoc accurately.

## Findings

Findings were presented, followed by three case studies of three tutors. Caution and mindfulness were needed when making assumptions based on data, primarily since the data was studied inductively. Transcription of the interviews happened as quickly as possible to share information with the case study participants. The quick turnaround of transcribing ensured that the information was as accurate as possible and added credibility and trustworthiness to the study.

The study findings provided insights on effective tutor self-reflection and how it could influence teacher candidates to improve their instructions and help program coordinators design targeted and effective strategies for preparing better tutors or teacher candidates. The study participants came from a Mid-western college.  All except one of the tutors majored in different fields of studies at the point of recruitment. One of them was a psychology major with a minor in pre-nursing in her second year in college. The other was pursuing a degree in anthropology and was

in her first year in college. The third was an education major in her first year of study: the first two taught kindergarteners and the third, fourth graders.

Three guiding questions helped guide the interviews, classroom observations, and analysis of data. The guiding questions focused on what the tutors reflected on, when and how reflection was done, and the lessons each participant learned from their self-reflection.

**What Do Tutors Reflect On?**

Several issues that tutors self-reflected before and then after the training were identified by analyzing the participants' responses to self-reflection and classroom observations data. It is worth noting that before the training, all participants had limited knowledge of the essence of structured self-reflection in general and while tutoring. All participants looked forward to receiving training on how to engage in self-reflection to become better at it and, hopefully, impact positive change to the students' academics. After they received training, the participants reflected on several issues, including

1. what they had learned about tutoring their students. For example, a tutor used self-reflection to think of the best way she could help a student who experienced "meltdowns" when struggling to spell some words. The tutor identified the circumstances surrounding it, recognized the signs that meltdowns were about to occur, and hence strategized accordingly on how best she could help the student. She used the structured self-reflection approach and borrowed ideas from her previous student who had meltdowns to help a group of students who had trouble with their handwriting. Self-reflection also enabled her to fine-tune her explanations to present them in a more understandable form to the student.

2. their relationships with students. Although the tutors believed that creating a positive relationship would help the students be more responsive to them, the process was not as straightforward as they had thought. When faced with behavior problems that affected the students' concentration, they found it challenging to draw a fine line between being friendly and approachable yet still show authority through persistent self-reflection and constant adherence to The ALACT circle, tutors' plans to experiment worked.

3. their feelings toward what they were facing. Though not often, and unless reminded, the tutors reflected on their feelings emanating from their experiences as tutors. Participants reflected on their feelings because they all reported frustration, in one way or another, that they had not been adequately prepared to teach literacy strategies to support their students. For example, a tutor had a deep feeling that she needed to do more in literacy instruction when she found herself not knowing how to teach during her tutoring sessions. Another felt disturbed by the fact that there was limited time to address all the issues surrounding her. Her frustrations increased when students showed disrespect, a matter that could leave her wondering why they did so. Participants, however, agreed that self-reflection helped them find a balance between their negative feelings. It provided them with an opportunity to analyze issues keenly before making an informed decision.

4. The ALACT Model. The tutors agreed that the model was initially time-consuming as there was often trial-and-error and a little bit of luck for all the planets to align.

However, they acknowledged that once they kept up with self-reflecting consistently, it almost came automatically and provided them with a clear framework to base their practice.

**How and When Tutor Self-reflected?**

Since tutors' instruction can influence the students' lives, participants were compelled to think systematically about how they could make their tutoring practices more effective and support the students who were struggling with literacy activities. Three basic elements of self-reflection helped express the process of how the tutors self-reflected. These three elements involved something that triggered an event, self-reflection, and the development of a new perspective.

Before the self-reflection training, reflection occurred either spontaneously or superficially. Unplanned self-reflection lacked focus and did not allow tutors to consciously pause and think about what was happening and possibly reinvent their teaching strategies to match their objectives and transform the students in a better way. With the self-reflection training, tutors consciously found time to self-reflect on a triggering event. The initial phase could also be triggered by either positive or negative incidences observed in class and compelled tutors to plan to tackle the negativities and reinforce the positive attributes.

The tutors self-reflected interactively, retroactively and prospectively, to analyze their practice and the circumstances they encountered to develop a new perspective. Interactive self-reflection involved the tutors scrutinizing their teaching approaches and making the necessary adjustments in terms of how they delivered their instructions, depending on the student's responses. Since all the tutors had limited teaching experience when they joined the AR program, it was difficult for them to engage reflection-in-action as they taught. Interactive self-reflection requires a tutor to be skilled in teaching to make keen observations, analyze students' behaviors, and respond accordingly. However, some tutors could employ interactive self-reflection in certain classroom sessions despite their limited knowledge and skills.

The tutors also utilized retroactive self-reflection, otherwise referred to as reflection-on-action, to look back at their teaching sessions and try to find answers to why certain things happened the way they did. It involved finding lessons from previous experiences by delving into their memory and retrieving what they could remember. The ALACT model, according to Korthagen (1985), argued that a key element of reflection is making one's concrete experience explicit, looking at the experience from one's frame of interpretation, and adapting this frame to improve one's performance. That was what the tutors were doing. They were reflecting retroactively by identifying certain elements or situations that they previously missed. In the process, they became more self-aware and understood their students even better, providing a common platform for solving conflicts and increasing cooperation.

Lessons Tutors Learned from Self-reflection

In this study, tutors learned about their tutoring practices and other lessons about their personal qualities through self-reflection. They gained a deeper understanding of how they could approach certain situations, such as classroom conflicts, devise new tutoring strategies, and

determine their effectiveness by observing students' literacy growth. Further, tutors learned how to create positive bonds with their students to make the learning environment friendlier and support students' emotional well-being. Additionally, the tutors learned to be more organized in their practice, enabling them to effectively plan instruction for the students. They keenly scrutinized and identified essential aspects of a specific situation, then conceived a plan, which was tried and tested for its efficiency, and as necessary, made adjustments.

## Limitations

Several limitations marked this study. It had a small number of participants due to tutor withdrawal and low tutor retention from the tutors' original pool. Consequently, the low number of participants limited the amount of information collected. There could have been more tutor training on the structured reflection model, which was ongoing with the observation period. The self-reflection training used made-up examples for role-playing and discussions.

Additionally, the tutors had limited tutoring skills related to their content, making it challenging to self-reflect on their instruction. Further, some of the tutors were in classrooms that often did not offer many opportunities to provide content tutoring. Usually, their classroom activities involved managing behaviors and monitoring classroom literacy stations.

Like other qualitative studies, this study's findings only apply to this specific study context and cannot be generalized beyond this group of tutors. Despite these limitations, this study offers possibilities for how teacher candidates could develop self-reflection skills to strengthen their future classrooms' practice.

## Implications for Teacher Candidates

This study's findings indicate the need to systematically focus on developing teacher candidates' self-reflection skills, promoting self-reflection systematically throughout teacher preparation programs. A similar training structure described previously in this article may help teacher candidates build confidence and make decisions to help their students learn and behave better. Structured reflection could enhance the teacher candidates' teaching process's overall effectiveness and establish supportive relationships between them and their students. Teacher candidates would have opportunities to reflect on their prior assumptions and set apart what seems right for them in their specific situations. Besides creating a positive learning environment for the students, structured self-reflection can serve as a stepping stone for enriching each candidate's professional identity. For instance, they could become more confident and self-conscious in regulating their feelings during their service. Teacher candidates can begin to intentionally think of how their relationships with the students, the students' backgrounds, the students' attention span, and various other elements affect their decisions on how to teach content, manage behavior or extend time-on-tasks.

The study indicates that tutors' experiences and recollections of their self-reflection journeys are consistent with the theoretical concepts discussed at the beginning of the study. Structural self-reflection improves personal and professional Awareness, and professional growth promotes new meanings and solutions based on learning from classroom experiences. Like tutors, teacher

candidates who have content knowledge would benefit even more from using the ALACT model of self-reflection. Virtual learning has become more common due to world health events. Teacher education programs that specifically provide teacher candidates opportunities to harness self-reflection for more effective teaching and learning could be beneficial. The self-reflection process may allow teacher candidates to learn to take a step back, consider where their students are coming from, the trauma they may be experiencing, and work to integrate consideration for those issues with learning standards in a virtual environment. The ALACT model is a practical framework for self-reflection.

However, it can be even more beneficial if teacher candidates could also use other self-reflection techniques such as audio recordings or reflective journals to further facilitate self-reflection on personal and classroom experiences. Admittedly, journals or written reflections can help promote self-reflection. These activities are labor-intensive for teacher candidates. However, having this option available will help different teacher candidates inclined to specific techniques more than others. Also, there is always a skilled professional responsible for these teacher candidates. Increasing opportunities for group discussions and one-on-one conversation while using the ALACT model can also promote deeper self-reflection. These reflections should focus not merely on technical skills but on the ethical and social implications (which the ALACT model enables) within which they are developed. Teacher candidates can then consider individual and collective implications and seek to facilitate improvements in practice and the social dynamics they are teaching.

A big part of the ALACT model aims to develop Awareness of often less rational factors. That is apt for the current times. There are much anxiety, doubt, and often not enough self-care swirling in teachers' lives today. Whether with the pandemic or not, these issues will continue to plague teachers' lives. Teacher candidates need to get into the groove of self-reflecting with automaticity to prepare for their classrooms. In other words, the model aims at a holistic approach to supporting teachers and teaching. Simultaneously, greater attention to other areas of reflection than just the sound sources guiding teachers' actions creates the need for a careful analysis of the possible contents of reflection.

Like the AR tutors, teacher candidates can be encouraged to examine their feelings and needs more deeply, which may help them touch upon personal issues related to their self-concepts, upbringing, and deepest motives for being a teacher. Further, Korthagen and his colleagues believe deeper self-reflection can have long-lasting benefits for teacher candidates as they begin their professional careers.

Like teachers, teacher candidates need to be reflective practitioners too. They should be thoughtful persons who analyze a situation, set goals, plan and monitor actions, and evaluate results through their professional thinking. They would be able to consider the immediate and long-term social and ethical implications of their reflected decision. While technical knowledge of teaching strategies is important, it may not be enough. Self-reflection may allow teacher candidates to develop a more precise language to clarify their thinking and possibly provide more effective instructional support to their students.

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