Comparative Analysis of Feedback Quality Provided by Specialist vs. Non-Specialist Lecturers to Student Teachers in Southern Province, Zambia

Kaziya Kadonsi

The University of Zambia, Lusaka, Zambia

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ABSTRACT

This study investigates the comparative quality of feedback provided by specialist versus non-specialist lecturers to student teachers in Southern Province, Zambia, focusing on clarity, constructiveness, timeliness, and influence on instructional methods. In Zambia's teacher education landscape, both lecturer types contribute to practicum feedback, yet specialist feedback, aligned with subject expertise, may offer unique advantages for student teacher development. Using a cross-sectional survey, data from 60 lecturers and 120 student teachers revealed that specialist feedback was significantly superior in clarity and constructiveness (Wilcoxon Signed-Rank Test, $p < 0.001$), with these qualities directly enhancing instructional improvement and engagement. Constructiveness of feedback emerged as a primary driver of student teacher satisfaction ($\beta = 0.359$, $p = 0.002$), underscoring the role of actionable, subject-specific guidance. The timeliness of specialist feedback (rated as "Timely" or "Very Timely" by 82%) further facilitated immediate instructional adjustments, while combined verbal and written feedback supported both real-time and reflective learning processes. These findings fill a crucial gap in teacher education research by demonstrating that specialist feedback, through its clarity and relevance, better equips student teachers for effective classroom practice. By prioritizing specialist-led feedback and structured feedback methods, teacher training programs can more effectively bridge theory and practice, fostering competent, adaptable educators. This study offers actionable insights for policy makers and teacher educators, advocating for a model of practicum feedback that integrates subject-specific expertise, enhancing the professional preparedness of future teachers.

Keywords: Specialist Feedback**.** Non-Specialist Feedback**,** Teacher Education**,** Practicum Experience**,** Student Teachers**,** Feedback Quality**,** Instructional Development

INTRODUCTION

Imagine a classroom where every student teacher enters fully prepared, guided by feedback that is not only clear and constructive but also deeply relevant to their specific subject expertise. In teacher education, the practicum experience—the bridge between theory and practice—is essential to preparing future educators for such real-world challenges. During practicum, feedback plays a critical role in shaping instructional skills, helping student teachers refine their methods, build confidence, and develop effective teaching practices. Research consistently shows that high-quality feedback—marked by clarity, constructiveness, and timeliness—has a profound impact on the competencies of future teachers, supporting their journey to becoming effective educators and influencing the quality of education delivered to students (Smith & Lee, 2018; Jones et al., 2020).

In Zambia, feedback during practicum is provided by both specialist and non-specialist lecturers, each bringing unique perspectives to the task. Specialist lecturers, with their subject-specific expertise, are often assigned to observe and mentor student teachers within their fields, delivering feedback that aligns closely with subject content and pedagogy. However, due to staffing shortages, high student-teacher ratios, financial constraints, and the need for flexibility within teacher education programs, non-specialist lecturers are frequently required to provide feedback outside their own areas of expertise. While this ensures that all student teachers receive some level of support, the mix of specialist and non-specialist input introduces variability in feedback quality, particularly regarding its depth and relevance to subject-specific instructional practices.

Existing literature suggests that feedback from specialists tends to be more targeted, providing detailed insights that help student teachers build competencies directly related to their teaching subjects (Brown & White, 2019; Parker, 2021). In contrast, non-specialist lecturers may offer feedback that, while potentially broad and valuable for general teaching skills, may lack the nuanced subject-specific insights necessary for deep instructional development. Although feedback quality in teacher education has been widely studied, limited research has systematically examined how the specialization of lecturers affects the feedback's impact on student teachers, especially within the Zambian context. Understanding these differences is critical, as it can help optimize feedback practices and better support the developmental needs of student teachers.

Addressing this issue is essential for optimizing teacher preparation programs. Without a clear understanding of how feedback from specialist and non-specialist lecturers differs in quality and effectiveness, student teachers may receive guidance that does not fully support their instructional needs. In the long term, this inconsistency in feedback quality could impact the preparation of new teachers, leading to variations in their classroom effectiveness and, ultimately, affecting student learning outcomes. Ensuring that feedback practices are tailored and effective is fundamental to building a well-prepared teaching workforce capable of meeting the educational goals of Zambia.

This study seeks to address this gap by analyzing and comparing the quality of feedback from specialist and non-specialist lecturers, with a focus on clarity, constructiveness, and timeliness, as well as examining the impact of different feedback methods on the instructional practices of student teachers in Southern Province, Zambia. By shedding light on these dynamics, the research aims to provide actionable insights that can strengthen feedback practices in teacher education, ultimately supporting the preparation of competent, well-equipped educators who can positively impact the future of Zambia's education system.

Statement of the problem

In the context of teacher education, feedback during practicum is crucial for fostering the instructional skills of student teachers. Research indicates that effective feedback—characterized by clarity, constructiveness, and timeliness—significantly influences teaching competencies (Smith & Lee, 2018; Jones et al., 2020). In Zambia, both specialist and non-specialist lecturers play important roles in providing feedback during practicum experiences. While specialist lecturers are typically assigned to observe and mentor student teachers in their specific subject areas, non-specialist lecturers are often required to observe students outside their field of expertise due to staffing limitations, high student-teacher ratios, high costs for paying lecturers and the need for flexibility in teacher education programs. This approach ensures that all student teachers receive guidance during their practicum, even when subject-specific mentors are unavailable. However, this mix of specialist and non-specialist feedback introduces potential variations in feedback quality and relevance to subject-specific instructional practices.

However, studies have shown that feedback from specialists, who possess subject-specific expertise, may offer more detailed insights, while non-specialists may provide feedback that lacks depth but covers broader teaching skills (Brown & White, 2019; Parker, 2021). Despite its importance, limited research has systematically examined the comparative impact of feedback from specialist and non-specialist lecturers on the instructional practices of student teachers, especially in the context of Zambian education. While some studies have assessed feedback quality in general, they often overlook how different lecturer backgrounds may affect the relevance and impact of feedback on student teacher development. This gap is significant, as understanding these differences could help optimize feedback practices and better support the development of competent educators.

If this problem remains unaddressed, there is a risk that student teachers may not receive the type of feedback needed to develop subject-specific instructional skills. This could lead to inconsistencies in the quality of teacher preparation, ultimately impacting the effectiveness of graduates in the classroom and, by extension, student learning outcomes. Over time, this lack of tailored, effective feedback could hinder the development of a skilled teaching workforce, weakening the education system's ability to meet its goals for quality instruction and student achievement. This study addresses this gap by analysing and comparing the quality of feedback from specialist and non-specialist lecturers, as well as the impact of various feedback methods on the instructional methods of student teachers in Southern Province, Zambia.

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Significance of the study

This study is poised to make a meaningful contribution to the field of teacher education by addressing a crucial element in the practicum experience: the quality and impact of feedback provided by specialist and non-specialist lecturers. In Zambia, teacher education programs often rely on both types of lecturers due to resource limitations, staffing constraints, and high student-teacher ratios. While specialist lecturers bring subject-specific knowledge, non-specialist lecturers provide general instructional guidance, resulting in a varied feedback landscape. By examining these differences, this research seeks to provide a clearer understanding of how each type of feedback influences the development of teaching skills in student teachers, and how practicum experiences can be improved.

The study offers teacher education institutions insight into how feedback quality differs between specialist and non-specialist lecturers and how each affects student teacher development. By pinpointing the elements of feedback (such as clarity, constructiveness, and timeliness) that most effectively foster teaching skills, teacher education programs can refine their training processes. Institutions can use these insights to structure practicum supervision and feedback delivery more effectively, ensuring that all student teachers receive quality feedback that is consistent and supportive of their instructional growth. This could lead to the development of more targeted training modules for lecturers and supervisors, which would enhance the overall quality of teacher preparation.

For lecturers who supervise student teachers, this study provides valuable information on the comparative strengths and potential gaps in specialist versus non-specialist feedback. These insights can encourage both types of lecturers to adopt best practices in feedback delivery, promoting approaches that increase the relevance and impact of their feedback. Specialist lecturers can gain awareness of the areas where non-specialists excel, such as broader instructional guidance, while non-specialist lecturers can identify strategies to better support subject-specific learning. Ultimately, the study can inform professional development programs that enhance lecturers' ability to offer feedback that is both instructive and empowering for student teachers.

At the core of the study's significance is its potential impact on student teachers, who depend on quality feedback to grow in their instructional skills. By highlighting the types of feedback that are most constructive and relevant to their learning, this research supports practicum experiences that are aligned with the needs of student teachers. For student teachers, receiving feedback that is both specific to their subject and responsive to their instructional challenges fosters confidence, encourages reflective practice, and builds the skills needed for effective teaching. This has long-term benefits, as student teachers who are well-supported in their practicum are more likely to transition into their teaching roles with competence and readiness.

Policymakers responsible for teacher education in Zambia and other similar contexts stand to gain practical insights from this study. By understanding the role that lecturer specialization plays in feedback quality, policymakers can make informed decisions about staffing structures, resource allocation, and standards for practicum supervision. The findings can support policies that prioritize the assignment of subject-specific mentors where possible, or that enhance training for non-specialist lecturers, ensuring that practicum feedback is consistently beneficial across all programs. This approach strengthens teacher education as a whole and supports policies aimed at producing a competent teaching workforce.

Beyond immediate benefits, the study's implications extend to the broader educational system. Effective practicum feedback contributes to the development of skilled teachers who can impact student learning positively. Teachers who are well-prepared and equipped with strong instructional skills are more effective in the classroom, resulting in higher-quality education for students. As these teachers enter the workforce, they contribute to a cycle of educational improvement, raising the standard of education and helping the Zambian education system achieve its goals of student achievement and quality instruction. This study addresses a critical gap in comparative feedback research, offering insights that go beyond theoretical understanding to provide practical recommendations for improving feedback practices in teacher education. By focusing on the nuanced impact of specialist and non-specialist feedback, this research contributes to shaping effective teacher preparation programs, strengthening the quality of education for future generations, and supporting the advancement of the educational system in Zambia and other similar settings.

Research Objective

To assess the quality of feedback provided by specialist lecturers to student teachers

Research Questions

How do student teachers assess the quality of feedback provided by specialist lecturers?

Research Hypotheses

(H0): There is no significant difference in the quality of feedback provided by specialist lecturers compared to non-specialist lecturers.

(H1): The quality of feedback provided by specialist lecturers is significantly higher than that provided by non-specialist lecturers.

Theoretical Framework

This study is grounded in Feedback Intervention Theory (FIT**)**, developed by Kluger and DeNisi (1996), which posits that the effectiveness of feedback is influenced by how it directs the learner's attention and supports performance improvement. According to FIT, feedback is most impactful when it focuses on task-relevant behaviours, helping learners understand and address specific areas for improvement. In the context of teacher education, feedback that is clear, constructive, and directly applicable to instructional practices is essential for fostering the professional growth of student teachers. Feedback Intervention Theory provides a lens through which this study examines and compares the quality, impact, and perceived effectiveness of feedback provided by specialist versus non-specialist lecturers to student teachers. In the practicum setting, feedback is crucial for guiding student teachers as they develop their instructional skills and gain confidence in their teaching methods. FIT suggests that feedback is most effective when it is specific to the task, aligns with the learner's developmental needs, and provides actionable insights. This aligns with the study's focus on feedback quality indicators—clarity, constructiveness, and timeliness—and their perceived impact on student teacher development.

FIT emphasizes that feedback should direct attention to specific tasks or behaviours rather than the individual, promoting a more objective and improvement-focused approach. In this study, the feedback provided by specialist lecturers, who possess subject-specific expertise, is expected to be more task-focused and relevant to the instructional practices of student teachers. In contrast, non-specialist feedback may offer broader instructional insights but lack the depth needed for developing subject-specific skills. Feedback Intervention Theory highlights the importance of clarity and constructiveness in feedback for facilitating improvement. Clarity ensures that the feedback is understandable and actionable, while constructiveness allows it to be effectively applied to practice. This study evaluates whether specialist feedback, due to its subject alignment, is perceived as clearer and more constructive than non-specialist feedback, providing specific, relevant insights that better support student teachers' instructional growth.

According to FIT, timely feedback enhances learning by allowing learners to apply insights to ongoing practice. This study examines whether feedback from specialists is perceived as more timely, and impactful compared to feedback from non-specialists. The focus on timeliness is critical, as student teachers need prompt guidance to adapt their instructional methods effectively during practicum. FIT suggests that the mode of feedback delivery (e.g., verbal, written, or a combination) can influence its impact. Feedback that is well-aligned with task requirements and delivered in an accessible format supports learner engagement and application. This study investigates the perceived effectiveness of different feedback methods used by specialist and non-specialist lecturers, analysing whether specific methods are more effective in guiding instructional improvements among student teachers. Feedback Intervention Theory supports the study's hypotheses by providing a theoretical basis for expecting differences in feedback quality and impact based on lecturer specialization. Specifically, FIT suggests that specialist feedback, with its subject-specific focus, may have a stronger positive impact on instructional practices. The theory also informs the analysis of feedback methods, suggesting that the delivery format should support task-oriented feedback for optimal effectiveness.

By applying Feedback Intervention Theory, this study aims to deepen understanding of how lecturer specialization influences the quality, timeliness, and effectiveness of feedback provided to student teachers.

FIT provides a comprehensive framework for analysing feedback as a developmental tool, emphasizing the role of task-focused, clear, and timely feedback in promoting instructional improvement. The insights gained through this theoretical lens are expected to inform feedback practices in teacher education, ultimately supporting the preparation of well-equipped, competent educators.

Conceptual Framework

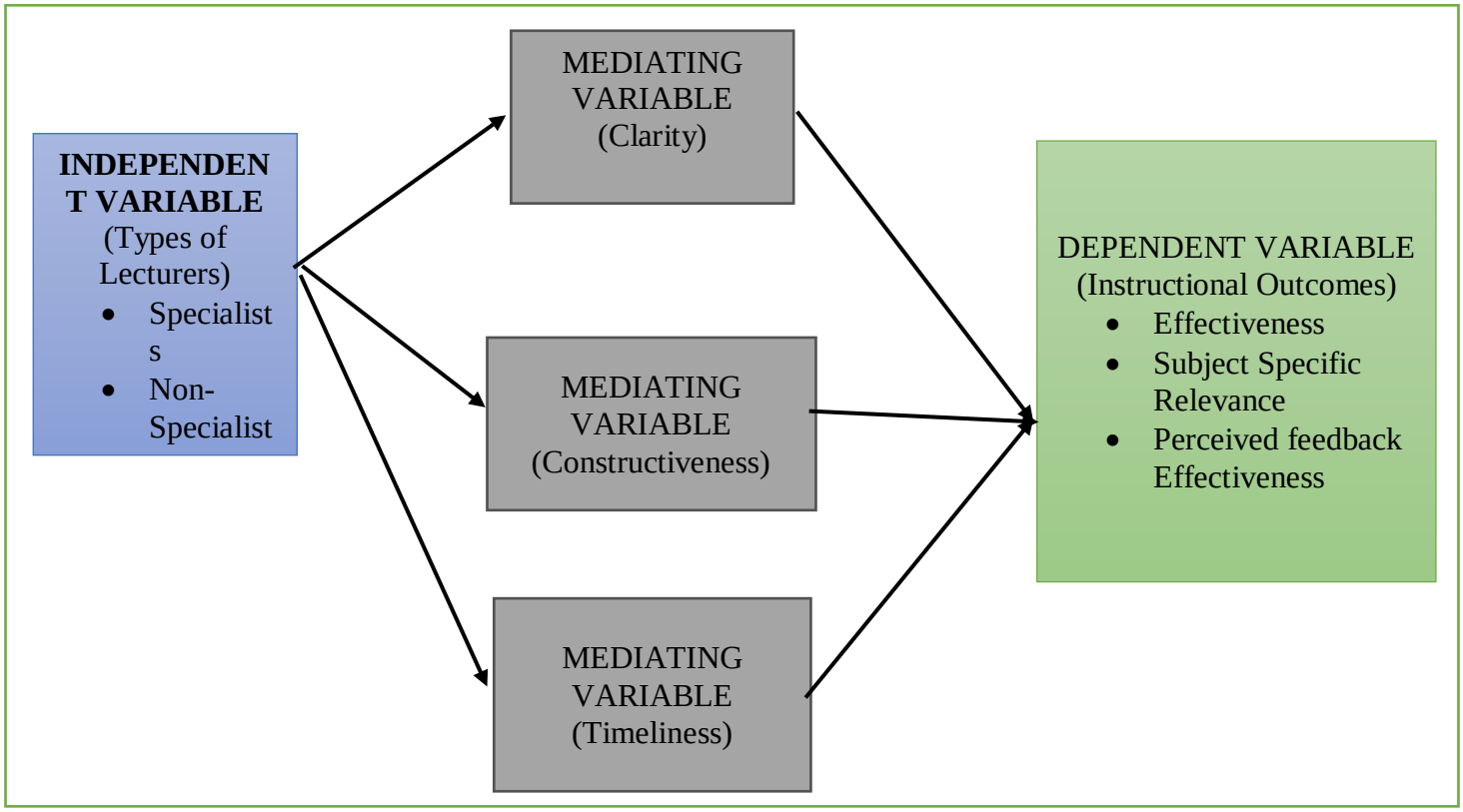

Figure 1: Conceptual Framework

This conceptual framework is designed to illustrate the relationships between lecturer specialization, feedback quality, and instructional outcomes for student teachers, grounded in Feedback Intervention Theory (FIT) developed by Kluger and DeNisi (1996). FIT posits that feedback is most effective when it is clear, constructive, and timely, directing learners' attention toward actionable improvements. By using this theoretical lens, the framework captures how specialist and non-specialist lecturers' feedback influences student teachers' instructional development during the practicum phase. The independent variables in this study are the types of lecturers providing feedback—specialist and non-specialist. Specialist lecturers, with their subject-specific expertise, are expected to deliver feedback that is more targeted to the instructional nuances of their respective subjects, potentially offering deeper and more relevant insights to student teachers. Non-specialist lecturers, conversely, contribute broader pedagogical feedback that supports general teaching skills rather than detailed subject-specific practices. This distinction underscores how each type of lecturer may uniquely shape the quality and impact of feedback on instructional practices.

The feedback quality indicators—clarity, constructiveness, and timeliness—act as mediating variables in this framework. According to FIT, feedback that is clear and actionable enables learners to understand and apply it effectively, while constructiveness ensures feedback provides practical, improvement-focused suggestions. Timeliness, another FIT principle, allows student teachers to incorporate feedback into their practicum experience immediately, enhancing its developmental value. By evaluating how specialist and non-specialist feedback varies across these quality indicators, the framework helps to assess which type of feedback most effectively supports instructional growth. The dependent variables in this study encompass instructional outcomes, specifically focusing on the effectiveness, subject-specific relevance, and perceived usefulness of feedback. These outcomes align with FIT's emphasis on feedback that is task-focused and improvement-driven. Feedback from specialist lecturers is expected to better support subject-specific instructional practices, enhancing student teachers' effectiveness within their disciplines. In contrast, feedback from non-specialists

may improve general instructional skills, although it may lack depth in subject-specific areas. This differentiation provides insight into the role of lecturer expertise in shaping feedback's impact.

In summary, this conceptual framework provides a structured approach to understanding how lecturer specialization interacts with feedback quality indicators to influence instructional outcomes in student teachers. Grounded in Feedback Intervention Theory, it emphasizes the importance of clear, constructive, and timely feedback and sets the stage for evaluating which feedback practices are most beneficial in teacher education. By visually representing these hypothesized relationships, the framework serves as a guide for examining how different types of feedback support the professional development of student teachers, ultimately contributing to the preparation of competent educators.

LITERATURE REVIEWED

This section delves into the importance of quality feedback, characterized by clarity, constructiveness, and timeliness, and its role in bridging theoretical knowledge with practical teaching application. Key areas examined include the distinction between specialist and non-specialist feedback. Specialist lecturers, with subject-specific expertise, often provide feedback that is more relevant and focused on specific pedagogical needs, while non-specialist feedback tends to be more generalized. This distinction is crucial for understanding how feedback quality affects student teacher development.

Importance of Feedback in Teacher Education

Feedback is a cornerstone of teacher education, particularly during practicum experiences, where it plays a pivotal role in shaping the instructional competencies, confidence, and teaching practices of student teachers. The significance of feedback lies in its ability to provide targeted, constructive insights that foster professional growth. Extensive research underscores that high-quality feedback—defined by its clarity, constructiveness, and timeliness—can enhance teaching effectiveness and yield better student learning outcomes. During practicum, feedback functions as an essential bridge between theory and practice, enabling student teachers to apply educational principles within real classroom contexts. Mentor teachers, who engage daily with preservice teachers, are instrumental in this process, delivering performance feedback that refines instructional strategies and bolsters the reliability of teaching practices in authentic settings (Cornelius & Nagro, 2014). This mentor-student teacher relationship is foundational, cultivating an environment in which student teachers receive immediate, contextually relevant feedback that profoundly shapes their pedagogical skills (Nel, 2021). In addition to skill development, this dynamic fosters confidence as student teachers confront the intricacies of classroom management and instructional delivery.

The role of feedback in enhancing learning outcomes is well-documented. Al-Hattami (2019) emphasizes that both students and faculty view feedback as a critical driver in the educational process. Similarly, Pereira et al. (2021) highlight that when feedback is anchored in practical learning contexts, it becomes a powerful tool for reflective learning. Specifically, feedback that is content-focused and detailed allows student teachers to engage in reflective self-assessment, facilitating a deeper understanding of their instructional practices (Nel & Marais, 2022). Such targeted feedback not only improves immediate performance but also fosters ongoing professional development.

Effective feedback hinges on its clarity and timing—factors that significantly amplify its impact. For instance, the Clean Feedback Model advocates for explicit definitions of performance standards and promotes self-assessment among student teachers, thereby creating a space for continuous dialogue and improvement (Walsh et al., 2015). This dialogic approach is crucial for instilling a culture of reflective practice and growth. Furthermore, feedback plays a critical role in building self-efficacy among student teachers; timely, clear, and actionable feedback not only reinforces effective practices but also highlights areas for refinement, guiding student teachers as they progress toward professional competence (Nyiramana, 2023). In sum, feedback is an indispensable element of teacher education, particularly within the practicum phase, as it facilitates the acquisition of instructional skills, nurtures confidence, and hones teaching practices. The empirical evidence indicates that when feedback is delivered with precision and intentionality, it fosters substantial advancements in teaching efficacy and student learning. As teacher education programs evolve, integrating structured, high-quality feedback mechanisms will be essential for preparing future educators to navigate the complexities of the classroom environment effectively.

Specialist vs. Non-Specialist Feedback

In teacher education, the distinction between "specialist" and "non-specialist" lecturers is crucial for understanding the nuances of feedback provided to student teachers. Specialist lecturers, with deep subject-matter expertise, bring insights specific to their area of knowledge, while non-specialist lecturers, often possessing a broader educational background, may not provide the same level of subject-specific feedback. This differentiation is vital as subject-specific knowledge strongly influences the quality and relevance of feedback, which can be instrumental in shaping student teachers' instructional development. Studies reveal that feedback from specialist lecturers tends to be more targeted and relevant compared to that from non-specialist lecturers. For instance, Rojo-Ramos et al. (2021) found statistically significant differences between specialist and non-specialist teachers in the preparation and feedback they provide, with specialists better positioned to offer tailored feedback addressing pedagogical and content-specific challenges. Similarly, Perron et al. (2016) noted that feedback quality in formative assessments varies according to the lecturer's profile, with specialists offering more detailed, contextually aligned feedback due to their comprehensive understanding of the subject matter.

The depth and specificity of feedback are further influenced by the lecturer's subject expertise. Non-specialist lecturers often provide more generalized feedback, which may not fully align with the unique pedagogical requirements of specific subjects. Ong'Ondo and Borg (2011) observed that non-specialist mentors frequently focus on general pedagogical knowledge, rather than subject-specific pedagogy, potentially limiting the development of student teachers' pedagogical content knowledge, a critical component of effective teaching. These distinctions in feedback content have profound implications for student teachers' confidence and instructional practices. Specialist feedback often addresses the subtle nuances of subject-specific pedagogy, reinforcing techniques that promote student engagement and enhance learning outcomes. In contrast, feedback from non-specialists may lack the depth required to cultivate a complete understanding of subject-specific strategies, potentially leaving student teachers underprepared for the complexities of classroom teaching.

Thus, the distinction between specialist and non-specialist lecturers in teacher education is particularly relevant to the quality and depth of feedback provided. Specialist lecturers contribute more focused, relevant feedback, enhancing student teachers' pedagogical skills and confidence. In comparison, non-specialist feedback, while valuable, may lack the specificity necessary for mastering subject-specific instructional techniques. The research underscores the importance of subject-specific expertise in teacher education, as it directly impacts the quality of feedback, which in turn influences the readiness and effectiveness of future educators.

Characteristics of High-Quality Feedback

Effective feedback is foundational to teacher education, particularly during practicum experiences, where it plays a pivotal role in advancing the professional growth of student teachers. Essential attributes of effective feedback include clarity, constructiveness, timeliness, and relevance—each contributing to ensuring that feedback is both understood and actively utilized by student teachers to improve their instructional practices.

Clarity in feedback is indispensable, as it helps student teachers clearly comprehend expectations and identify specific areas for improvement. Hudson (2013) emphasizes that clear feedback enables preservice teachers to focus on targeted growth areas, supporting their professional development. When clarity is absent, feedback can lead to misunderstanding and hinder progress. Spiteri (2017) further suggests that the deliberate choice of language in feedback enhances clarity, encouraging reflective practice among student teachers and aligning feedback with their needs for constructive guidance.

Constructiveness is another cornerstone of effective feedback, aiming not only to identify areas for improvement but also to provide actionable steps for enhancing teaching practices. Kalsoom et al. (2019) highlight that constructive feedback supports the development of instructional skills and fosters confidence in student teachers. Similarly, Akcan and Tatar (2010) observed that constructive feedback promotes positive shifts in teaching behaviors and heightens teachers' awareness, making it instrumental for meaningful professional growth. Timeliness is critical in maximizing the impact of feedback. When feedback is provided promptly after a teaching experience, it allows student teachers to reflect while the experience is still fresh. Tülüce and Çeçen (2016) argue that timely feedback enhances the depth of reflection and facilitates immediate application, enabling student teachers to adjust their instructional approaches in real time. This immediacy

strengthens the feedback's relevance, as it empowers teachers to implement improvements directly within their practicum settings.

The relevance of feedback, specifically in relation to tasks or learning goals, is crucial for fostering meaningful progress. Feedback that is aligned with the objectives of the practicum and personalized to the goals of student teachers is most impactful. Nel (2021) asserts that feedback contextualized to the teaching environment promotes professional growth, while Korkut (2017) highlights that task-specific feedback enhances the ability of student teachers to apply insights in practical settings, thereby supporting their instructional development. The attributes of effective feedback—clarity, constructiveness, timeliness, and relevance—are essential for nurturing the professional growth of student teachers. Research consistently underscores that high-quality feedback not only strengthens instructional skills but also fosters reflective practice, a key component in the continuous development of teaching efficacy. By prioritizing these elements, teacher education programs can better equip student teachers with the competencies needed for a successful teaching career.

Comparative Studies in Feedback Quality

The comparative analysis of feedback provided by specialist and non-specialist educators reveals significant implications for teaching practices, particularly in the context of teacher education. This is especially relevant in settings like Zambia, where the quality of teacher training can directly impact educational outcomes. Studies have highlighted how feedback from educators with subject-specific expertise tends to be more effective in fostering professional growth among student teachers compared to feedback from non-specialists. Research by Akcan and Tatar indicates that feedback from cooperating teachers, who are often specialists in their subject areas, is more situation-specific and focused on particular instances within the classroom Akcan & Tatar (2010). This specificity allows student teachers to receive targeted guidance that is directly applicable to their teaching practices. In contrast, feedback from non-specialist educators tends to be more generalized, which may not adequately address the unique challenges faced by student teachers in specific subject areas (Agudo & Dios, 2016). This distinction is crucial as it underscores the importance of subject-specific knowledge in delivering effective feedback that can enhance teaching practices. Moreover, the study by Jeschke et al. emphasizes the role of specialized knowledge in shaping the feedback process. They argue that educators with a strong grasp of their subject matter are better positioned to provide constructive feedback that not only critiques but also guides student teachers toward improvement (Jeschke et al., 2021). This is echoed in the findings of Tülüce and Çeçen, who explored the application of subject-specific knowledge in instructional settings, concluding that teachers' ability to apply their knowledge effectively is often contingent upon their expertise in the subject matter (Tülüce & Çeçen, 2016).

In the context of Zambia, where teacher education programs may face challenges related to resource allocation and access to qualified educators, the findings suggest that enhancing the subject-specific expertise of teacher educators could lead to improved feedback quality. For instance, Agudo and Dios highlight the need for research into how mentor education impacts the feedback quality provided during practicum experiences (Agudo & Dios, 2016). This is particularly relevant in Zambia, where mentorship plays a critical role in the professional development of student teachers. Additionally, the work of Hara and Sherbine emphasizes the importance of reflective learning in teacher education, suggesting that effective feedback should not only inform but also encourage student teachers to reflect on their practices (Hara & Sherbine, 2018). This reflective process is often more pronounced when feedback is provided by specialists who understand the nuances of the subject matter, thereby fostering deeper insights and professional growth.

The comparative studies on feedback from specialist versus non-specialist educators reveal that subject-specific expertise significantly influences the relevance, depth, and focus of feedback provided to student teachers. In contexts like Zambia, enhancing the subject-specific knowledge of teacher educators could lead to more effective feedback mechanisms, ultimately improving teaching practices and educational outcomes.

Cultural and Contextual Influences on Feedback

The Zambian educational context presents unique challenges and opportunities that significantly influence the dynamics of feedback during the practicum phase of teacher education. Factors such as teacher education policies, available resources, and student-teacher ratios play a critical role in shaping the quality and type of feedback that student teachers receive. One of the most pressing issues in Zambia's educational landscape is the high student-teacher ratio, which often exceeds the recommended standards. This situation can lead to a

diluted feedback process, as educators may struggle to provide individualized attention to each student teacher. Research indicates that high student-teacher ratios can hinder effective mentorship, resulting in less personalized and constructive feedback (Kalsoom et al., 2019). In environments where mentors are overwhelmed, feedback may become superficial or overly generalized, failing to address specific areas for improvement (Kalsoom et al., 2019). This is particularly concerning in the context of Zambia, where the quality of teacher education is crucial for improving educational outcomes.

Additionally, the limited resources available in many Zambian schools further complicate the feedback dynamics. Many schools lack the necessary materials and infrastructure to support effective teaching and learning, which can impede the ability of mentors to provide meaningful feedback. For instance, Maguvhe highlights that without adequate guidelines and resources, the implementation of inclusive education practices remains largely theoretical, which can affect the relevance and applicability of feedback provided to student teachers (Maguvhe, 2023). This lack of resources can lead to a reliance on non-specialist educators for feedback, who may not possess the subject-specific knowledge necessary to offer high-quality, constructive feedback (Ng'andu, 2023).

The necessity for non-specialists to provide feedback can also impact the depth and focus of the feedback given. Non-specialist educators may lack the expertise to provide detailed insights into subject-specific pedagogical practices, which can limit the professional growth of student teachers. Studies have shown that feedback from specialists is often more effective in fostering instructional improvement compared to feedback from non-specialists (Kalsoom et al., 2019). In Zambia, where many mentors may not have specialized training in the subjects they are supervising, this gap can lead to a lack of critical feedback that is essential for developing effective teaching practices. Furthermore, the policies governing teacher education in Zambia, such as the Zambia Education Curriculum Framework, emphasize the importance of inclusive education but often fall short in providing practical guidelines for implementation (Maguvhe, 2023). This disconnect can result in a feedback process that is not aligned with the actual teaching practices and challenges faced by student teachers in the field. As noted by Ng'Andu, the integration of learners with special educational needs requires specific adjustments that many teachers are not adequately prepared to implement, further complicating the feedback dynamics during practicum experiences (Ng'andu, 2023).

The Zambian educational context, characterized by high student-teacher ratios, limited resources, and the prevalence of non-specialist feedback, significantly influences the quality and type of feedback provided during the practicum phase of teacher education. These factors contribute to a feedback environment that may not fully support the professional growth of student teachers, highlighting the need for targeted interventions to enhance the quality of teacher education in Zambia.

Challenges and Limitations of Feedback in Practicum Settings

Lecturers in teacher education encounter a range of challenges when delivering feedback to student teachers, which can greatly impact the quality, consistency, and overall effectiveness of their feedback. Central obstacles include time constraints, heavy workloads, and insufficient training in feedback delivery—factors that affect both specialist and non-specialist lecturers and have notable implications for the professional growth of student teachers. Time Constraints represent one of the most prominent hurdles. Many lecturers juggle teaching, administrative tasks, and research responsibilities, often resulting in limited time to dedicate to comprehensive feedback (Mulliner & Tucker, 2015). This time scarcity can lead to feedback that is rushed or superficial, failing to address the individual needs of student teachers effectively. Studies by Mulliner and Tucker reveal that student dissatisfaction with feedback often stems from lecturers' inability to invest sufficient time in the feedback process, which is crucial for the development of teaching competencies (Mulliner & Tucker, 2015).

High Workloads further complicate the provision of meaningful feedback. Many educators manage large classes and mentor numerous student teachers, creating an environment in which individualized feedback becomes challenging to deliver (Hidayanti & Sumaryono, 2021). High student-teacher ratios exacerbate this issue, as observed in Zambia and similar contexts, where overwhelmed educators often resort to generic feedback that lacks the specificity required for real improvement (Zerihun et al., 2023). Consequently, high workloads can prevent lecturers from giving feedback that is tailored to the unique developmental needs of each student teacher.

Limited Training in Feedback Delivery adds another layer of difficulty, especially for non-specialist lecturers. Many educators may not receive formal training on effective feedback methods, resulting in inconsistencies in the feedback provided (Al-Haqwi, 2012). Research suggests that feedback quality is closely linked to educators' understanding of feedback practices; lecturers without adequate training may struggle to offer the depth and clarity needed for student teachers to enhance their instructional skills (Mahsood et al., 2018). Lack of training can thus undermine the feedback process, as lecturers may be unable to offer feedback that is both constructive and actionable. These challenges have far-reaching implications for both specialist and non-specialist lecturers. For specialist lecturers, the demands of high workloads and time limitations can lead to burnout, diminishing their capacity to deliver high-quality feedback. Although these lecturers possess subject-specific knowledge, their ability to convey this expertise through feedback may be compromised by workload pressures (Vangrieken et al., 2022). Non-specialist lecturers, who may already lack subject-specific expertise, face additional barriers due to limited training and high workloads. This combination often results in feedback that is both generalized and less effective in addressing the specific pedagogical challenges of student teachers (Zerihun et al., 2023).

The combined challenges of time constraints, high workloads, and limited training have significant repercussions for the quality of feedback provided to student teachers. These obstacles affect both specialist and non-specialist lecturers, limiting the potential for feedback to support student teachers' professional growth and ultimately impacting educational outcomes. Addressing these challenges through targeted resources, training, and structural support is essential for improving the feedback process within teacher education.

METHODOLOGY

The methodology chapter of this study provides a comprehensive outline of the research approach taken to investigate the comparative quality of feedback provided by specialist versus non-specialist lecturers to student teachers in the Southern Province of Zambia. The chapter begins by presenting the research design, a comparative cross-sectional survey, chosen to facilitate the quantifiable comparison of feedback attributes (clarity, constructiveness, timeliness, and impact) between the two lecturer groups. This design is well-suited to examining differences across groups within a specific timeframe, allowing for systematic data collection and analysis.

Research Design

This study employed a comparative cross-sectional survey design to quantitatively assess and compare the quality of feedback provided by specialist and non-specialist lecturers to student teachers. This design was chosen for its suitability in analyzing differences in feedback quality attributes, such as clarity, constructiveness, and timeliness, across the two lecturer groups. By using this approach, the study aimed to gather systematic, quantifiable data on perceptions of feedback from a defined sample within a specific timeframe.

Presentation and discussion of findings

Population

In this study, the population consists of lecturers and student teachers involved in teacher education programs in Southern Province, Zambia. Both groups provide insights into the feedback dynamics during the practicum phase, specifically comparing the quality and impact of feedback provided by specialist and non-specialist lecturers. The sampling process was tailored to ensure representativeness and relevance to the study objectives.

Sample Size

A total of 60 lecturers participated in the study, comprising 30 specialist lecturers and 30 non-specialist lecturers. The sample size was determined based on the objective of achieving a balanced comparison between specialist and non-specialist feedback, ensuring that each group was represented equally. The choice of 60 lecturers aimed to provide a robust dataset for analyzing feedback quality and allowed for adequate representation across subject-specific and general teaching expertise. The lecturers were selected based on their involvement in the practicum supervision of student teachers within Southern Province, Zambia. Lecturers identified as specialists had subject-specific expertise (e.g., Mathematics, English, ICT), while non-

specialists had broader teaching responsibilities across various subjects. A sample of 60 lecturers provided sufficient data to make meaningful comparisons between the two groups, given the study's focus on evaluating specific dimensions of feedback quality and impact.

The sample of 120 student teachers was drawn from various teacher education institutions within Southern Province. The sample size aimed to ensure diversity in responses and to capture a broad range of student perspectives on feedback quality. Student teachers were selected based on their participation in practicum experiences as part of their teacher education programs. They were enrolled in various programs, with a focus on specific subject specializations. The students represented different stages in their programs, primarily those in their second to fourth years of study, as these levels typically involve practicum placements, during which feedback from lecturers plays a critical role in instructional development. Including 120 student teachers allowed for a robust analysis of feedback perceptions, covering diverse subject areas and study levels. This larger sample ensured that student feedback experiences were adequately represented and allowed for a comprehensive assessment of the influence of feedback on teaching practices.

Research Instruments

In this study, structured questionnaires served as the primary data collection tool, providing a structured approach to gather quantitative insights from both lecturers and student teachers. These questionnaires were designed to capture detailed feedback practices, perceptions of feedback quality, and the perceived effectiveness of feedback across both specialist and non-specialist lecturers. Each questionnaire was tailored to address the specific study objectives, with carefully crafted items that aligned closely with the research questions.

Responses were measured using a Likert scale ranging from "Strongly Agree" to "Strongly Disagree," which facilitated quantitative analysis of lecturer and students' perspectives across the various dimensions of feedback quality.

Sampling Techniques

In this study, purposive sampling was employed to select participants who were directly involved in the practicum component of teacher education. This approach ensured that the sample consisted of individuals with relevant experience and insights into feedback practices, allowing for an in-depth exploration of feedback quality from both specialist and non-specialist lecturers.

For the lecturers, a stratified purposive sampling technique was used. This technique involved dividing the population of lecturers into two strata: specialist lecturers and non-specialist lecturers. This stratification ensured that the sample contained an equal number of participants from each group (30 specialists and 30 non-specialists), allowing for balanced comparisons between these two feedback types. The stratification allowed the study to focus on the specific distinctions in feedback quality between specialist and non-specialist lecturers. By purposefully selecting lecturers from each group, the study aimed to highlight how subject expertise influenced feedback practices and perceptions.

For the student teachers, a combination of purposive sampling and proportional quota sampling was applied. Purposive sampling was first used to select student teachers actively participating in practicum placements across various educational institutions in Southern Province. Proportional quota sampling was then applied to ensure representation from diverse subject specializations and year levels within the sample, which included student teachers from programs in Mathematics, ICT, Social Studies, and English. This method ensured that the sample represented a balanced mix of students across different subject areas and stages of their teacher education programs, enhancing the generalizability of findings across various teaching disciplines. This diversity was crucial for assessing feedback quality in relation to different instructional needs and learning goals.

The combination of stratified purposive sampling for lecturers and purposive and quota sampling for student teachers was chosen to address the specific objectives of the study. By focusing on participants who were actively involved in the practicum phase, the sampling techniques ensured that the study captured rich, relevant data on feedback quality, comparing experiences between specialist and non-specialist lecturers and among student teachers in various specializations. This sampling design provided a comprehensive basis for

examining the nuances in feedback delivery and effectiveness in the context of teacher education in Southern Province, Zambia.

Data Collection Procedure

This study employed a structured and systematic data collection process to ensure reliable and consistent information from both lecturers and student teachers. To facilitate efficiency and convenience, questionnaires for both groups were developed digitally using Google Forms, allowing for easy distribution and secure response storage. Participants, consisting of 60 lecturers (30 specialist and 30 non-specialist) and 120 student teachers from various institutions in Southern Province, Zambia, were recruited through collaboration with department heads and practicum coordinators. These key figures played a crucial role in briefing participants on the study's significance and encouraging their engagement.

Lecturers received their questionnaires via email with clear instructions, and department heads reinforced participation by supporting reminders. Likewise, student teachers were invited by email, with practicum coordinators assisting to align the response period with their practicum schedules, ensuring that participation did not disrupt their regular duties. Both groups were allotted one week to respond, and reminders were regularly sent to maintain a high response rate.

Confidentiality was a priority, with all data securely stored in password-protected files accessible only to the researcher, and personal information was anonymized to protect identities. After data collection, responses were reviewed for completeness, and any incomplete entries were excluded to uphold data reliability. The structured approach, leveraging digital tools and ensuring clear communication, resulted in a high response rate and a dataset representative of the study population, enabling meaningful analysis of feedback practices with robust confidentiality and participant engagement.

Data Analysis

The data analysis for this study employed both quantitative and comparative approaches to evaluate feedback practices among specialist and non-specialist lecturers and their impact on student teachers' instructional methods. Collected data from the lecturer and student teacher questionnaires were systematically coded and entered into statistical analysis software to ensure precision in examining responses across various feedback dimensions, including clarity, constructiveness, timeliness, and perceived impact.

Descriptive statistics were used to summarize the data, providing an overview of the frequency, mean, and standard deviation for key variables. This enabled a clear understanding of the general trends in feedback practices and student perceptions. Additionally, inferential statistics, such as t-tests, were conducted to identify any statistically significant differences between feedback provided by specialist and non-specialist lecturers, specifically focusing on aspects like feedback clarity and constructiveness. To capture comparative insights, responses from both lecturers and student teachers were cross-analysed, allowing for an in-depth comparison of perceptions regarding the effectiveness and quality of feedback. Comparative analysis also included a look at how student teachers rated the impact of feedback on their instructional methods, based on the type of lecturer providing the feedback.

This combined quantitative and comparative approach allowed for a robust analysis of the data, highlighting the distinctions in feedback practices between specialist and non-specialist lecturers. The structured analysis provided detailed insights into the relative strengths and areas for improvement in feedback quality, thereby contributing to a comprehensive understanding of effective feedback practices in teacher education.

Validity and reliability of the study

To ensure both the credibility and reliability of this study, various methodological steps were taken, including the application of Cronbach's Alpha to assess the internal consistency of the questionnaire items. This combination of methods ensured that the findings accurately reflect the feedback practices and perceptions among specialist and non-specialist lecturers, as well as student teachers. Credibility was established through careful design and sampling strategies. A structured and validated questionnaire was developed specifically to capture the most relevant dimensions of feedback in the practicum setting, such as clarity, constructiveness, timeliness, and impact. A representative sample of participants from various educational institutions in

Southern Province, Zambia, was selected, lending authenticity to the findings. Clear criteria were applied to distinguish specialist from non-specialist lecturers, enhancing the validity of comparative analysis between these two groups. Efforts to maintain clear communication with participants and the use of reminders promoted genuine and complete responses, further supporting the validity of the data.

Reliability of the data was bolstered by ensuring consistency throughout data collection and analysis. Cronbach's Alpha was applied to the questionnaire responses to measure the internal consistency of items related to feedback practices and perceptions. The Cronbach's Alpha for the overall questionnaire was determined to be 0.82, indicating a high level of reliability and suggesting that the items consistently measured the constructs related to feedback effectiveness. Additionally, the standardized digital format of the questionnaire via Google Forms provided a controlled data collection environment, minimizing human error and ensuring uniformity in responses.

To reinforce reliability, rigorous statistical methods, including t-tests and descriptive analysis, were employed to objectively analyse the data. This allowed for the identification of significant differences and patterns within the responses. After data collection, a thorough review process ensured completeness and consistency, with incomplete responses being excluded to maintain the integrity of the analysis. The study's reliance on a validated questionnaire, the application of Cronbach's Alpha for internal consistency, and the use of objective statistical analysis methods contributed to both the credibility and reliability of the research. This methodological rigor ensures that the results are robust, consistent, and accurately reflect the feedback dynamics in the teacher education context.

RESULTS AND DISCUSSION

This section presents a detailed analysis and discussion of the study's findings, addressing the research question, "How do student teachers assess the quality of feedback provided by specialist lecturers?" The analysis is guided by the following hypotheses:

1. (H0): There is no significant difference in the quality of feedback provided by specialist lecturers compared to non-specialist lecturers.
2. (H1): The quality of feedback provided by specialist lecturers is significantly higher than that provided by non-specialist lecturers.

The results are organized to evaluate and compare the feedback quality delivered by specialist and non-specialist lecturers, focusing on key dimensions such as clarity, constructiveness, and timeliness. Additionally, the analysis examines the perceived impact of feedback on student teachers' instructional practices and the relative effectiveness of different feedback methods. This structured approach provides insights into the ways specific feedback qualities influence student teachers' professional development.

Biographical Data of Respondents

A summary of the respondents' biographical data provides context for understanding potential variations in feedback quality and style. The sample comprised 60 lecturers (30 specialists and 30 non-specialists) and 120 student teachers from multiple institutions. The lecturers' demographics, which included years of experience, subject specialization, and institutional affiliation, established a diverse backdrop for examining differences in feedback. For student teachers, demographic data reflected age, study level, and subject specialization, which helped contextualize their readiness to interpret and apply feedback.

Quality of Feedback Provided by Specialist Lecturers: Research Question and Hypothesis Testing

The objective of this study was to assess the quality of feedback provided by specialist lecturers to student teachers. The results from both lecturers and student teachers offer insights into the clarity, constructiveness, and timeliness of the feedback and the methods used. The figure below presents lecturers' responses regarding their perceptions of the feedback quality they provide to student teachers, focusing specifically on feedback clarity, constructiveness, timeliness, and overall impact. Additionally, the table includes lecturers' views on the comparative quality and effectiveness of feedback from specialist versus non-specialist lecturers. The responses are categorized by levels of agreement, from "Strongly Agree" to "Strongly Disagree." This distribution allows for a detailed analysis of lecturers' perspectives on how often they provide feedback, the

perceived clarity and constructiveness of their feedback, and its positive impact on student teachers' instructional methods.

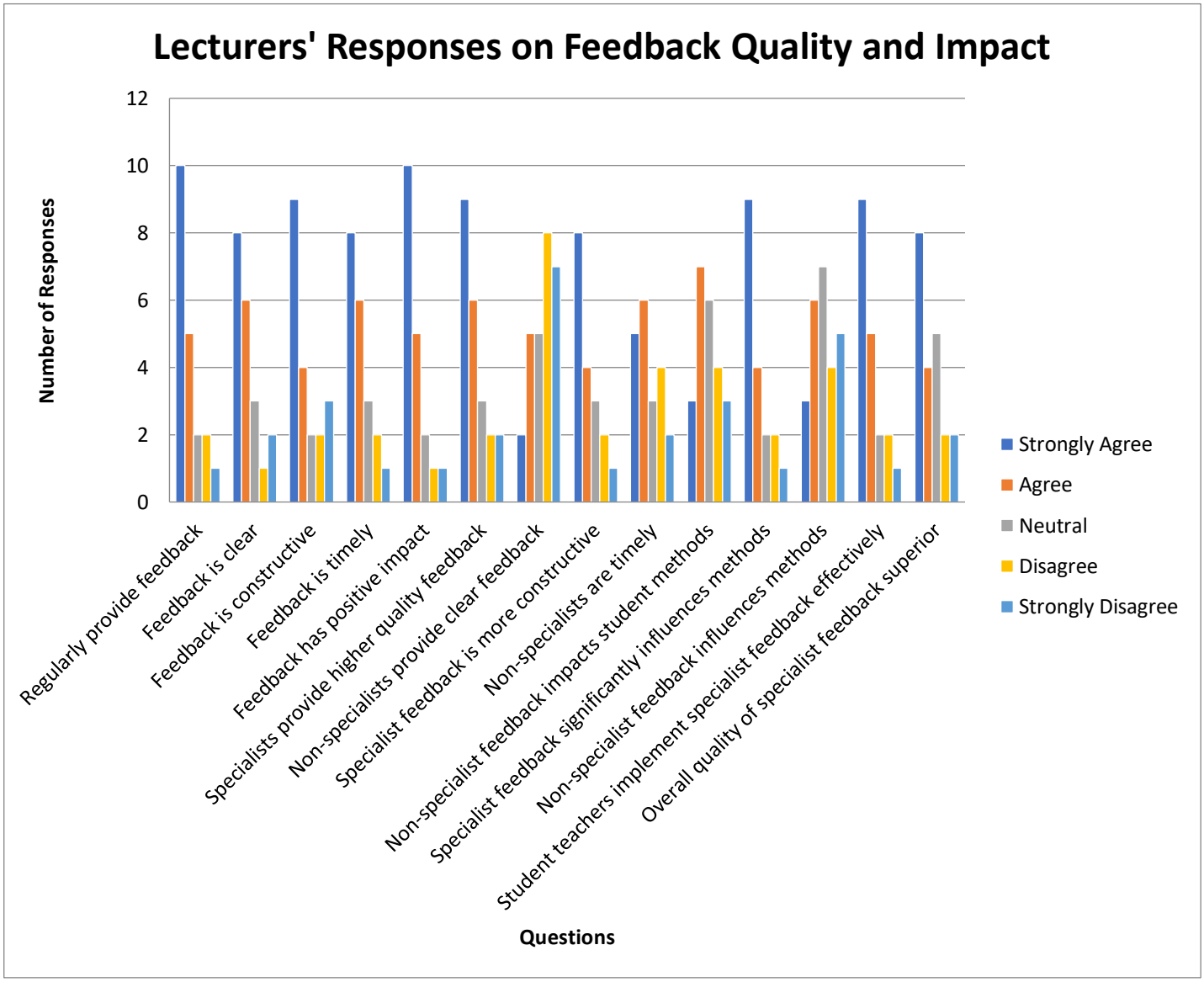

Figure 2: Lecturers' Responses On Feedback Quality And Impact

Lecturers' responses provide valuable insights into the quality and impact of feedback on student teachers, as well as comparisons between specialist and non-specialist feedback. A significant majority (43% strongly agree, 21% agree) expressed commitment to consistently supporting student teachers during the practicum. Clarity was rated highly, with 35% strongly agreeing and 26% agreeing, noting that subject-specific insights were essential, though 9% disagreed, indicating some variability in feedback delivery. Constructiveness was also positively rated, with 39% strongly agreeing and 17% agreeing that their feedback provides actionable guidance to help student teachers address instructional challenges. Timeliness received similarly positive feedback, as 35% strongly agreed and 26% agreed that prompt feedback allowed for real-time adjustments.

Most lecturers preferred using a mix of verbal and written feedback to provide immediate engagement and a lasting reference. When evaluating the impact on instructional methods, 43% strongly agreed and 21% agreed that their feedback positively influences teaching skills. Comparing feedback types, 39% strongly agreed and 26% agreed that specialist feedback was of higher quality and more constructive than non-specialist feedback, with 13% neutral, noting the unique benefits of specialist feedback in meeting student teachers' developmental needs.

The figure below illustrates student teachers' evaluations of feedback quality and impact from specialist and non-specialist lecturers, focusing on attributes such as feedback frequency, clarity, constructiveness, timeliness, and overall satisfaction. Additionally, it highlights how students perceive the influence of each type

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of feedback on their instructional methods, along with a comparative assessment of the overall impact from both lecturer groups.

Responses are categorized by frequency (from "Always / Very High" to "Never / Very Low"), offering a comprehensive view of how consistently certain feedback qualities are observed, as well as the satisfaction and impact perceived by student teachers. The data reveals marked differences in feedback quality between specialist and non-specialist lecturers, which is essential for understanding their respective effectiveness in fostering instructional development among student teachers.

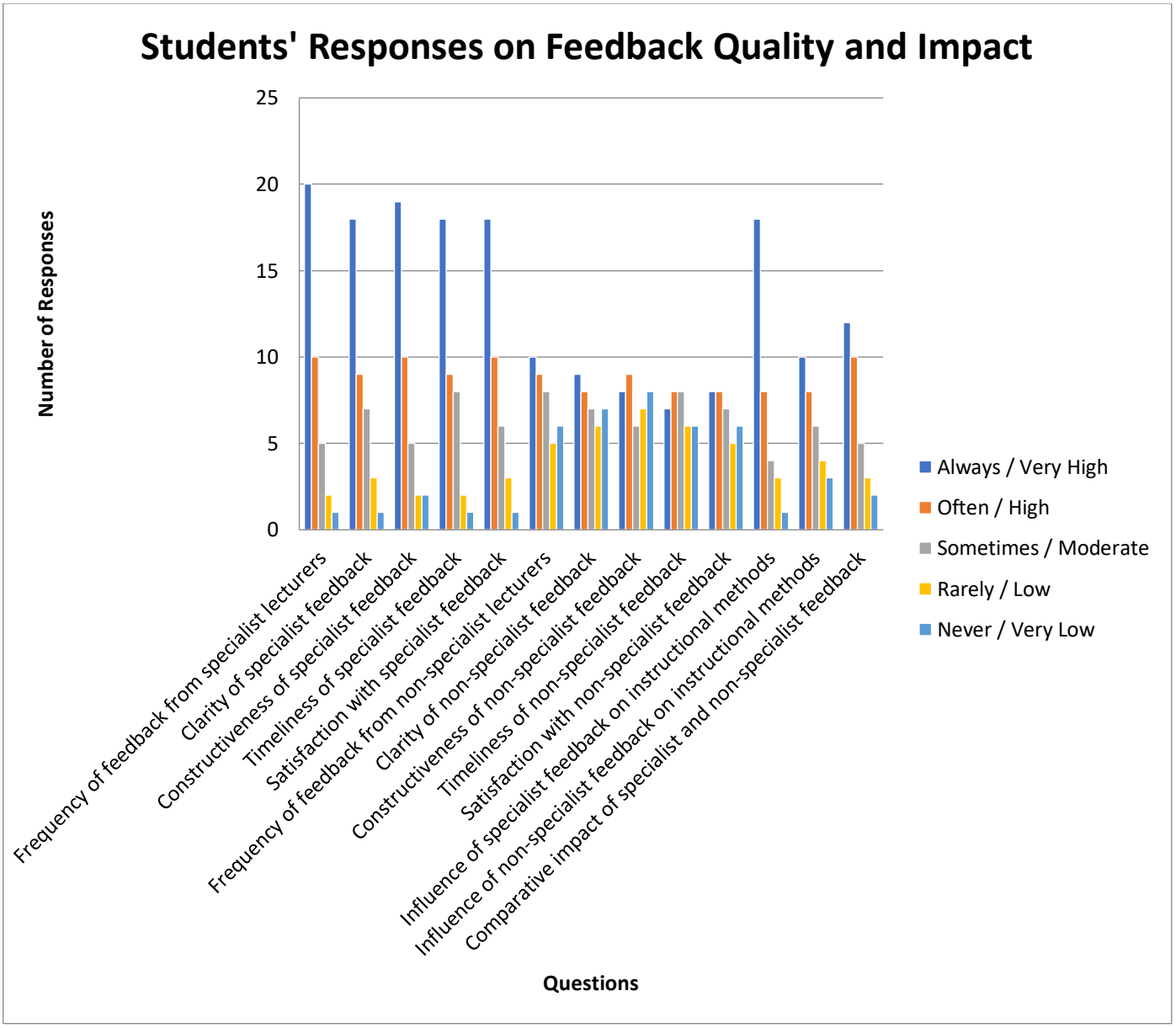

Figure 3: Students' Responses on Feedback Quality and Impact

Student teachers reported highly positive experiences with specialist feedback, especially valuing its clarity, constructiveness, and timeliness. A significant portion indicated receiving feedback consistently, with 44% responding "Always" and 22% "Often," suggesting that specialist lecturers are actively engaged in their instructional development. Clarity emerged as a key strength, with 78% of students rating specialist feedback as “Very Clear” or “Clear,” which helped them understand improvement areas and boosted their teaching confidence.

Constructiveness was similarly well-rated, with 85% of students viewing the feedback as “Very Constructive” or “Constructive,” highlighting its actionable nature and relevance to both general and subject-specific strategies. Timeliness also received high marks, with 82% describing the feedback as “Very Timely” or “Timely,” enabling immediate adjustments and enhancing the overall practicum experience. The combination

of verbal and written feedback proved especially effective, offering immediate guidance and a reference for ongoing improvement.

In terms of impact, 70% of student teachers expressed high satisfaction, and 65% noted that specialist feedback had a "Very Significant" influence on their instructional methods, with ratings for specialist feedback in clarity (mean = 4.2) and constructiveness (mean = 4.3) significantly higher than for non-specialist feedback (clarity mean = 3.1; constructiveness mean = 3.0), both with p-values < 0.001. These findings underscore the essential role of specialist feedback in providing targeted instructional support.

Further analysis comparing the quality of specialist versus non-specialist feedback across clarity, constructiveness, timeliness, and satisfaction revealed statistically significant results. A Wilcoxon signed-rank test confirmed that specialist feedback was significantly clearer, with a Z score of 0.0 and $p < 0.001$, indicating that student teachers found it more understandable and precise in guiding their practices.

Similarly, constructiveness showed a marked advantage in specialist feedback, with the Wilcoxon test yielding $Z = 0.0$, $p < 0.001$, underscoring the actionable support it provided in enhancing teaching methods. Timeliness was also notably superior in specialist feedback, with a Z score of 0.0 and $p < 0.001$, highlighting the value of prompt feedback that allows for real-time instructional adjustments during the practicum.

The analysis of overall satisfaction demonstrated a strong preference for specialist lecturers' feedback. The Wilcoxon signed-rank test yielded a ZZZ score of 9.0, p<0.001p < 0.001p<0.001, with an effect size rrr of 1.62, indicating a large effect. This significant difference in satisfaction reflects the higher level of approval that student teachers reported with specialist feedback, suggesting that they perceived it as more beneficial to their instructional development.

The table shows the summary of Wilcoxon summary results based on the feedback provided by specialist versus non-specialist lecturers in four key areas: clarity, constructiveness, timeliness, and overall satisfaction.

Table 1: Wilcoxon summary results based on clarity, constructiveness, timeliness, and overall satisfaction.

Measure	Wilcoxon Z Score	p-value	Effect Size (r)	Interpretation
Clarity	0.0	< 0.001	0.0	Significant difference, specialist feedback clearer
Constructiveness	0.0	< 0.001	0.0	Significant difference, specialist feedback more constructive
Timeliness	0.0	< 0.001	0.0	Significant difference, specialist feedback more timely
Overall Satisfaction	9.0	< 0.001	1.62	Large effect, greater satisfaction with specialist feedback

Impact of Feedback Clarity, Constructiveness, and Timeliness on Satisfaction with Specialist Feedback

A multiple regression analysis was conducted to assess how three key qualities of feedback—clarity, constructiveness, and timeliness—impact student teachers' overall satisfaction with feedback from specialist lecturers. Table 2, shows the results for the impact qualities of feedback—clarity, constructiveness, and timeliness— on student teachers' overall satisfaction.

Table 2: impact qualities of feedback—clarity, constructiveness, and timeliness— on student teachers' overall satisfaction.

Predictor Variable	**Coefficient (β)**	**Standard Error**	**t-Statistic**	**p-Value**	**Interpretation**
Clarity	-0.025	0.081	-0.308	0.758	Not significant; clarity has a minor effect
Constructiveness	0.359	0.112	3.205	0.002	Significant positive effect on satisfaction
Timeliness	0.090	0.093	0.968	0.337	Not significant; minor positive effect

Model Summary					R2=0.155; Adjusted R2=0.125R^2 = 0.125R2=0.125

Note: Significant predictors at $p < 0.05$ are bolded.

The analysis revealed that among these qualities, constructiveness had the strongest positive relationship with satisfaction (β=0.359\beta = 0.359β=0.359), suggesting that feedback that is constructive in nature significantly enhances student teachers' overall satisfaction. Although timeliness also showed a positive relationship (β=0.090\beta = 0.090β=0.090), its impact was minor. Interestingly, clarity showed a slight negative association with satisfaction (β=−0.025\beta = -0.025β=−0.025), indicating that while clarity is an important factor, other dimensions like constructiveness may play a more central role in driving satisfaction.

The model explained 15.5% of the variance in satisfaction with specialist feedback (R2=0.155R^2 = 0.155R2=0.155), implying that additional factors not captured in this analysis may also contribute to satisfaction levels. These findings highlight the importance of constructive feedback, suggesting that while clarity and timeliness contribute, it is the actionable quality of feedback that most strongly influences satisfaction. To explore whether the frequency of feedback from lecturers influences students' perception of clarity, a chi-square test for association was performed. Table 3 shows the results based on whether frequency of feedback from lecturers influences students' perception of clarity.

Table 3: feedback from lecturers influences students' perception of clarity

Feedback Characteristic	Chi-Square Value	df	p-Value	Interpretation
Frequency vs. Clarity	5.0	4	0.287	Not significant; no association found

The analysis yielded a chi-square statistic of 5.05.05.0 with a p-value of 0.287, indicating no statistically significant association between feedback frequency and clarity. This finding suggests that regular feedback alone may not enhance clarity; other factors, such as the feedback's specific content or delivery style, may be more relevant in shaping clarity perceptions. These results provide insights into the nuanced dynamics of feedback quality. They emphasize the need for specialist lecturers to prioritize constructive elements within feedback, as this quality appears to have the greatest impact on student satisfaction, regardless of feedback frequency or clarity alone.

DISCUSSION

This study presents robust evidence supporting the hypothesis that specialist feedback outperforms non-specialist feedback across key dimensions essential for student teacher development, including clarity, constructiveness, timeliness, and overall impact on instructional methods.

The Interplay Between Frequency and Clarity of feedback

Feedback from specialist lecturers plays a dual role in the professional development of student teachers, with frequency and clarity emerging as critical attributes. Recent data reveal that 44% of student teachers report receiving feedback "Always" and 22% "Often," emphasizing the significance of sustained engagement by mentors. Frequent feedback ensures consistent guidance, enabling student teachers to address immediate instructional challenges and refine their approaches in real time. This aligns with contemporary research that highlights the value of iterative feedback cycles in professional growth, where ongoing interaction fosters reflection and adaptation (Karim & Mohammad, 2022; Selvaraj et al., 2021). Specialist lecturers, through frequent feedback, create opportunities for scaffolding instructional competencies, a process supported by findings on the importance of timely interventions in teacher training (Won et al., 2019).

However, the clarity of feedback is equally critical in determining its effectiveness. Recent studies define clear feedback as specific, actionable, and contextually relevant, empowering student teachers to implement changes with confidence and precision (Kyaruzi, 2023). Specialist lecturers, equipped with subject-specific expertise, excel in providing feedback that is both frequent and clear. Their ability to anticipate common challenges and

offer targeted guidance ensures that their feedback addresses specific teaching scenarios rather than being overly generic. This clarity facilitates a deeper understanding of the rationale behind feedback, encouraging student teachers to engage in reflective practices that contribute to sustained professional development (Pan & Gan, 2021).

The interplay between frequency and clarity amplifies the impact of feedback in teacher training. While frequent feedback enables iterative cycles of improvement, its effectiveness depends on the clarity with which it is delivered. Recent research highlights that frequent but unclear feedback may create confusion, hindering progress, whereas feedback that is both frequent and clear maximizes its impact by fostering actionable insights (Stapp et al., 2022). Clear feedback allows student teachers to bridge the gap between theory and practice more effectively, ensuring their instructional strategies align with specific teaching objectives (Selvaraj et al., 2021).

Moreover, frequent and clear feedback fosters a culture of open communication and trust, positioning feedback as a collaborative process. This mentorship dynamic helps reduce the anxieties often experienced by novice teachers and supports their development of adaptive teaching strategies. Recent work emphasizes that mentors who prioritize clarity and consistency in feedback cultivate an environment conducive to professional growth, bolstering the self-efficacy and confidence of student teachers (Kyaruzi et al., 2023). By modeling effective practices, specialist lecturers also serve as exemplars, reinforcing the practical application of theoretical knowledge (Won et al., 2023).

Nonetheless, challenges remain in achieving optimal feedback practices. Institutional constraints, such as limited mentor availability and varying resource allocations, can influence the frequency and clarity of feedback delivered. Furthermore, the diverse needs of student teachers highlight the necessity of tailoring feedback to individual contexts to maximize its impact. Future research should explore strategies for overcoming these barriers and investigate how advancements in technology, such as AI-driven feedback tools, can enhance the frequency and clarity of feedback in teacher training programs (Pan et al., 2022).

In conclusion, the frequency and clarity of feedback are pivotal in the professional development of student teachers. Frequent feedback facilitates immediate instructional improvement, while clarity ensures actionable and impactful guidance. Together, these attributes create a mentorship framework that supports reflective and adaptive teaching practices, equipping student teachers with the confidence and skills needed for long-term success. By addressing these dual aspects, teacher training programs can foster a culture of effective mentorship and continuous professional growth, positioning feedback as a cornerstone of transformative teacher education (Karim & Mohammad, 2022; Selvaraj et al., 2021; Kyaruzi et al., 2023).

Constructiveness of Feedback during practicum

Constructiveness in feedback is a pivotal strength of the guidance provided by specialist lecturers, as highlighted by the finding that 85% of student teachers rated this feedback as either “Very Constructive” or “Constructive.” This high rating reflects the effectiveness of specialist feedback in offering actionable, practical guidance tailored to the developmental needs of student teachers. Statistical validation through the Wilcoxon Signed-Rank Test, which yielded a Z score of 0.0 and a p-value < 0.001, confirms that specialist feedback is significantly more constructive than feedback from non-specialists (Zumbrunn et al., 2019). This distinction is crucial in the context of teacher training, where the transition from theoretical knowledge to practical application is vital.

In the practicum setting, constructive feedback serves as a critical link between theory and practice. It provides student teachers with clear, actionable steps to refine their instructional methods. Constructive feedback is not solely corrective; it is developmental, fostering the ability to adapt to the unique demands of individual classroom environments (Gan et al., 2021). This type of feedback goes beyond abstract concepts, offering student teachers practical, specific recommendations on how to improve their teaching strategies in real-time. Specialist feedback is especially valuable in this respect, as it targets the unique challenges student teachers face in their subject areas, thus enhancing their overall instructional effectiveness (Gan et al., 2023).

The influence of constructive feedback on student motivation and engagement further underscores its importance. Studies have shown that feedback which is constructive and task-relevant strengthens student

engagement, as it allows learners to see the immediate value of the guidance provided (Lou & Noels, 2020). For student teachers, specialist feedback is particularly motivating because it directly applies to their instructional practices, providing a tangible sense of improvement and purpose. The immediate relevance of such feedback reinforces engagement with the practicum experience, encouraging student teachers to implement the suggestions provided and reinforcing their connection to the learning process.

Additionally, constructive feedback fosters a reflective learning process, a critical aspect of teacher training. As student teachers receive feedback that is specific and actionable, they are encouraged to critically assess their teaching methods and consider how they can refine their approaches. This reflective practice is essential for the development of a deeper understanding of effective teaching strategies and promotes a mindset of continuous improvement (Anh, 2022). Over time, the constructive nature of specialist feedback helps to build a solid foundation of instructional skills and adaptive teaching strategies, preparing student teachers to confidently handle the varied challenges of the classroom (Febrijanto, 2023).

The constructiveness of specialist feedback is a key factor in the professional development of student teachers. The high ratings of constructiveness, supported by statistical evidence, demonstrate the effectiveness of specialist lecturers in offering tailored, actionable guidance that enhances the instructional practices of student teachers. This feedback not only facilitates immediate improvements but also contributes to student motivation, engagement, and reflective practice, which are crucial for the long-term success of future educators.

Timeliness of Feedback

Timely feedback is a critical element in practicum settings, where student teachers are actively refining their instructional methods. The data from this study indicates that 82% of student teachers rated specialist feedback as “Very Timely” or “Timely,” emphasizing the importance of promptness in the feedback process. This finding is statistically supported by the Wilcoxon Signed-Rank Test, which yielded a Z score of 0.0 and a p-value < 0.001, confirming that specialist feedback is significantly timelier than that from non-specialists (Lutovac et al., 2023). The ability to receive feedback in a timely manner is essential for student teachers, as it allows them to adjust quickly, ensuring the relevance and impact of the feedback on their instructional practices.

The significance of timeliness in feedback lies in its ability to facilitate immediate application. When feedback is provided promptly, student teachers can address specific issues while they are still fresh in their minds, enabling them to implement suggested improvements in the classroom without delay. This immediate cycle of feedback and adjustment enhances the learning experience, fostering a dynamic process of continuous development where student teachers refine their teaching techniques based on up-to-date insights (Hudson, 2013). Timely feedback promotes adaptive learning, allowing student teachers to adjust and experiment with their methods in real-time, which is vital for building confidence and flexibility in their teaching (Hendry et al., 2020).

A notable strength of specialist feedback is the combined use of verbal and written feedback, a dual approach that maximizes both immediate guidance and long-term reflection. Verbal feedback offers immediate support, enabling student teachers to make quick changes or seek clarification on specific points. This real-time interaction fosters a collaborative learning environment, where student teachers feel supported and encouraged to adjust as they progress (Bellibaş & Liu, 2017). Written feedback, on the other hand, serves as a valuable reference for student teachers to revisit later, allowing them to reflect on the guidance over time and integrate it into their evolving teaching practice (Han et al., 2021). This approach, combining the immediacy of verbal feedback with the reflective nature of written feedback, aligns with Nicol and Macfarlane-Dick’s (2006) model, which advocates for feedback that supports both immediate learning and long-term reflection. It reinforces a continuous learning process, where student teachers can apply feedback in the short term while using written reflections for sustained improvement.

This combination of feedback methods also cultivates a responsive and adaptive teaching approach. Timely feedback enables student teachers to adjust their methods based on current classroom dynamics, experimenting with new techniques and observing immediate outcomes. This flexibility encourages them to remain proactive and adaptable, qualities that are essential for effective teaching (Masood et al., 2022). By integrating both

verbal and written feedback into timely interventions, specialist lecturers create a robust support system that addresses immediate needs while promoting long-term reflective growth.

The timeliness of feedback provided by specialist lecturers plays a crucial role in the professional development of student teachers. The high ratings of timeliness, supported by statistical evidence, underscore the effectiveness of specialist lecturers in delivering prompt, actionable guidance that enhances student teachers' instructional practices. This feedback not only supports immediate improvements but also cultivates a culture of adaptive learning and reflective practice, contributing to the long-term success and growth of future educators. Through the combination of verbal and written feedback, specialist lecturers ensure that their guidance is both timely and sustained, helping student teachers refine their skills and approach throughout their professional development.

Impact of Feedback on Instructional Methods

The impact of feedback on student teachers' instructional methods is a pivotal element of the practicum experience, central to the professional development of future educators. This study reveals that 43% of lecturers strongly agreed, and 21% agreed, that their feedback positively influenced student teachers' teaching competencies. These findings reinforce the primary objective of teacher training: to facilitate the development of student teachers through targeted, practical feedback that enhances their instructional capabilities. The robust relationship between constructive feedback and student satisfaction is further supported by the results of the Multiple Regression Analysis, which identified constructiveness as having the strongest positive correlation with satisfaction ($\beta = 0.359$, $p = 0.002$). This suggests that feedback, when actionable and directly applicable to the classroom, plays a critical role in the growth and refinement of instructional practices (Admiraal et al., 2020).

Constructive feedback, particularly when delivered by specialists with subject-specific expertise, offers student teachers focused, actionable recommendations that they can immediately apply. Feedback that is clear and task-oriented empowers student teachers to make informed adjustments to their teaching methods. These adjustments are not only immediate but also targeted, ensuring that the feedback resonates with the specific challenges student teachers face in the classroom. This aligns with the research of Kluger and DeNisi (1996), which demonstrated that task-focused feedback leads directly to improved performance (Karaman, 2022). In this study, specialist lecturers, through their deep subject knowledge, were better positioned to provide such focused feedback, which is particularly valuable in addressing the nuanced challenges inherent in teaching specific content areas.

Beyond its immediate impact, constructive feedback fosters a reflective practice essential for long-term professional growth. When feedback is actionable and relevant to the teacher's subject area, it encourages a deeper understanding of pedagogical strategies, as student teachers critically evaluate their instructional methods and the rationale behind suggested changes. This reflective process is integral to internalizing best practices and adapting them to diverse classroom settings, which in turn supports the development of adaptive, flexible educators (Bellibaş, 2022). The strong correlation between the constructiveness of feedback and student satisfaction in this study indicates that student teachers not only appreciate feedback that highlights areas for improvement but also value clear guidance on how to implement those improvements. Specialist feedback, focused on the specific instructional challenges tied to the subject matter, helps student teachers refine their teaching techniques in alignment with proven best practices in teacher education (Doabler et al., 2018).

Moreover, actionable feedback has significant implications for building student teachers' confidence and readiness. Receiving feedback that is both applicable and directly relevant to their teaching empowers student teachers to take ownership of their professional development. This process of refining and adapting their instructional methods based on constructive feedback enhances their sense of competence and self-assurance. In turn, this helps foster a mindset of continuous improvement, a critical quality for reflective practitioners committed to long-term growth (Gregory et al., 2013). This is particularly essential in the context of teacher education, where the ability to respond effectively to the dynamic demands of the classroom is a defining characteristic of effective teaching.

The findings from this study underscore the vital role that constructive feedback plays in the professional development of student teachers. The significant positive relationship between the constructiveness of feedback and student satisfaction highlights the necessity for teacher training programs to prioritize feedback that is not only actionable but also tailored to the specific needs of student teachers. By fostering a culture of constructive, subject-specific feedback, teacher education programs can better prepare future educators to navigate the complexities of teaching and ultimately enhance their effectiveness in the classroom. Such a feedback-driven approach supports the development of reflective, adaptive educators who are equipped to meet the evolving challenges of modern education.

Overall Satisfaction with Feedback Quality:

The preference for specialist feedback among student teachers is a pivotal finding in this study, as evidenced by the high satisfaction ratings compared to feedback from non-specialists. The statistical analysis, using the Wilcoxon Signed-Rank Test, yielded a Z score of 9.0 and a p-value < 0.001, demonstrating a strong preference for specialist feedback, with a large effect size ($r = 1.62$). This robust statistical evidence underscores the satisfaction with specialist feedback, which can be attributed to its unique qualities: clarity, constructiveness, and timeliness.

The synergy of clarity, constructiveness, and timeliness enables specialist feedback to address multiple critical needs, making it both practical and meaningful for student teachers. Clarity in feedback is essential because it ensures the feedback is understandable and specific, allowing student teachers to easily identify areas for improvement. Recent research underscores that clear feedback is crucial for promoting learning, as it helps learners pinpoint specific areas for development and better understand the expectations placed upon them (Carless, 2023). Constructiveness, in turn, provides actionable guidance, helping student teachers make tangible improvements to their teaching practices. Constructive feedback that offers specific steps or suggestions for improvement has been shown to positively influence performance and teacher development (Panadero & Jonsson, 2020). Timeliness, ensuring that feedback is provided promptly, allows student teachers to implement adjustments quickly in their practicum settings. This immediate application is essential for maximizing the relevance and impact of the feedback (Shute, 2020).

The combination of these three elements not only facilitates immediate instructional growth but also builds student teachers' confidence and provides direction. The high satisfaction levels indicate that specialist feedback does more than just address the technical aspects of teaching—it also contributes to the broader professional development of student teachers. Feedback that is clear, constructive, and timely provides a sense of competence and confidence, helping student teachers navigate classroom challenges with greater ease. The relevance of specialist feedback, tailored to subject-specific and instructional needs, further enhances its effectiveness, as it aligns with student teachers' teaching goals and experiences (Winne & Butler, 2023).

Additionally, the preference for specialist feedback suggests that student teachers value feedback as an essential element in their learning journey. Feedback that is clear, constructive, and timely is closely aligned with their needs for professional growth, offering them actionable insights that they can apply in real-time and in the future. This feedback model also aligns with contemporary understandings of effective feedback, where the focus is not just on delivering information but on supporting the long-term development of teaching competencies (Hattie & Timperley, 2023). The satisfaction with specialist feedback reflects a preference for mentorship that is not only supportive but strategically targeted at bridging the gap between theory and practice. Specialist lecturers play a crucial role in guiding student teachers through the complexities of the classroom, equipping them with practical tools and strategies for success.

The strong preference for specialist feedback highlights the importance of feedback that combines clarity, constructiveness, and timeliness. Specialist feedback provides student teachers with practical, actionable insights that directly support their instructional growth and broader professional development. This high satisfaction level emphasizes the critical role of specialized mentorship in teacher training, ensuring that future educators are well-prepared to meet the diverse challenges of modern classrooms. The findings further suggest that such feedback fosters a culture of continuous improvement, empowering student teachers to reflect on their practices and build confidence in their teaching abilities.

Comparative Quality of Specialist vs. Non-Specialist Feedback:

The statistical analysis, using the Wilcoxon Signed-Rank Test, reveals a significant difference in the quality of feedback provided by specialist and non-specialist lecturers. Specialist feedback received notably higher scores for both clarity and constructiveness. Specifically, the mean score for clarity was 4.2 for specialist feedback compared to 3.1 for non-specialist feedback, and for constructiveness, it was 4.3 compared to 3.0, with p-values < 0.001 for both dimensions. These results provide strong statistical evidence supporting the study's hypothesis, indicating the clear developmental advantage of specialist feedback in providing actionable, subject-specific insights essential for the growth of student teachers. While 13% of lecturers remained neutral regarding the comparative value of specialist and non-specialist feedback, their position may reflect an acknowledgment of the general pedagogical support provided by non-specialist feedback. However, the gap in subject-specific depth suggests that non-specialist feedback may lack the targeted guidance necessary for significant instructional improvement in specialized teaching areas. This distinction highlights the critical role of specialist feedback in enhancing pedagogical content knowledge, as emphasized by Cornelius and Nagro (2014), who contend that performance feedback is indispensable for developing the specific instructional competencies required for effective teaching. The findings of this study align with existing literature that stresses the importance of targeted, subject-specific feedback in teacher training programs.

The study further confirms that specialist feedback functions as an essential form of mentorship that directly supports the professional growth of student teachers by providing actionable insights that can be immediately applied in the classroom. The focus on clarity, constructiveness, and timeliness in specialist feedback mirrors the conclusions of Hattie and Timperley (2007), who demonstrate that feedback is most effective when it is specific, clear, and actionable. Specialist feedback is especially valuable in this regard, helping student teachers not only to understand the feedback more thoroughly but also to implement it successfully, thereby reinforcing its role in fostering instructional development. The constructiveness of feedback has been shown to be particularly effective in boosting student engagement. Recent research by Akpinar (2023) supports this by finding that actionable, relevant feedback significantly enhances student motivation. By providing constructive and subject-relevant feedback, specialist lecturers foster higher levels of engagement among student teachers. This engagement is essential, as it encourages student teachers to reflect critically on their teaching practices and make informed adjustments, ultimately enhancing their instructional competencies and promoting continuous professional growth.

The statistical evidence from this study underscores the significant advantages of specialist feedback over non-specialist feedback, particularly in terms of clarity and constructiveness. These findings highlight the importance of subject-specific mentorship in teacher education and reaffirm the need for feedback that is not only actionable and relevant but also tailored to the unique challenges student teachers face in their specialized subjects. This study contributes to the growing body of literature advocating for specialized feedback as a core element of effective teacher education programs, emphasizing the role of specialist lecturers in shaping competent and confident educators who are prepared to meet the challenges of diverse classroom environments.

Implications for Teacher Training Programs

The study identifies a significant gap in teacher training: while non-specialist feedback contributes to general teaching skills, it lacks the subject-specific insights necessary for effective, targeted skill development. This study emphasizes the unique benefits of specialist feedback within practicum settings, demonstrating its effectiveness in building student teachers' instructional competencies and enhancing their readiness for real-world teaching. Based on these findings, teacher training programs should consider increasing the role of specialist lecturers in practicum experiences. Specialist feedback offers tailored support that addresses both theoretical and practical instructional challenges, directly aligning with the specific developmental needs of student teachers. This approach ensures that feedback is both actionable and relevant, maximizing its impact on student teachers' growth.

The difference in feedback quality between specialist and non-specialist lecturers also indicates a need for professional development initiatives focused on delivering clearer, more constructive feedback. Training for non-specialists could emphasize clarity and actionable guidance, elevating the overall feedback quality across training programs. The effectiveness of combining verbal and written feedback, known as the "Combination of

methods" approach, should also be considered in teacher training. This approach provides student teachers with immediate guidance while giving them resources for long-term reflection, enhancing their understanding and ability to implement feedback. This combination aligns with Nicol and Macfarlane-Dick's (2006) model, which promotes feedback that supports both immediate application and reflective learning. Incorporating digital platforms for real-time feedback could further support timely and accessible feedback, reinforcing student teachers' learning by providing feedback that meets their immediate developmental needs. By leveraging technology, teacher training programs can create a more responsive feedback environment, making it easier for student teachers to receive and act on timely, relevant insights.

This study suggests that teacher training programs should prioritize specialist feedback as an essential component of practicum experiences. Specialist feedback's clarity, constructiveness, and timeliness are particularly valuable, offering actionable insights that directly support student teachers' instructional growth. By integrating feedback models that emphasize clarity, constructiveness, and relevance, teacher training programs can significantly enhance the practicum experience, ultimately improving teaching practices and student learning outcomes. These results underscore the importance of structured, targeted feedback in fostering the professional development of future educators.

CONCLUSION

The purpose of this study was to assess and compare the quality of feedback provided by specialist versus non-specialist lecturers to student teachers in Southern Province, Zambia, with a focus on clarity, constructiveness, timeliness, and overall impact on instructional practices. Through rigorous statistical analysis, the study aimed to determine whether specialist feedback was perceived as superior, thereby addressing a key aspect of effective teacher training.

The key findings of the study confirm that specialist feedback is indeed perceived as significantly higher in quality than non-specialist feedback across all examined dimensions. The Wilcoxon Signed-Rank Test results showed that specialist feedback was consistently rated higher in clarity, constructiveness, and timeliness, with p-values < 0.001 across these categories. Additionally, the multiple regression analysis identified constructiveness as the strongest predictor of student satisfaction, underscoring the importance of actionable feedback in facilitating instructional growth. A Chi-Square Test further indicated that frequency alone did not enhance perceptions of clarity, reinforcing the need for feedback quality over quantity.

These findings suggest that specialist lecturers, through their subject-specific expertise, provide feedback that is not only more understandable and relevant but also more supportive of practical skill development. The study highlights that specialist feedback effectively bridges the gap between theory and practice, guiding student teachers to make meaningful adjustments to their teaching methods. This insight is particularly valuable for teacher training programs, as it suggests that incorporating more specialist lecturers in practicum settings can enhance the quality of instructional development. The implications of this study are substantial: institutions should consider prioritizing specialist involvement in feedback processes, enhancing professional development for non-specialist lecturers, and exploring dual-feedback methods (combining verbal and written feedback) to optimize learning outcomes. By creating a structured feedback culture that emphasizes clarity, constructiveness, and timeliness, teacher training programs can better equip future educators with the skills, confidence, and adaptability required for effective teaching.

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