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Exploring reflective teaching approaches among secondary school teachers in Hawassa University's technology villages

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Abstract

This research aimed to explore the extent of secondary school teachers' engagement in reflective practice. It specifically investigated the types of reflection in which teachers participate and the factors hindering their engagement in reflective practice. To address these objectives, a mixed- methods research design was employed. Data were collected from secondary school teachers using questionnaires and focus group discussions. The findings revealed that teachers were generally not engaged in reflective practice. Weak planning and evaluation of lessons prior to implementation hindered their reflection- for- action. Similarly, insufficient focus on lesson effectiveness during implementation impeded their reflection- in- action, while a lack of evaluation of lesson outcomes after implementation negatively impacted their reflection- on- practice. Based on these findings, recommendations were provided to enhance teachers' reflective practices, including strategies for improving lesson planning, in-class reflection, and post- lesson evaluation. These recommendations aim to support teachers in bridging the gap between theory and practice, thereby fostering professional growth and improving instructional effectiveness.

1 Introduction

Reflective practice has long been recognized as a critical element in the professional development of teachers. Rooted in Dewey (1933) concept of reflective thinking, this idea emphasizes the importance of teachers critically evaluating their teaching practices to refine their strategies and enhance student learning. Schön (1983) expanded this concept by categorizing reflective practice into three distinct types: reflection- in- action, reflection- on- action, and reflection- for- action. Reflection- in- action involves making real- time adjustments during teaching, reflection- on- action occurs after the lesson to assess its effectiveness, and reflection- for- action is about planning for future improvements based on insights gained from past experiences. These reflective processes enable teachers to engage with their practice at various stages, continuously improving both their teaching techniques and their students' learning outcomes.

The role of reflective practice in improving teacher effectiveness and student achievement is widely acknowledged in educational research. Teachers who regularly engage

in reflective practices are better able to adapt to diverse classroom contexts, address individual student needs, and refine their instructional strategies (Farrell, 2015; Larrivee, 2008). Furthermore, reflective practice helps teachers to bridge the gap between theoretical knowledge acquired during their training and its practical application in the classroom (Zeichner and Liston, 2013). By critically examining their teaching methods and understanding the teaching- learning process, reflective teachers become more attuned to the needs of their students and the dynamics of the classroom.

Despite its recognized benefits, reflective practice faces several challenges, particularly in resource- constrained settings. Teachers often struggle to engage in reflective practices due to time constraints, lack of institutional support, and insufficient training on reflective methods (Korthagen, 2017). In countries like Ethiopia, these challenges are further exacerbated by overcrowded classrooms, high student- teacher ratios, and limited opportunities for professional development (Asfaw, 2017; Jita and Mokhele, 2014). As a result, many teachers find it difficult to consistently engage in reflective practices, which limit their ability to improve and adapt their teaching approaches.

While the importance of reflective practice in enhancing teacher development and student learning is well- established globally, there is a pressing need to examine how it is implemented in specific educational contexts, particularly in developing countries like Ethiopia. In these settings, teachers face unique challenges that may hinder their ability to fully adopt reflective practices. This study aims to investigate the current status of reflective practice among secondary school teachers in Ethiopia, focusing on the factors that influence its adoption and the types of reflective practices employed by teachers.

The theory- practice gap remains a persistent issue in education. Although teachers receive training based on research- derived theories, many struggle to apply this theoretical knowledge effectively in their teaching practices (Nuthall, 2004). For some teachers, the theoretical knowledge gained during training is seen as disconnected from their classroom reality. As a result, they often fail to integrate theory into their daily teaching practices, leading to a disconnect between what is taught in theory and what is practiced in the classroom. Reflective practice helps teachers to examine and align their teaching practices with their beliefs, teaching structures, and individual teaching styles. Without such reflection, teachers risk relying on isolated strategies that lack a coherent theoretical foundation, making it difficult to achieve meaningful improvements in their teaching.

Scholars have attempted to conceptualize reflective practice in various ways. Schön (1983) and Clark (2007) distinguished between reflection- in- action and reflection- on- action, emphasizing that reflection is not a one- time activity but a continuous process that involves making real- time adjustments during lessons and analyzing past experiences to inform future practice. Reflection- for- action, according to Van Manen (1999), involves planning for action and preparing for future teaching situations by incorporating insights gained from past experiences. Reflection, in any of its forms, enables teachers to refine their skills, develop greater self- efficacy, and engage in more effective problem- solving (Larrivee, 2000; Kemmis, 1994). It also helps teachers develop a deeper understanding of their students' emotional and educational needs, enabling them to create more supportive and engaging learning environments (Soisangwarn and Wongwanich, 2014; Gill, 2014).

Reflective practice, rooted in the constructivist paradigm, is seen as a tool for professional growth. Constructivism advocates for active involvement in learning, where teachers are not just transmitters of knowledge but facilitators who help students construct their own understanding (Osterman, 1999). This approach requires teachers to engage in ongoing reflection, which is an experiential learning cycle that includes four stages: experience, assessment, re- conceptualization, and experimentation (Osterman, 1999). Through reflection, teachers assess their experiences, reframe their understanding, and experiment

with new strategies in the classroom. This process allows teachers to bridge the gap between technical knowledge and the tacit knowledge they form by integrating theory and practice (Hine, 2002). Schon described this as the theory- practice gap, which reflects the challenge teachers face in applying theoretical knowledge effectively in the classroom.

The different types of reflection reflection- for- action, reflection- in- action, and reflection- on- action play distinct roles in enhancing teaching practices. Reflection- for- action helps teachers plan for upcoming lessons, considering students' backgrounds, classroom dynamics, and learning objectives. Reflection- in- action allows teachers to adjust their teaching strategies in real time, while reflection- on- action focuses on post- lesson evaluation, helping teachers identify strengths and weaknesses for future improvement. However, the lack of reflection in practice is often the primary reason for the persistence of the theory- practice gap. Teachers who neglect to reflect on their practice fail to integrate theoretical knowledge with classroom realities, which leads to routine teaching that lacks intentionality and effectiveness.

This study is thus initiated to explore the extent to which secondary school teachers in Ethiopia engage in reflective practice and identify the barriers they face in bridging the theory- practice gap. Understanding these challenges will provide insights into how reflective practice can be better integrated into teachers' professional development and improve their teaching practices, ultimately enhancing student learning outcomes.

1.1 Research problem

The classroom is the place where educational theory is applied, examined, and assessed. However, theory alone is insufficient without reflection on its practical application. While teachers may possess theoretical knowledge, it is through reflective practice that they refine their teaching methods, assess student needs, and adapt their strategies to improve learning outcomes. The theory- practice gap arises when teachers fail to reflect on their classroom experiences, thus preventing the connection between theoretical knowledge and real- world teaching practice (Schön, 1983).

Reflective practice allows teachers to critically examine and reframe their beliefs, assumptions, and teaching strategies based on their experiences. Teachers who reflect before, during, and after their lessons are better equipped to adapt their methods in alignment with student needs, contextual factors, and educational goals (Clark, 2007; M. Cavanagh and Prescott, 2010). Dewey (1933) emphasized that teachers do not learn solely from experience but from reflecting on it. This reflective process is crucial for professional growth and enhancing student learning. However, in many Ethiopian secondary schools, teachers engage minimally in reflective practice. This lack of reflection inhibits their ability to assess their strengths and weaknesses, preventing them from improving their teaching practices over time.

Despite the increasing recognition of reflective practice in teacher education, there is a notable lack of research on how Ethiopian teachers engage in reflective practice after completing their initial teacher training. Existing studies mostly focus on student teachers' reflective practices during their practicum, yet little attention has been paid to how teachers continue to reflect in the field. Observations of Postgraduate Diploma in Teaching (PGDT) students during their practicum revealed that neither the student teachers nor their mentors engaged in reflective practice. Lesson plans from mentors often lacked completed reflection sections, further indicating neglect of reflection in their teaching routines. The absence of reflection points to a disconnect between theoretical knowledge and classroom reality, leading to routine teaching practices that lack critical evaluation.

Several factors may contribute to the absence of reflective practice among Ethiopian teachers, including time constraints, insufficient professional development opportunities, and a cultural resistance to reflection (Alemayehu, 2019). Without reflection, teachers cannot identify areas for improvement or innovate in their teaching methods, which limit both their professional growth and their students' learning outcomes. Moreover, the absence of follow-up research on how teachers engage in reflective practice post-graduation exacerbates the issue, hindering the evaluation of teacher education curricula.

This study aims to fill this gap by exploring the engagement of secondary school teachers in Ethiopia with reflective practice. It seeks to identify the barriers they face, examine the types of reflective practices employed, and offer recommendations for improving reflective practices to enhance teaching quality and student outcomes.

1.2 Research questions

Based on the stated problem, this research seeks to answer the following key questions:

1. What types of reflection are secondary school teachers engaged in?
2. What factors hinder teachers' reflective practice in secondary schools?

1.3 Objectives of the study

The main objective of this research is to explore the extent of secondary school teachers' engagement in reflective practice.

1.3.1 Specific Objectives

Specifically, this research aims to:

1. Describe the types of reflection in which secondary school teachers are engaged.
2. Identify the factors hindering teachers' engagement in reflective practice.

1.4 Significance of the research

The findings of this research will be significant to:

Hawassa University research and development directorate: By providing baseline data on the status of teachers' reflective practice, this research will help the Directorate in designing intervention strategies or conducting further studies on this topic.

Teacher education institutes: By providing insights into how teachers are equipped with knowledge and skills related to reflective practice, this research will enable these institutions to reassess their curriculum and improve their professional relationships with practicum schools.

Teacher educators: By offering valuable information on the status of teachers' reflection, this research will help teacher educators evaluate and improve their systems of teacher preparation.

Regional education bureau, zone, and woreda education offices: By highlighting the factors affecting teachers' reflective practice, this research will assist these offices in taking appropriate remedial measures and providing the necessary support to teachers.

2 Research design and methodology

2.1 Research design

The purpose of this research was to assess the engagement of secondary school teachers in reflective practice. To answer the research questions, a mixed methods approach was employed. This approach was chosen because it allows for the collection of both qualitative and quantitative data (Creswell, 2007).

2.2 Source of data and data collection tools

2.2.1 Source of data

The primary source of data for this research was secondary school teachers. Since reflective practice is a tacit process, the most reliable data comes from the practitioners themselves. Therefore, teachers were selected as the sole source of data for the study.

2.2.2 Tools of Data Collection

Questionnaire A questionnaire was used to collect data from the respondents. The questionnaire consisted of 13 items, each with a five- point Likert scale (1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree). The items were designed to assess the types of reflective practices employed by teachers. Specifically, five items were related to reflection- for- action, three to reflection- in- action, and five to reflection- on- action.

Focus group discussion (FGD) Focus group discussions were conducted as an additional tool for data collection. According to Krueger and Casey (2000), a focus group discussion is a "carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non- threatening environment" (p. 5). The focus groups consisted of 5- 10 teachers who were homogeneous in their professional experience. A moderator facilitated the discussions, which lasted no longer than 2 hours. The focus group discussions focused on teachers' reflective practices, including planning and evaluating lessons before implementation, making adjustments during class, and assessing the effectiveness of lessons after they were taught.

2.3 Sample and sampling techniques

Five secondary schools (Addis Ketema, Tabor, Alamura, Gemeto, and Millennium) were selected randomly for the study. From each school, 10 teachers were chosen randomly, resulting in a total of 50 teachers.

For the focus group discussions, participants were selected based on their willingness to engage in the discussion. A total of 10 teachers were selected and participated in the discussions.

2.4 Data analysis

The quantitative data collected from the questionnaire were analyzed using statistical methods. Specifically, the mean scores for each item on the Likert scale and the percentage distribution of respondents' answers were calculated.

The qualitative data collected from the focus group discussions were analyzed using a qualitative approach. The responses were examined for common themes and patterns related to the teachers' reflective practices.

2.5 Ethical considerations

To ensure respect for the participants and maintain scientific rigor, the researchers adhered to fundamental ethical principles. Creswell (2007) recommends that researchers ensure confidentiality and protect participants' rights and privacy. Permission was obtained from all participants before the study commenced, and the purpose of the research was clearly explained.

The focus group participants were selected voluntarily, and to protect their anonymity, their names were not used in the study. Instead, participants were assigned numbers (e.g., T1- T10) for identification purposes when necessary.

2.6 Pilot test

A pilot study was conducted to test the reliability and internal consistency of the questionnaire. Cronbach's alpha was used to measure reliability, and the results indicated strong internal consistency, with a Cronbach's alpha value of 0.839.

3 Data presentation and analysis

In this research, fifty secondary school teachers (30 male and 20 female) participated. Of these, 10 teachers took part in the Focus Group Discussions (FGDs), with participation being voluntary.

The teachers who participated in the FGDs were assigned codes, as their responses were used in the data presentation and analysis. The table below outlines the profile of the participants and their corresponding codes:

Table 1: Profile of FGD participants

Respondents' code	Sex	Subject	Level of education	work experience
T1	M	Civics	BA	8
T2	M	English	BA	10
T3	F	Biology	BA	10
T4	M	Chemistry	BA	7
T5	M	Physics	BA	12
T6	F	Biology	BA	6
T7	M	Mathematics	BA	14
T8	M	Civics	BA	11
T9	M	English	BA	11
T10	F	Mathematics		12

3.1 Teachers' reflective practices

3.1.1 Teachers' reflection for action

The data presented in Table 2 reflects teachers' engagement in "reflection for action," which involves thinking about the future implementation of lessons. The findings suggest that most teachers are not engaging in this form of reflection. Specifically, 28 teachers (56%) disagreed with evaluating the suitability of their lessons before teaching, and 12 (24%) strongly disagreed. Only 6 (12%) agreed that they evaluate their lessons beforehand.

Writing instructional objectives and designing activities suited to students' backgrounds is crucial for effective teaching. However, the data shows that a large portion of teachers (50% and 28% respectively) did not consider students' backgrounds when writing objectives or activities. The FGD, teachers discussed their engagement in reflection for action, once, one teacher (T5) stated:

I have been teaching for 10 years. With my experience, I no longer emphasize planning lessons. I know the students' behavior, so I don't expect anything unusual in the classroom. The lesson plans are for administrative purposes, and they don't guide my teaching.

Another participant (T2) agreed, pointing out that while teachers plan, they don't evaluate their lessons.

Teachers generally lack anticipation for their lessons, which prevents them from adjusting on the spot.

These comments suggest that "reflection for action" is absent in secondary school teaching. Teachers do not anticipate classroom dynamics and thus fail to critically evaluate their teaching strategies beforehand.

Table 3:

Table 2: Teachers' reflection in action

		N	%	Mean	SD
1	While teaching, I check whether I am implementing the lesson according to my lesson plan	46	42	1.50	.818
2	I make amendments to the lesson if I can't proceed as I planned it	68	-	2.15	.521
3	I check students' engagement and learning	-	54	2.15	.853

“Reflection in action” refers to the process of evaluating and amending lessons while they are being implemented. However, the data in Table 3 suggests that many teachers do not reflect in this way. 22 (44%) of the respondents disagreed with checking the alignment of their lesson with the plan while teaching, and 26 (52%) disagreed with amending the lesson based on real- time evaluation. The absence of reflection in action stems from the lack of reflection for action, as teachers do not have pre- set strategies or objectives to modify during the lesson.

The FGD discussions confirmed this: teachers were unaware of “reflection in action” and reported that they did not evaluate the implementation of their lessons in real- time. One teacher (T5) explained:

I don’t reflect during my lessons. I have no expectations for what will happen in class, so there’s nothing to reflect on.

Another teacher (T4) shared:

The curriculum is content- heavy, and we are judged based on how much material we cover. Reflection during lessons doesn’t happen because we are focused on finishing the syllabus.

These responses show that secondary school teachers are not effectively engaging in reflection in action.

Table 3: Teachers’ reflection on action

		N	%	Mean	SD
1	At the end of the lesson, I evaluate how I implemented my lesson plan as it is planned	35	22	2.71	1.350
2	At the end of the lesson, I try to identify the weakness and strengths of my lesson	25	12	2.81	1.450
3	If I succeed in my lesson, I describe why it was successful	-	8	3.20	1.950
4	If I don’t succeed in my lesson, I describe why it was not successful	-	7	3.21	1.950
5	I use the result of lesson evaluation as a base to plan the next lesson	21	8	2.54	2.610

Reflection on action involves evaluating the success or failure of lessons after their delivery. Table 4 shows that many teachers do not practice this form of reflection. For example, 27 (54%) of respondents disagreed with evaluating how well they followed their lesson plans, and 28 (56%) disagreed with identifying their strengths and weaknesses after lessons.

In FGD discussions, teachers shared that while they informally reflected on previous lessons when preparing for future ones, they did not formally evaluate the success or failure of their teaching. As T2 mentioned:

I don’t formally evaluate my lessons. But when I’m preparing for the next lesson, I think about how well I taught the previous one.

These insights reveal that reflection on action is not a formalized practice among secondary school teachers.

4 Discussion of result

The results of this study suggest that secondary school teachers are not effectively engaging in reflective practices at various stages of their teaching process. The findings from this research resonate with existing literature on reflective teaching and the challenges teachers face in incorporating reflection into their professional practices. Below is a discussion of the results in light of relevant literature and empirical studies.

4.1 Reflection-for-action

Reflection- for- action involves pre- teaching planning where teachers anticipate how to approach lessons, evaluate their suitability, and plan for diverse classroom situations (Schön, 1983). In this study, the results indicate that a significant number of teachers did not reflect on the suitability of their lessons before teaching. More than half of the respondents (56%) did not evaluate whether their lessons would be appropriate for their students' needs. This aligns with findings from previous studies, such as those by Husu et al. (2008) and Korthagen (2004), who argue that reflective practice requires careful consideration of the lesson plan in relation to students' backgrounds and learning styles.

Research by Calderhead (1989) also suggests that while teachers acknowledge the importance of lesson planning, many fail to critically assess the appropriateness of their plans in relation to student needs. This lack of pre- teaching reflection can lead to ineffective lesson delivery, as teachers are not anticipating potential challenges or planning for varied student responses (Schön, 1987). Moreover, the absence of reflection- for- action in this study reflects the findings of Timperley et al. (2007), who highlighted that teachers often focus more on content delivery than on tailoring lessons to meet students' needs.

4.2 Reflection-in-action

Reflection- in- action refers to teachers making real- time adjustments during the lesson based on student responses and engagement (Schön, 1983). The data from this study reveal that the majority of teachers (44%) did not check whether they were delivering the lesson as planned, and more than half (52%) did not amend their teaching approach during the lesson. These findings are consistent with the research of Pultorak (1993), who found that many teachers rarely engage in reflection during lesson delivery, even though it is crucial for adapting the teaching to student responses and creating a more dynamic learning environment.

The literature supports the view that reflection- in- action is essential for teaching practice, particularly when unanticipated situations arise in the classroom (Schön, 1983). However, similar to the results of this study, several empirical studies have pointed out that many teachers either do not engage in real- time reflection or lack the skills to effectively modify their teaching mid- lesson (Meijer et al., 2009). This inability to adjust lessons may be attributed to a lack of reflective training or inadequate time and resources to engage in such practices (Darling-Hammond et al., 2017). Teachers, who are not accustomed to reflecting while teaching may find it difficult to adjust their approaches in response to student needs or classroom dynamics.

In their study on reflective practice in classrooms, R. F. Cavanagh and McMaster (2005) also found that teachers' reflections were often limited to post- teaching evaluations and did not extend to real- time classroom adjustments. This reflects the findings in this

study, where teachers were not prepared to reflect on their practices during teaching, limiting the effectiveness of their lesson delivery.

4.3 Reflection-on-action

Reflection- on- action is the process of evaluating one's teaching practices after the lesson has been completed, which involves analyzing what worked well and what could be improved for future lessons (Schön, 1983). The results in this study show that teachers largely neglected this type of reflection. A majority (54%) of teachers did not evaluate their lesson after teaching, and 56% did not reflect on their strengths and weaknesses post- lesson. This lack of post- teaching reflection is supported by earlier research by Dewey (1933) and Schön (1983), who argued that reflection after action is a critical component for professional growth and improvement. Without this reflective process, teachers miss the opportunity to learn from their experiences and enhance their future teaching strategies.

The literature emphasizes that reflection- on- action is vital for teachers to identify areas of improvement and make informed adjustments to their instructional practices. According to Korthagen (2004), teachers who engage in reflection- on- action can identify the strengths and weaknesses of their lessons, which is an essential part of professional growth. However, as this study illustrates, many teachers do not formally engage in such reflective practices. A study by Larrivee (2000) found that while some teachers informally reflect on their lessons, they often fail to document or structure this reflection in a way that leads to measurable improvements.

Moreover, the results are consistent with findings from Klassen et al. (2012), who noted that a lack of systematic reflection after teaching contributes to teachers' professional stagnation. Without formal reflection after lessons, teachers may fail to recognize recurring problems or adjust their teaching methods, which ultimately affect student learning outcomes.

4.4 Factors hindering reflective practice

The study also explored factors that hinder teachers' engagement in reflective practices, including a lack of training, insufficient professional development, and limited support. The teachers in this study cited the absence of specific training on reflective practices as a significant barrier to engaging in reflection. This is consistent with the findings of Korthagen (2001), who noted that teachers often lack the training to engage in deep reflective practices. Moreover, a lack of institutional support and time constraints were cited as additional challenges, echoing the findings of other studies (e.g., Zeichner and Liston, 1996; Timperley et al., 2007), which suggested that teachers often struggle to prioritize reflection due to heavy workloads and a lack of structured time for reflection.

The literature also indicates that teachers who are not supported in their reflective practice, either through training or through a supportive school culture, are less likely to engage in reflective teaching. According to Ross et al. (2012), reflective practice is more likely to be successful when teachers receive ongoing support and professional development that encourages critical thinking and self- reflection.

5 Conclusions

The study reveals that secondary school teachers generally do not engage in meaningful reflective practices at all stages of their teaching process. The absence of systematic reflection- for- action, reflection- in- action, and reflection- on- action limits the teachers' ability to adapt to their students' needs, refine their teaching methods, and improve the overall quality of education. Reflection is critical to fostering professional growth and enhancing teaching efficacy. However, the findings suggest that many teachers lack the knowledge, skills, and habits required to implement effective reflective practices.

In addition, factors such as a lack of training on reflective practices, insufficient professional development, and limited support systems were identified as significant barriers. These barriers inhibit teachers' ability to engage in and benefit from reflective practices, which are essential for improving teaching quality.

6 Recommendations

The findings of this study underscore the need for significant improvements in fostering reflective practices among secondary school teachers. To address the identified gaps in reflection- for- action, reflection- in- action, and reflection- on- action, as well as to mitigate the barriers hindering effective reflection, the following recommendations are proposed:

1. **Teacher training and professional development:** To foster reflective teaching practices, there is a clear need for targeted professional development programs that focus on reflection techniques. Teachers should be equipped with the knowledge and skills necessary to engage in reflection- for- action, reflection- in- action, and reflection- on- action. Training should emphasize the value of reflection in improving teaching and learning, and teachers should be provided with tools and strategies to integrate reflection into their daily practices.
2. **Curriculum and pedagogical support:** Schools and educational authorities should provide teachers with the time, resources, and support to engage in reflection. This could involve creating opportunities for collaborative reflection, such as peer observations or reflective practice groups, where teachers can share experiences and learn from one another. Additionally, lesson planning formats and school- based structures should be designed to encourage more reflective practices, allowing teachers to reflect both before and after lessons.
3. **Administrative support:** School administrators must actively promote the importance of reflection within the school culture. This includes creating an environment that values continuous improvement and where teachers feel supported in taking the time to reflect on their practices. Administrative support may also involve ensuring that teachers have sufficient time within their work schedules for professional reflection and development.
4. **Encouraging a reflective mindset:** Schools should encourage a culture of reflective practice by making it an integral part of the teaching profession. Teachers should be encouraged to see reflection as an ongoing process that enhances their teaching and positively impacts student learning. A shift in mindset from seeing reflection as an optional activity to viewing it as a professional necessity could help overcome some of the resistance to reflection found in the study.

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Data Availability

Data can be made available on the behavior of the request

Declaration of interests' statement

The author declare no competing interests.

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