

# Exploring the Influence of Head Teachers' Instructional Supervision on the Development of Competencies in Lesson Preparation for Science and Elementary Technology Teachers in Public Primary Schools in Gasabo District, Rwanda

Emmanuel Nsengumuremyi<sup>1</sup>  
Dan Imaniriho<sup>2</sup>

<sup>1</sup>nsengumuremyiimm@gmail.com

<sup>2</sup>imaniriho@yahoo.fr

<sup>1,2</sup>University of Rwanda-College of Education

Submitted: July 31, 2024, Accepted: January 2, 2025, Published: January 18, 2025

<https://doi.org/10.51867/ajernet.6.1.20>

## ABSTRACT

*This study investigates the influence of head teachers' instructional supervision on the competences of science and elementary technology teachers in public primary schools in Gasabo District, Rwanda. Effective instructional supervision is crucial for developing teachers' abilities in lesson preparation, which is vital for improving student learning outcomes. The theoretical framework is grounded in the Teacher Professional Growth theory. Using qualitative design, the study surveyed a population of teachers and head teachers from 40 public primary schools in Gasabo district, whereby 132 people including both teachers and head teachers were targeted. Purposive sampling techniques were utilized, resulting in a sample of 5 head teachers and 24 teachers who were selected by the mean of snowball sampling technique. Data collection involved qualitative methods, including interviews and document review, with thematic analysis applied to analyze research data. The findings reveal that head teachers often neglect pre-observation conferences and fail to provide constructive feedback after classroom observations. This lack of comprehensive supervision hinders teachers' professional development and their ability to effectively prepare lessons. The study shows a clear link between the involvement of head teachers in instructional supervision and the improvement of teachers' competences in lesson planning. The study concluded that low levels of head teachers' involvement in instructional supervision practices had a direct negative influence on the development of competences in lesson planning among science and elementary technology teachers, which in return affected their ability to effectively plan and implement their lessons. To address these issues, the study recommends that head teachers conduct regular pre-observation conferences and offer meaningful feedback to teachers. Additionally, it suggests that Sector Education Inspectors should frequently inspect schools to ensure proper implementation of instructional supervision practices. Furthermore, continuous professional development for head teachers is advised to enhance their supervisory skills. The research highlights the importance of effective instructional supervision in fostering teachers' professional growth and improving educational outcomes. By implementing the recommended practices, schools in Gasabo District can better support their teachers, ultimately benefiting students' learning experiences.*

**Keywords:** Classroom Observation, Constructive Feedback, Lesson Preparation, Post-Observation, Pre-Observation, Teachers' Competences

## I. INTRODUCTION

The right to education extends beyond mere access; it encompasses a commitment to quality education (United Nations International Children's Fund [UNICEF], 2000). The competence of teachers in lesson preparation is critical to the success of any educational system, as formal education significantly contributes to both individual and societal advancement. This is considered as an investment because it yields significant private and social returns (Asafu-Adjaye, 2012). Achieving educational goals requires key players like school head teachers and teachers to fulfil their responsibilities effectively. Therefore, ensuring proper supervision of teachers is a critical concern for educational organizations. In this regard, the head teacher provides essential guidance within the school environment, playing a foundational role in supervising teaching and learning activities (Mofareh, 2011).

This study investigates independent variables associated with instructional supervision practices that are vital for enhancing teacher effectiveness in lesson preparation and improving student learning outcomes. The key components for prior to classroom observations include support for teachers in setting clear instructional objectives, selecting relevant materials, and planning engaging lesson activities. The key activities for classroom observations involve assessing the effective alignment of these components with the established objectives, evaluate the effectiveness of teaching aids, and analyse instructional strategies used. After lesson observation, constructive feedback sessions for teachers provide with them valuable understandings, enabling them to refine their practices.

Collective implementation of these practices foster continuous improvement in teaching, which ultimately enhances educational outcomes.

Ekyaw (2014) defines instructional supervision as a cycle of activities between a supervisor and a teacher aimed at enhancing classroom performance. It is essential for improving teaching quality and developing teaching competences. It involves providing constructive feedback, identifying and resolving teaching issues, and aiding teachers in developing their skills. As a continuous assessment tool, instructional supervision empowers teachers to expand their capacity for learning and supporting others, thus serving as a strategy for enhancing teaching and learning. Within the school setting, effective instructional supervision is primarily the responsibility of the head teacher. And when it is done effectively, it aims at improving quality teaching and development of teaching competences.

In Rwanda, the government has made significant progress in promoting STEM (Science, Technology, Engineering, and Mathematics) education through different initiatives starting from basic education levels. A key component of this educational framework is lesson preparation, particularly for science and elementary technology teachers in public primary schools. Lesson preparation serves as the foundation for effective classroom instruction and helps ensure that learners grasp essential concepts and develop practical skills. To support this process, head teachers are expected to oversee the instructional supervision, which includes a thorough pre-observation conference, an in-depth classroom observation, and a subsequent post-lesson conference with each teacher.

In summary, the paper seeks to address the critical issue of instructional supervision in Rwandan primary schools, focusing on the need for effective supervision to improve teacher competences in science and elementary technology subject. The research is driven by the goal of enhancing the overall quality of education by providing actionable insights and recommendations for improving supervisory practices. The study's findings are expected to benefit school head teachers, educational planners, the National Examination and School Inspection Authority, and future researchers interested in educational supervision and teacher development.

### 1.1 Statement of the Problem

Research shows that instructional supervision is the foundation for improving the quality and standard of teaching and learning process (Uwaleke et al., 2021). An instructional supervision is very important for the teacher's competences (Ikegbusi, 2014). When it is conducted effectively, it helps teachers to be committed to their work and helps the less effective and inexperienced teachers to improve their teaching practices in lesson preparation. In Rwanda, head teachers are responsible for conducting instructional supervision, which includes observing teachers and providing reflective feedback to enhance professional learning. This process helps develop teachers' self-awareness regarding their teaching practices and their impact on learning outcomes (UR-CE, 2021; Imaniriho, 2011). Effective supervision by head teachers is crucial for cultivating competences into educators for them to be capable of significantly contributing to national development (Imaniriho et al., 2024; Mitchell et al., 2024). The Rwanda Basic Education Board School Leadership Assessment Toolkit recommends the school head teachers to regularly observe lessons, record their findings, and provide oral and written feedback to teachers (REB, 2021).

This paper addresses the critical issue of inadequate instructional supervision in Rwandan primary schools, particularly in the subjects of science and elementary technology (SET). Despite the importance of effective supervision by head teachers in enhancing teachers' competencies in lesson preparation, there is a noticeable gap in the implementation of these practices. This deficiency has led to insufficient teacher preparedness and poor student performance, as evidenced by low scores in national examinations among P6 students in Gasabo District. The lack of comprehensive pre-observation conferences and constructive feedback further exacerbates the issue, limiting the professional growth of teachers. The study seeks to investigate the current state of instructional supervision, its impact on teachers' competencies, and propose strategies for improvement to ensure better educational outcomes.

### 1.2 Research Objectives

The study objectives were:

- (i) To examine how primary school head teachers in Gasabo District conduct instructional supervision to improve lesson preparations for teachers.
- (ii) To evaluate the influence of instructional supervision practices on development of competences in lesson preparation among science and elementary technology teachers in public primary schools in Gasabo District.
- (iii) To elaborate the suggestions for improvement of school head teacher's instructional supervision practices.

## II. LITERATURE REVIEW

### 2.1 Theoretical Review

#### 2.1.1 The theory of Teacher Professional Growth

The theoretical framework is grounded in the Teacher Professional Growth theory by Clarke and Hollingsworth, which describes professional growth as a non-linear, recursive process influenced by various domains, including personal, practice, consequence, and external stimuli. According to Chan et al. (2019), educational supervision aims to enhance teacher professional growth. Fullan (2020) suggests that professional growth is more likely to be successful when it occurs close to the teacher's working environment and includes opportunities for reflection and feedback.

The theory identifies four domains of change in a teacher's professional environment: (i) *Personal Domain*: This includes the teacher's knowledge, beliefs, and attitudes; (ii) *Domain of Practice*: This involves classroom practices where teachers apply new, effective methods and discard ineffective ones to improve student achievement; (iii) *Domain of Consequence*: This represents the implicit outcomes, such as a teacher's ability to adjust after supervision; (iv) *External Domain*: This relates to external sources of information or stimuli. These domains collectively represent the individual teacher's professional world of practice, encompassing their actions, the indirect consequences of those actions, and the knowledge and beliefs that both prompt and respond to those actions.

The theory aligns well with this study because it emphasizes the connection between teacher professional growth through school-based instructional supervision and the development of competencies. For teachers to develop competences, there must be an external stimulus or information, such as teaching strategies modelled in in-service sessions, examples of good lesson plan, or assessment techniques discussed during feedback sessions (External Domain). Inspired by these stimuli, teachers practice new competencies (Domain of Practice), guided by changes in their beliefs and attitudes (Personal Domain). This leads to new pedagogical knowledge and skills, resulting in improved teaching strategies, lesson planning, and assessment techniques (Domain of Consequence).

### 2.2 Empirical Review

Instructional supervision plays a vital role in enhancing the quality of teaching and improving lesson preparations for teachers. For primary school head teachers, this process is integral to supporting teachers in developing professional competences and improving educational outcomes.

Studies have shown that head teachers' roles are pivotal in shaping the supervisory process, with a particular emphasis on how teachers' preparation can be influenced by regular and effective supervision. Studies also indicated that head teachers' instructional supervision practices can directly influence teachers' development of competences, particularly in specialized subjects such as science and elementary technology. In addition, the literature also suggests that instructional supervision must evolve to support teachers more effectively through constructive feedback and reflective dialogues between supervisors and teachers. The empirical review, therefore, examine how these broader trends in instructional supervision apply through various models and frameworks for instructional supervision, which can be analysed through three distinct stages: (i) pre-lesson observation; (ii) classroom observation; (iii) post-classroom observation reflection.

#### 2.2.1 Pre-lesson Observation

School leaders play a crucial role in facilitating curriculum development at the school level. According to the World Bank (2018), as cited in the module "Leading Learning & Leading Teaching for Continuous Professional Development Diploma in Effective School Leadership by UR-CE (2021), teachers often lack the skills or motivation to be effective, nevertheless, they are the most important factors affecting learning in schools. To support teachers effectively, school head teachers must organize and plan before lesson observations. UR-CE (2021) suggest that the teacher and the observer should jointly prepare for the lesson observation, agree on its purpose, discuss how it fits within the Competence-Based Curriculum implemented in Rwanda, and plan the lesson together. Chan et al. (2019) assert that principals strongly support their teachers in curriculum implementation, holding them accountable for their instructional approaches while allowing flexibility to achieve their goals. Sowell (2018), and Thessin (2019), as cited in Chan et al. (2019), emphasize that this collaboration reflects a joint effort between principals and teachers for successful curriculum implementation.

#### 2.2.2 Classroom Observation

Classroom observation assesses the quality of teaching to ensure students receive the most effective learning experience. Research conducted in Tanzania by Manaseh (2016) reveals that instructional supervision enhances teachers' competences and students' learning. Similarly, in Rwanda, head teachers carry out instructional supervision, which provides effective professional learning for teachers by emphasizing reflection and feedback on practice to

improve learning and self-awareness about teaching practices and their impact (UR-CE, 2021). Effective instructional supervision helps produce competent citizens who contribute to national development.

### 2.2.3 Post-lesson Observation

Generally, effective instructional feedback aims at improving instruction. Giving feedback is more than sharing a list of suggestions for change. By giving feedback, you want the teacher to change his/ her practice. Teachers gain a lot from receiving feedback given to them. Feedback helps them to progress. When teachers are observed and given meaningful and beneficial feedback on their teaching, they become aware of what corrections to make in order to change (Lia, 2016).

### 2.3 The Link between the Theoretical Framework, the Empirical Review and the Research Problem

In conclusion, the theoretical framework of Teacher Professional Growth seamlessly integrates with the empirical findings on instructional supervision's impact on teacher competencies. The four domains of change—personal, practice, consequence, and external—outlined in the framework are reflected in the practices observed in empirical studies. For instance, the role of school head teachers in pre-lesson planning, classroom observation, and post-lesson feedback fosters an environment where teachers' knowledge, beliefs, and classroom practices evolve. The external stimuli provided by instructional supervision activities, such as lesson observations and feedback, directly influence teachers' personal domains and practices. This, in turn, leads to tangible improvements in teaching strategies and student learning outcomes, aligning with the domains of consequence and external factors described in the theoretical framework. Thus, the empirical review supports the theory by demonstrating how structured instructional supervision fosters professional growth and competency development among teachers to improve student learning outcomes.

This study aims to investigate how these practices influence the development of teachers' competences in lesson planning in the primary schools of Gasabo district. The theoretical framework and empirical review form the foundation for this study, emphasizing how instructional supervision enhances teacher competences and student outcomes. By examining these elements, the paper explores the practical applications of the Teacher Professional Growth theory in the context of primary education in Gasabo district. The subsequent sections will detail the methodology used to assess the impact of instructional supervision on teacher competency development, analyze the findings, and discuss the implications for educational practice and policy. This integrated approach ensures a comprehensive understanding of how theory and practice converge to improve educational quality.

## III. METHODOLOGY

This study employed the qualitative research design with narrative inquiry perspective to explore the influence of instructional supervision on development of the competences for primary science and elementary technology teachers in Gasabo district. It surveyed a population of teachers and head teachers from 40 public primary schools in Gasabo district, whereby 132 people including both teachers and head teachers were targeted. The sample included five purposively selected head teachers and 24 science and technology teachers chosen via snowball sampling, ensuring relevant experience with instructional supervision.

Data collection involved two primary instruments: document analysis and unstructured interviews. The document analysis involved getting information by carefully studying written documents, or visual information from sources. In this study, the researcher reviewed the lesson observation reports of the school head teachers in order to assess feedback quality provided to teachers in lesson preparation. He also reviewed the lesson plans made by the teachers to check their progress after a series of lesson preparations and feedback. Unstructured interviews were conducted with the purpose of collecting data relating on teachers' experiences and perspectives on instructional supervision as well as on how instructional supervision is conducted to support teachers' development of competences in lesson planning.

Data collection procedures included systematic document analysis to evaluate existing practices and flexible, in-depth interviews to explore instructional supervision's influence on lesson planning. Qualitative data from document analysis and interviews underwent thematic analysis to uncover recurring themes. The analysis provided a comprehensive understanding of how instructional supervision influences teacher competences in lesson planning, enhancing the study's overall validity.



## IV. FINDINGS & DISCUSSION

### 4.1 Instructional Supervision Practices

The instructional supervision practice passes through three stages including the pre-observation or before observation conference, classroom observation and post observation conference or feedback session. The first objective of this study was to examine how primary head teachers conduct the instructional supervision in public primary schools of Gasabo District to enhance lesson preparations for teachers. In order to investigate about this, the researcher used the documents review, whereby he reviewed the comments the head teachers gave to the teachers in a series of lesson observations done. After that, he checked the lesson plans made by the teachers, and noted the state of the lesson plans. Then, he went ahead and asked teachers questions relating to how instructional supervision practices is conducted in schools, in the form of interview

#### 4.1.1 Practices Related to Pre-Classroom Observation

The head teacher's instructional supervision practices in schools included a number of activities to be carried out before the classroom observation. Normally, the school head teacher has to sit with the teacher and plan for the lesson together. It is their good time to discuss on the relevant instructional materials to provide, the relevant lesson activities to prepare as well as relevant instructional strategies to use during teaching and learning.

The results from the interview conducted in order to be aware of how the school head teacher supported teachers to prepare the lessons before classroom observation showed that the majority of teachers (83.3%) confirmed that, their school head teachers did not see the necessity of carrying out the pre-observation conference.

During the interview conducted, when asked how the school head teacher guided and supported them in teaching activities before lesson observation, one teacher at school one said:

*"Before observation, my head teacher, just informs me when he will come for observation. He doesn't ask me about the lesson I have to teach. He doesn't organize any other activity with me".* Then another teacher at school two said, *"Before coming to observe in class, the head teacher doesn't carry any other activity with me. He only informs me when he will come for observation. When time comes, I see him coming in my class"*.

The table below summarizes the number of teachers who confirmed that they are supported in lesson preparation by their school head teachers before classroom observation:

**Table 1**

*Number of Teachers Confirming Support in Lesson Preparation by Head Teachers*

School	Number of Teachers supported by the school head teachers in lesson preparation before classroom observation	Percentage
School 1	0/5	0%
School 2	4/4	100%
School 3	0/5	0%
School 4	0/5	0%
School 5	0/5	0%
<b>Total</b>	<b>4/24</b>	<b>16.6%</b>

The statistical findings represented in this table 1, indicated that the instructional supervision practices related to pre-observation conference were not done in all schools.

With the objective of examining how primary head teachers conduct the instructional supervision to improve lesson preparations for teachers, the data collected from teachers across five schools showed a remarkable difference in the level of how the school head teachers support teachers in lesson preparation before classroom observation. In most schools, teachers said that they receive little to no support in lesson preparation before classroom observation. Generally, the quantitative figures showed that only 16.6% of teachers receive support from their school head teachers before classroom observation, highlighting a significant gap in instructional supervision practices. This shows a serious need for schools to re-examine their supervision practices and prioritize structured, supportive pre-observation conferences as part of school head teachers' responsibilities. This lack of preparation limits the potential for improving teaching practices through collaborative efforts.

Normally, pre-observation conferences are intended to prepare teachers for classroom observations through collaborative lesson planning and discussions on instructional strategies. However, in this study, the results from the pre-observation conference stand in contrast to what previous studies have shown. Chan et al. (2019) asserted that school head teachers have to strongly support their teachers and affirmed that the result of the collaboration between the school head teacher and teachers during pre-observation conference reflects a joint effort between the school head

teacher and teachers for successful curriculum implementation. In addition to the points mentioned above, the study's findings further highlighted a significant contrast with the guidance provided by UR-CE (2021), in their Module 4 on Leading Learning and Teaching, part of the Continuous Professional Development Diploma in Effective School Leadership by VVOB, Education for Development Rwanda. They emphasize the importance of collaboration, advising that the teacher and observer should meet prior to the lesson observation to prepare together. They need to have a common understanding on the purpose of the lesson observation, discuss how the lesson fits within the competence-based curriculum, discuss the focus of the lesson observation, and plan a lesson together and determine anticipated outcomes.

#### 4.1.2 Practices Related to Classroom Observation

Typically, the instructional supervision practices of school head teachers involve various activities conducted during lesson observations. These observations play a vital role in fostering a shared understanding of effective teaching practices and their impact. Additionally, they create valuable opportunities for colleagues to discuss challenges and concerns that arise in the classroom (UR-CE, 2021). The results from the interview conducted to be aware of how the school head teachers conduct the classroom observation revealed that the majority of teachers (100%) confirmed that their head teachers visit them in class for classroom observation. During the interview guide, when asked how the classroom observation is done in their school, a teacher at school one answered,

*” During the observation session, the school head teacher comes in class on time, I present him pedagogical documents, he checks them and then he observes me teaching. He also records the classroom events”. Then another teacher on school two answered, “During classroom observation, the school head teacher comes in class on agreed time, and asks me to present the pedagogical documents, he checks them, he checks the availability of teaching and learning aids, instructional and assessment strategies, he observes me teaching and then records the classroom events”.*

The table below summarizes the number of teachers who confirmed that they are observed by their school head teachers during the process of classroom observation:

**Table 2**

*Number of Teachers Confirming Observation by Head Teachers during Classroom Observation*

School	Number of Teachers observed by their school head teachers in the process of classroom observation.	Percentage
School 1	5/5	100%
School 2	4/4	100%
School 3	5/5	100%
School 4	5/5	100%
School 5	5/5	100%
<b>Total</b>	<b>24/24</b>	<b>100%</b>

The statistical findings represented in table 2 indicated that the instructional supervision practices related to classroom observation were done in all schools. Generally, the engagement of the school head-teachers in lesson observation was universal, with teachers from school 1 to school 5, affirming that all teachers were observed.

Contrarily to the stage of the pre-observation conference, during the classroom observation, teachers agreed that the school head teachers come in class on time, assess the availability of pedagogical documents, teaching and learning aids and how they are used as well as instructional and assessment strategies for the lesson. In addition to that, they also record the classroom events and comments on my lesson plan. This shows that, the instructional supervision practices related to classroom observation were done to all the teachers, in all schools. This aligns with what is highlighted by UR-CE (2021) that during the lesson observation, the head teacher or any other observer has to take as many notes as possible he/ she can or, even better, record (parts of) the lesson. This then help during feedback afterwards. The results from this study do not show the school head teachers in Gasabo district carrying out the impromptu, frequent and short classroom observation. However, with the intention of developing teacher's competences, other several literatures such as those of Tesfaw and Hofman (2014); Campbell (2013); Milanowski (2011); Marshall, 2009 and Holland (2004) as cited in Malunda et al. (2016) support more frequent, short, unannounced, informal classroom observations by school head teachers to motivate teachers to adopt effective pedagogical practices.

### 4.1.3 Practices Related to Post Classroom Observation

After classroom observation, the head teachers are expected to involve teachers into constructive feedback. Giving feedback is more than sharing a list of suggestions for change. By giving feedback, the school head teacher wants the teacher to change his/ her practice. Normally, if the feedback is well given, it results in better teaching and learning practices. When not given well, teachers may become defensive, demotivated or dismissive of the feedback. In fact, the goal of feedback is to improve practice one step at a time, not to show how much one knows about teaching. The results from the interview conducted with the purpose of being aware of how the school head teachers conduct the feedback session after lesson observation, the majority of teachers (83.3%) confirmed that their head teachers do not conduct the feedback session effectively. They do not engage with them during feedback, they do not encourage motivation and positive self-esteem for teachers. In addition to that, the school head teachers do not use discussions after lesson observations to discuss aspects of lesson planning. During the interview, when asked how their head teachers conduct the feedback session after lesson observation, one teacher at school one said,

*“After lesson observation, the head teacher immediately tells me what I did not do well in lesson planning as well as in teaching students. Normally we don’t sit and share how the lesson went. We rarely sit and plan how to improve on the points that identified to have the gap in general”.* Another teacher at school three said, *“After lesson observation, the head teacher calls me out side and then he shares with me the areas I have to improve, either in lesson planning or teaching and learning practices. We rarely sit and plan how to improve on the points that identified to have the gap in general”.*

The table below summarizes the number of teachers who confirmed that they were provided with constructive feedback after classroom observation:

**Table 3**

*Number of Teachers Receiving Constructive Feedback from School Head Teachers after Classroom Observation*

School	Number of teachers provided with constructive feedback by the school head teachers after classroom observation	Percentage
School 1	0/5	0%
School 2	4/4	100%
School 3	0/5	0%
School 4	0/5	0%
School 5	0/5	0%
<b>Total</b>	<b>4/24</b>	<b>16.6%</b>

The statistical findings represented in table 3, indicated that the instructional supervision practices related to providing teachers with feedback after lesson observation were not done in all schools.

The data on the post classroom observation feedback sessions showed that the majority of teachers did not receive any form of constructive feedback from their school head teachers after observing them. In school 1, school 3, school 4 and school 5, none of the observed teachers said that he/she received the constructive feedback from their head teachers. This disclosed a serious gap in instructional supervision practices within those schools. Generally, only four out of twenty-four teachers (16.6%) received feedback from their head teachers. This showed a general issue reflecting that many school head teachers are not leveraging classroom observation to provide teachers with guidance and professional support, especially in lesson planning.

The finding from the review of the documents showed that the school head teachers record the comments on lesson planning. However, the comments recorded are incomplete or unclear which makes it hard for some teachers to understand what to improve. For instance, when asked how they understand the feedback relating to lesson planning given to them, a teacher said,

*“Most of the time, I don’t understand all what the head teacher asks me to read as comments. Due to short period of time he always has, we don’t sit and discuss on what went well and what I have to improve in lesson planning or teaching practices. Then, he asks me to read the comments which sometimes I don’t understand”.*

The effectiveness of instructional supervision depends on the quality of feedback given to teachers during post-observation conferences. In these sessions, head teachers are expected to analyze recorded observations and offer constructive feedback to teachers to improve their lesson preparations. As this study aimed to explore how primary head teachers conduct instructional supervision, on the post-observation feedback stage, it was realized that after observing teachers, the head teachers do not use the recorded information to effectively give feedback to teachers.

This is generally opposite to what Abubakar (2020) say that effective instructional feedback should be collaboration between the teachers and head teachers to talk about lessons, the choice of instructional strategies, and the impact on students. Lia (2016) confirms that when teachers are observed and given meaningful and constructive

feedback on their teaching, they become aware of what adjustments to make to change. However according to the results from the study, teachers are only observed, but not effectively provided with constructive feedback, which affects their competences in lesson preparation.

This also contradicted with what other scholars James (2021) and Halim et al. (2018) found. According to James (2021), constructive feedback should be clearly structured and articulated to highlight areas for improvement while motivating educators to embrace those changes. Similarly, Habyarimana and Andala (2022) emphasize that effective feedback for teachers should be non-judgmental, respectful, and reflective, fostering a sense of ownership. Additionally, it should be timely and specific to enhance its usefulness.

## 4.2 Teachers' Competences

The teachers' competences include mainly preparation of lessons, lesson delivery and assessment practices. This research focused on competences of lesson preparation as the basis for effective teaching and learning. The review of the documents focused on reviewing lessons plans prepared by each individual teacher in each school. After reviewing them, the researcher analyzed the comments the head teachers gave teachers on those lesson plans, and noted the transformation made after a series of instructional supervision practices. The five areas of transformation focused on in this exercise on included, setting a SMART instructional objective of the lesson with five elements and action verbs, provision of the stimulating teaching and learning aids for the lesson to make learning more meaningful for all learners' abilities, setting activities for the lesson to help students explore the lesson through interaction among themselves, the use of teaching and learning strategies to facilitate students' interaction and setting assessment activities to effectively assess the learning throughout the lesson.

The statistics in the table below shows the number of teachers who were transformed due to instructional supervision practices done by their head teachers. An attempt was made to identify the areas where those teachers perform well as a result of instructional supervision. The researcher has identified the number of teachers performing well in each area of lesson preparation and the percentages were calculated. The summary is provided below:

**Table 4**

*Number of Teachers and the Areas of Development in Lesson Preparation*

Area of development in lesson planning for teachers in five schools	% of teachers transformed
Setting a SMART instructional objective for the lesson with five elements.	75.0 %
Preparing all the instructional materials for the lesson to make learning more meaningful for all learners' abilities.	54.1 %
Using teaching and learning strategies to facilitate students interaction	29.1 %
Setting lesson activities for the students to encourage them to interact in groups	25.0 %
Setting assessment activities to effectively assess the learning throughout the lesson.	37.5%

The findings in the table 4 showed that, the areas of development in lesson preparation were not mastered by all the teachers at the same level. The extent to which, the school head teachers got involved in practicing instructional supervision has influenced the development of science and elementary technology teachers' competences in lesson planning. Generally, a big number of teachers counting to 75.0% were able to set a SMART instructional objective for the lesson with five elements. However, there are other areas of lesson planning, which are performed by few teachers. 54.1% of teachers prepared all the instructional materials for the lesson to make learning more meaningful for all learners' abilities. Other areas are performed by very few teachers. Only 29.1% of teachers used teaching and learning strategies to facilitate students' interaction, 25.0% were able to set lesson activities for the students to encourage them to interact in groups while 37.5% were able to set assessment activities to effectively assess the learning throughout the lesson.

The second objective of this study was to evaluate the influence of instructional supervision practices on development of competences in lesson preparation among science and elementary technology teachers in public primary schools in Gasabo District. Looking at the areas of development in lesson planning, the data revealed that, there were varied levels of improvement across different areas of lesson planning after a series of instructional supervision practices. Some schools have demonstrated a significant progress in setting a SMART instructional objective of the lesson with five elements and action verbs, others were still struggling with providing the stimulating teaching and learning aids for the lesson to make learning more meaningful for all learners' abilities, setting activities for the lesson to help students explore the lesson through interaction among themselves, using teaching and learning strategies to facilitate students' interaction and setting assessment activities to effectively assess the learning throughout the lesson.

The results from this study stand in contrast to what previous studies have shown. For instance, according to Milkova (2020), a well-crafted lesson plan effectively incorporates three essential components: learning objectives,



teaching and learning activities, and strategies for assessing student understanding. Establishing clear learning objectives allows the teacher to identify the appropriate teaching and learning activities to implement in the classroom. And these activities, in turn, guide the methods for evaluating whether the students have achieved the set objectives. In contrast to the above, the results from the study show that teachers in most schools can set the instructional objective of the lesson, but fail to practice the setting of teaching and learning activities, and strategies for assessment.

Chen (2018) highlighted that formative assessments integrated into lesson activities help teachers measure understanding throughout the lesson, allowing for timely adjustments to instruction. Additionally, Sneider and Wojnowski (2013), argue that assessment is a crucial component of the teaching and learning process. However, the results from the study show that most of teachers have not yet mastered this practice.

Not only the above, but also, Abubakar (2020) states that the teaching aids are mainly aimed at exploring the full potentials of the students in terms of learning so as to make easy the transfer of knowledge from the teachers to the students. He equally asserts that students taught with instructional materials were found to be of improvement compared to those taught without instructional materials. Conversely, the results from this study showed that schools have variable levels of progress in using teaching aids.

### 4.3 Suggestions for Improved Instructional Supervision Practices

After finding out how the primary school head teachers carry out the instructional supervision practices in schools, and evaluating the influence of instructional supervision practices on science and elementary technology teachers' competences in public primary schools of Gasabo District, the next objective was to draw the suggestions for the successful implementation of instructional supervision practices.

In order to draw the recommendations, the researcher used the module 4: Leading learning & leading teaching, for Continuous Professional Development Diploma in Effective School Leadership, VVOB, Education for development Rwanda, by UR-CE (2023) where they highlight that most supervision of teaching is done by lesson observations. They then suggest four steps in conducting a successful instructional supervision:

#### *Planning the Lesson Observation Together*

For the success of instructional supervision practices, the school head teacher has to support teachers in organizing and planning before the lesson observation starts. UR-CE (2023) said that, before the lesson observation, the teacher and the observer should sit together to prepare for the lesson observation. They need to have a common understanding on the purpose of the lesson observation, discuss how the lesson fits within the Competence Based Curriculum, which is under implementation in Rwanda, discuss the focus of the lesson observation, and plan a lesson together and determine anticipated outcomes. During this time, they also agree upon instruction materials and strategies of teaching, as well as processes of learning and evaluation to be used.

This step is very important because it help both the teachers and the observer to discuss on what students have to learn, what is fundamental and less important in the lesson, how to know if students have learned the content of the lesson, and how to provide more learning opportunities for learners who will master the content and for those who still struggle with understanding it. In addition, the school head teacher who is the observer, indicates what he/she will focus on during the lesson observation, using the lesson observation form. When planning for the observation together, both the observer and the teacher determine the anticipated lesson outcomes, discuss instructional challenges, and agree on materials, teaching strategies, as well as the processes of learning and evaluation.

#### *Conducting the Lesson Observation*

This is also an important step in instructional supervision practices. During the lesson observation process, the school head teacher has to take notes of everything that takes place in class. According to the module 4: Leading learning & leading teaching, for Continuous Professional Development Diploma in Effective School Leadership, VVOB, Education for development Rwanda, UR-CE (2019), highlighted that during the lesson observation, the head teacher or any other observer has to take as many notes as he/ she can. This then helps during feedback afterwards.

#### *Giving Feedback on the Lesson*

The term feedback is used to describe all kinds of comments, advice, praise, and evaluation made after an activity. Feedback and reflection on the lesson afterwards is crucial for learning and development of teachers' competences. UR-CE (2023), suggested that feedback is given as soon as possible after the lesson observation. So, the school head teacher and the teacher sit down in a quiet place, for the feedback discussion and foresee plenty of time. By giving feedback, you want the teacher to change his/ her practice. Teachers benefit from receiving feedback. Feedback helps them to progress. When teachers are observed and given meaningful and constructive feedback on their teaching, they become aware of what adjustments to make to change (Lia, 2016). When giving feedback, it is advised to focus your feedback on a few aspects to improve upon, rather than overwhelming the teacher with lots of

negative elements. In addition to the above, the evaluation ends with the observer and teacher agreeing on changes in the teacher's strategy and a follow up observation.

#### *Reflection on Ways to Improve the Lesson*

For the instructional supervision to achieve its objective, after lesson observation and feedback, the teacher has to make a step and reflect on how the lesson can be improved. Hattie and Timperley (2007) emphasized this by saying that: "*We don't learn from practice, but from reflecting on our practice*". On this note, the teacher can use other information as well, such as student work and assessment results to reflect on the lesson taught for improvement. This can be done individually, with the observer, or with other teachers in a Community of Practice organized at school level.

## V. CONCLUSIONS & RECOMMENDATIONS

### 5.1 Conclusions

This paper primarily aimed to explore the impact of instructional supervision on the development of competences among primary science and elementary technology teachers in Gasabo District, specifically in lesson preparation. It examined the influence of instructional supervision on the development of teaching competences among primary science and elementary technology teachers in the Gasabo District. The investigation focused on the practices before, during, and after classroom observations, aiming to understand how these activities influence teachers' lesson preparation and overall instructional effectiveness.

The findings indicated significant gaps in the implementation of pre-observation conferences, where head teachers often failed to engage in collaborative lesson planning and discussions with teachers. Although classroom observations were regularly conducted, the depth and quality of these observations varied widely, with many head teachers providing limited feedback. The post-observation phase was particularly underutilized, as teachers rarely received detailed, actionable feedback to guide their professional growth.

This lack of comprehensive instructional supervision impedes teachers from effectively planning lessons, preparing relevant materials, and appropriately organizing assessment activities. However, the study underscored that when instructional supervision is properly implemented, it significantly enhances teachers' competences. This conclusion is supported by various researchers who assert that effective instructional supervision, encompassing pre-observation, observation, and post-observation stages, positively influences teachers' competences. In that framework, this paper highlights the critical role of comprehensive instructional supervision in enhancing teacher competences. When head teachers actively participate in all stages of supervision: pre-observation, observation, and post-observation, they provide valuable support that helps teachers refine their teaching practices, better prepare lessons, and improve student learning outcomes. The alignment of these findings with the Teacher Professional Growth theory underscores the importance of structured, reflective supervision in fostering professional development.

### 5.2 Recommendations

According to the findings, to enhance the effectiveness of instructional supervision practices that foster teachers' competencies in lesson preparation, the study suggests several strategies:

Prior to conducting pre-observation conferences, head teachers should consistently engage in discussions with teachers, focusing on lesson objectives, instructional techniques, and assessment approaches. By working together, teachers and supervisors can ensure that they are adequately prepared and in sync with the objectives of instructional supervision.

Moreover, training programs for head teachers should emphasize the significance of employing effective observation methods and the value of offering comprehensive, constructive feedback. By implementing this approach, we aim to establish consistent standards for observations and provide teachers with valuable feedback on their instructional methods.

It is also crucial for post-observation sessions to be mandatory and structured, incorporating reflective discussions. Head teachers should offer detailed, constructive feedback that acknowledges both the teacher's strengths and areas that require improvement, promoting a culture of ongoing professional growth.

Additionally, workshops and training sessions should be arranged for both head teachers and teachers to exchange effective strategies in instructional supervision and lesson preparation. These sessions can provide opportunities for continuous learning and professional development.

## REFERENCES

- Abubakar, M. B. (2020). Impact of instructional materials on students' academic performance in Physics, in Sokoto-Nigeria. *Earth and Environmental Science*, 476(1), 012207.
- Asafu-Adjaye, P. (2012). Private Returns on Education in Ghana: Estimating the Effects of Education on Employability in Ghana. *African Sociological Review*, 16(1), 121-139. <https://doi.org/10.57054/asr.v16i1.3843>
- Chan, M. C. E., Roche, A., Clarke, D. J., & Clarke, D. M. (2019). *How do teachers learn? Different mechanisms of teacher in-class learning*. In G. Hine, S. Blackley, & A. Cooke (Eds.), *Mathematics education research: Impacting practice* (pp. 164-171). Proceedings of the 42nd annual conference of the Mathematics Education Research Group of Australasia. MERGA.
- Chen, C.-C. (2018). *Facilitation of teachers' professional development through principals' instructional supervision and teachers' knowledge-management behaviors*. IntechOpen. <https://doi.org/10.5772/intechopen.77978>
- De Villiers, R. (2013). 7 principles of highly effective managerial feedback: Theory and practice in managerial development interventions. *International Journal of Management Education*, 11(1), 66-74. <https://doi.org/10.1016/j.ijme.2013.01.002>
- Ekyaw, B. A. (2014). *The practices and challenges of instructional supervision in Asossa Zone primary schools* (Master's thesis). Jimma University, Ethiopia.
- Fritz, C., & Miller, G. (2003). Supervisory options for instructional leaders in education. *Journal of Leadership Education*, 2(2), 13-27. <https://doi.org/10.12806/V2/I2/RF2>
- Fullan, M. (2020). *The right drivers for whole system success 01*. Michael Fullan.
- Habyarimana, C., & Andala, O. (2022). School environmental factors and students' academic performance in twelve years' basic education in Rwanda: A case of Rwamagana District. *Global Scientific Journal: 10*(3), 2366-2379
- Halim, S., Wahid, R., & Halim, T. (2018). Classroom observation—A powerful tool for continuous professional development (CPD). *International Journal on Language, Research and Education Studies*, 2(7), 162-168. <https://doi.org/10.30575/2017/IJLRES-2018050801>
- Ikegbusi, N. G. (2014). Towards enhancing staff personnel management in secondary schools in Anambra state. *Journal of Educational Research*, 2(3), 117-124.
- Imaniriho, D. (2011). Decentralized supervision of schools in Kigali city: issues and challenges. In *Journal of education and practice*, vol. 2, N° 1, pp.1-13
- Imaniriho, D.; Manirakiza, V.; Mukingambeho, D.; Nyirishema, M.; Muhire, I.; Buhigiro, J.L. (2024). Assessing Competences of Geography Students Acquired through the Competence-based Teaching and Learning Approach in Rwandan Secondary Schools. *The East African Journal of Education and Social Sciences*, 4 (6), 94-107.
- James, S. (2021, February 9). 3 most popular ways to give teachers immediate feedback after a walkthrough. *Education Walkthrough*. <https://educationwalkthrough.com/3-most-popular-ways-to-give-teachers-immediate-feedback-after-a-walkthrough/abcdefghijklmnopqrstuvwxyz>
- Lia, M. (2016). Using an observation coaching checklist to provide feedback to teachers. *Journal of Catholic Education*, 19(1), 312-327. <https://doi.org/10.15365/joce.1901122016>
- Malunda, G. M., Kiggundu, E., & Kizito, R. (2016). Instructional supervision and the pedagogical practices of secondary school teachers in Uganda. *Journal of Education and Practice*, 7(30), 179-186. <https://files.eric.ed.gov/fulltext/EJ1118918.pdf>
- Manaseh, A. (2016). Instructional leadership: The role of heads of schools in managing the instructional programme. *International Journal of Educational Leadership and Management*, 4(1), 30. <https://doi.org/10.17583/ijelm.2016.1691>
- Milkova, S. (2020). *Strategies for Effective Lesson Planning*. Center for Research on Learning and Teaching. [https://crlt.umich.edu/gsis/p2\\_5](https://crlt.umich.edu/gsis/p2_5)
- Mitchell, R., Ayinselya, R.A., Barrett, A.M, Cortez Ochoa, A.A., David, O., Imaniriho, D., Nwako, Z.A., Reda, N.W. & Singh, M. (2024). *Teacher professional development in Africa: A critical synthesis of research evidence*. CIRE, Bristol.
- Mofareh, A. (2011). *School-based instructional supervision in Saudi Arabian public secondary schools* (Doctoral thesis, University of York).
- National Institute of Statistics of Rwanda. (2021). *Rwanda statistical yearbook 2021*. National Institute of Statistics of Rwanda. February 2024. Retrieved from <https://www.statistics.gov.rw/publication/1767>
- Nshimiyimana, P., & Sikubwabo, C. (2022). *Contribution of instructional supervision practices by the school authorities in improving learners' academic performance in private secondary schools, Burera District, Rwanda*. Working Papers 2022-41-03. Voice of Research. <https://ideas.repec.org/p/vor/issues/2022-41-03.html>

- Rwanda Education Board. (2019). *The national teacher CPD framework* Kigali, Rwanda. February 2024 Retrieved from [https://www.eenet.org.uk/resources/docs/THE\\_NATIONAL\\_TEACHER\\_CPD\\_FRAMEWORK-Booklet-B5Size.pdf](https://www.eenet.org.uk/resources/docs/THE_NATIONAL_TEACHER_CPD_FRAMEWORK-Booklet-B5Size.pdf)
- Sharma, S., Yusoff, M., & Kannan, S. (2011). Instructional supervision in three Asian countries: What do teachers & principals say? In *Proceedings of the 2nd International Conference on Education and Management Technology* (IPCSIT Vol. 13). IACSIT Press.
- Siddiqua, A. (2019). Classroom observation as a tool for professional development. *World Journal of English Language*, 9(1), 49-56. <https://doi.org/10.5430/wjel.v9n1p49>.
- Sneider, C. I., & Wojnowski, B. (2013). Opening the door to physics through formative assessment. *The Physics Teacher*, 51(5), 290–293. <https://doi.org/10.1119/1.4807750>
- Srinivasan, P. (2016). Educational evaluation. In *Evaluation in education* (pp. 1-44). Laxmi Book Publication.
- Ukobizaba, F., & Nizeyimana, G. (2022). Active learning through assessment for learning: A way to enhance students' understanding of mathematical concepts. *Rwandan Journal of Education*, 5(2), 193.
- UR-CE (2019) Continuous Professional Development Diploma in Effective School Leadership. *Student Manual*, Volume 1, 3rd Edition, Kigali.
- UR-CE (2021) Continuous Professional Development Diploma in Effective School Leadership (CPD-DESL), *Student Manual, Module 4: Leading Learning & Leading Teaching*, 4<sup>th</sup> edition, June 2021.
- UR-CE (2023) Continuous Professional Development Diploma in Effective School Leadership (CPD-DESL), *Student Manual, Module 2: Managing the school as an organization*, 5<sup>th</sup> edition, March 2023.
- UNICEF. (2000). *Defining quality in education*. New York, NY: United Nations Children's Fund.
- Uwaleke, G. C., Iyala, F. E., & Yakubu, S. (2021). Principals' instructional supervisory roles and teachers' job performance in public secondary schools in Ekiti State, Nigeria. *African Scholars Journal of Contemporary Education Research (JCER-8)*, 21(8), 14-19. [https://www.africanscholarpublications.com/wp-content/uploads/2021/10/AJCER\\_Vol21\\_No8\\_June\\_2021-1.pdf](https://www.africanscholarpublications.com/wp-content/uploads/2021/10/AJCER_Vol21_No8_June_2021-1.pdf)
- Williamson, R., & Blackburn, B. (2021, March 10). Offering constructive feedback to teachers. *MiddleWeb*. <https://www.middleweb.com/44717/providing-constructive-feedback-to-teachers/>