

**PERFORMANCE APPRAISAL PRACTICES AS DETERMINANTS OF
TEACHER PRODUCTIVITY IN PUBLIC SECONDARY
SCHOOLS IN MAKUENI COUNTY, KENYA**

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**Research Thesis Submitted to the School of Education in Partial Fulfilment
of the Requirements for the Award of Doctor of Philosophy
Degree in Educational Administration of
Machakos University**

AUGUST, 2024

DECLARATION

Declaration by the Student

This research thesis is my original work and has not been presented for a degree in any other university or for any other award.

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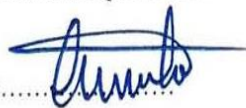
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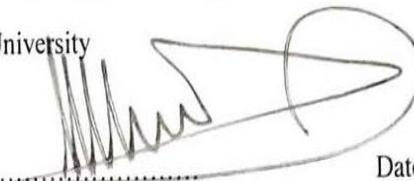
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DEDICATION

I dedicate this thesis to my spouse, Caroline Mumbua and my children, Mark Mutuku, Morris Mutua and Esther Mutheu for their continued support and encouragement during my studies.

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LIST OF ABBREVIATIONS AND ACRONYMS

BECCAD	Basic Education, Child Care and Adolescent Development
CCAs	Co-curricular Activities
CEPPE	Center of Study for Policies and Practices in Education
DVD	Digital Video Disc
IEBC	Independent Electoral and Boundaries Commission
KNBS	Kenya National Bureau of Statistics
LSE	Life-Skills Education
NACOSTI	National Commission for Science, Technology and Innovation
NBPTS	National Board for Professional Teaching Standards
SPSS	Statistical Package for Social Sciences
TPAD	Teacher Performance Appraisal and Development
TSC	Teachers' Service Commission
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children Fund
USA	United States of America
YESA	Youth Enterprise and Storytelling Association

ABSTRACT

Teachers' appraisal is crucial for enhancing their performance in terms of classroom teaching methods, syllabus completion, and students' academic achievements. Nevertheless, in Makueni County, many public secondary school teachers struggle to finish the syllabus on time, resulting in low academic results among their students. This research aimed to explore how performance appraisals influence teacher productivity in public secondary schools in Makueni County, Kenya. The study objectives included evaluating the effectiveness of differentiated instruments, adherence to professional standards, use of portfolios, and involvement in co-curricular activities (CCAs) in determining teachers' productivity. The research was guided by teacher evaluation theory and the education production function theory. A concurrent triangulation technique and mixed methods were employed in the study. A total of 362 participants were selected using Yamane's Formula from the population, which included 393 administrators and 3420 teachers from 393 public secondary schools in Makueni County, making a total of 3813 respondents. All accessible secondary schools in Makueni County's nine sub-counties were included in the study through stratified sampling. A minimum of 4 schools were selected from each sub-county from which 39 principals were selected using purposive sampling considering schools with varying academic performance in the past five years. To ensure impartiality, 323 teachers were selected using a simple random technique. Quantitative data was collected through questionnaires from teachers, while qualitative data was gathered through interviews with principals. A pilot study was conducted among 36 participants from secondary schools in Makueni County to test the validity and reliability of the research instruments. The validity was ascertained through expert judgment in educational management and university supervisors. The split-half technique was utilized to establish reliability, resulting in a reliability index of $r = 0.728$ using the Cronbach Alpha Method, signifying high internal reliability. The data analysis commenced with the identification of common themes. Qualitative data was thematically analysed based on the study objectives and presented in narrative form. Quantitative data was analysed inferentially through Pearson's Product Moment Correlation and Multiple Linear Regression Analysis using Statistical Package for Social Sciences (Version 27). The quantitative results were presented in tables. The research revealed that teacher productivity in public secondary schools has been low due to delayed syllabus coverage, resulting in low academic performance. This issue is attributed to ineffective teacher performance appraisal practices implemented by principals, including the lack of differentiated instruments, adherence to national professional standards, portfolios, and participation in CCAs. The study suggests that secondary school principals should allocate more time and resources to comprehend the various teaching methods employed by teachers, their mastery of content, and real-life skills. Principals should also motivate teachers to familiarize themselves with the legal requirements in education, pursue additional training, and have a comprehensive understanding of classroom pedagogy. The Ministry of Education should organize workshops to educate teachers on the importance of maintaining accurate portfolios in the teaching profession. Additionally, the Ministry of Education should establish a teaching program that encourages participation in CCAs.

CHAPTER ONE

INTRODUCTION

This chapter delves into the context of the study, presents the research problem, outlines the purpose and objectives, formulates research questions, explains the rationale and significance, and discusses the limitations, delimitations, and assumptions of the study. Additionally, this chapter presents both theoretical and conceptual frameworks, and provides operational definitions for key terms.

1.1 Background to the Study

Teachers play a crucial role in shaping the educational experience of students and have a significant impact on their academic achievements. Regular performance evaluations are essential to ensure that teachers are meeting their educational goals. The concept of performance appraisal dates back to ancient times and can be considered one of the oldest professions in the world. Evidence of early appraisal systems can be seen in Robert Owen's New Lanark Textile Mills in Scotland during the 1800s, where a color-coded display was utilized to assess employee performance (Grint, 2015).

The purpose of the assessment system was to enhance and inspire performance, promote competition, and perhaps even provide a prize for excellent job output. Nonetheless, there have been significant changes to the employee assessment system throughout time. In accordance with Tyler (2014), the appraisal technique is currently being applied in significantly more domains due to market shifts and technological advancements. Early versions of the performance evaluation framework had its roots in scientific and classical techniques, which were followed by the human relations school of management. Naturally, the industrial revolution gave rise to the scientific management method.

According to Taylor (2014), the system aimed to create strategies for boosting productivity and inspiring workers to utilize these labor-saving techniques. This method, which breaks down a task into its basic activities using time and motion studies, stresses the systematic assessment of work activity and the application of bureaucratic procedures to assist individuals realize their maximum potential (Morgan, 2014). After that, it ascertains the most effective and efficient way to do each task before setting a work quota for the assignment.

The next step is to set a benchmark to figure out how much an employee should be able to do with the tools and resources available in order to evaluate, appraise, and compensate them based on their level of productivity (Stoner & Freeman, 2015). To sum up, this method looks for ways to make the work process more efficient and effective by observing, organizing, benchmarking, and re-establishing it. Only then is any employee who does well on the job evaluated and given a reward. Even though the scientific management technique has its drawbacks, it has demonstrated a significant rise in productivity and, in certain cases, greater compensation. People can be dedicated to achieving organizational goals and have a desire for job happiness (Robbins, 2015).

In addition to creating issues, this kind of situation may also lead to increased tension, opposition, and irritation from unions and employees who believe that working longer hours or harder will eventually exhaust available labor, leading to layoffs and the exploitation of both parties. Even with this claim, the majority of systems contain flaws. The goal of the traditional management paradigm was to increase production and performance by utilizing efficient management techniques. According to Robbins (2015), this strategy's main goal was to increase efficiency and effectiveness by utilizing management concepts like a distinct

division of labor, a rigid hierarchy of authority, defined performance standards, reward systems, and clear guidelines for employee behaviour. There is a drawback to this strategy as well. It was heavily criticized for being more fitting for earlier times, when organizations operated in an environment that was more secure and predictable. Because of this, it is not relevant to the modern day, when surroundings are more volatile and organizations are more complicated. Then came the 1930s and 1940s, during which the human relations school of management emerged and led to more advancements and improvements to the performance rating method.

In order to boost morale and productivity, the human relations school of management approach led to the focus on the social component of work and the stifling effects of formal authority (Mayo, 2014). It still has a significant impact on how assessment systems are developed today, and many organizations take its contribution to achieving both individual and organizational performance and efficiency very seriously (Lansbury & Quince, 2017). In summary, the scientific, classical, and human relations management techniques—all of which have advantages and disadvantages—were the historical sources of evaluation. These approaches also appear to be complementary.

Lansbury and Quince (2017) believe that the scientific management approach focused on optimizing organizational functions to enhance performance and productivity, whereas the human relations school of management thought addressed the social dimensions of work in organizations as a whole. These claims highlight how performance appraisals have changed throughout time, bringing about a number of modifications since its creation many years ago. For instance, the use of 360-degree assessment by contemporary organizations is becoming

more and more common. However, it's still unclear if the hotel industry's techniques have advanced into the forefront or are still quite conventional. Stated differently, performance appraisal is the process of assessing an employee's work habits and achievements in order to compare actual performance to planned performance. Levinson (2016) asserts that this kind of analysis supports decision-making, development, motivation, and control. These advantages enable organizations to better manage human utilization, minimize losses resulting from subpar performance, and regulate marginal performance. Individuals may both clearly grasp how their career is developing and be rewarded for good work at the same time.

According to Levinson (2016), assessments can also be used to inform decisions about counseling, disciplinary measures, layoffs, or terminations. Positive incentive for employees to operate more productively and effectively might be generated by performance feedback, nevertheless. Assessments are inevitably required as management must evaluate the work of their subordinates. Decisions made in the lack of assessment might be predicated on subjective opinion, which would make them seem unjust and unequal. To summarize, an evaluation of performance is an ongoing procedure that evaluates an employee's job performance in respect to predetermined criteria and notifies the employee of the results (Fournies, 2016).

Employees' need for safety, acceptance, self-worth, self-actualization, drive, and productivity are all significantly impacted by performance reviews. By bringing out the best in individuals and rewarding and keeping the greatest employees on staff, it helps organizations accomplish their goals and missions. In theory, the worker is employed by the management, who is ultimately in charge of

accomplishing the business's goals (Quality Digest, 2017). This provides guidance and motivation for the staff members as well as a way for the management to assess their level of participation. The management and employee have a review at the end of the year to determine which areas the employee met, surpassed, or did not live up to expectations. In education context, performance appraisal is an essential strategy of personnel management designed to identify an individual teacher's current level of job performance.

Nykodym, Simonett and Welling (2016) note that performance appraisal practices entail activities undertaken by education managers to determine the capability of a teacher to perform and deliver on his or her mandate. These practices include assessing teachers' time management, participation in co-curricular activities, management of students' discipline, creating learner safety in the classroom and above all, effective classroom management. Nykodym *et al.* (2016) further opine that performance appraisal factors in teachers' strengths and weaknesses, enable teachers to enhance their educational attainment, provides a foundation for gratifying or penalizing teachers for their contribution to education goals, motivates higher performance, identifies training and development needs, which are key for potential productivity. In other words, it offers data for succession planning to support the hiring procedure and instruction that promotes supervisors' comprehension of their subordinates.

According to Hackman and Oldham (2017), performance appraisals in the Netherlands offer a logical media or tool for measuring individual teachers' contribution to education goals achievement and success. Nevertheless, there is still much to learn about how these methods of teacher performance assessment affect instruction.

As per Millette's (2018) assertion, the work production documented by educators is considered their teacher performance. In other words, it entails teachers' ability to cover syllabi effectively and on time and generate learners that receive high marks on both internal and external exams. In countries such as Australia and New Zealand, teacher performance has been low. For instance, a report by Marshall and Zbar (2019) illustrates that, in Australia, 40.8% of high school teachers rarely finish their syllabi in time and 67.3% of their students receive terrible scores in national exams. Marshall and Zbar (2019) aver that this is attributed to a multiplicity of factors which include teacher performance appraisal practices that are adopted by education managers.

To give validity to the claims, Miller and Monge (2019) found that performance reviews had an equal chance of having a positive and negative effect on teacher performance and the school in research done in Mexico. Miller and Monge (2019) also noted that choices on training, promotions, firings, merit pay increases, and other matters do guarantee teacher effectiveness at institutions when performance appraisals are carried out well. This is indicative of the fact that performance appraisals usually have a positive and negative impact on teachers. In the words of Champion and Thayer (2018), teachers in Colombia who score highly on their appraisals are often driven to continue performing well. That is, when an teacher receives favorable assessment feedback, especially when it comes with a pay raise, they feel valuable and worthy.

In most countries in Africa, Greasley, Bryman, Dainty, Price, Soetanto and King (2020) report that most schools use a variety of performance appraisal practices designed by the Ministry of Education based on their ideologies and the attributes they value in teachers, most evaluation processes resemble checklists or grading

systems for particular abilities and attributes. These instruments assist institutions in identifying teachers' areas of weakness and guarantee that they are being fairly compensated. Thus, performance appraisal is a veritable tool for teacher productivity. In Tanzania, Onesto and Anyingisye (2020) assert that the fundamentals of performance reviews in most schools is to assess each teacher's commitment and determine how effectively they are doing with their assigned work. According to Onesto and Anyingisye (2020), performance appraisal as a means of offering a review and assessment of each employee's work effectiveness has both beneficial and bad impacts on the productiveness of educators in secondary schools.

The author further reports that, in secondary schools where teachers received ongoing evaluations, they were inspired to work more efficiently, which decreased absenteeism and resulted in increased student performance. This means that, the teacher is motivated to accomplish those learning objectives when their goals are made clear and their performance issues are recognized. In other words, developing a thorough strategy for the professional growth of teachers and providing them with goals to work toward encourages increased productivity, which guarantees the delivery of high-quality teaching in secondary school.

In Kenya, the scenario is similar with teacher performance practices being undertaken by the government through the Teachers' Service Commission (TSC). According to Maithya and Akala (2021), the TSC undertakes performance appraisal for teachers as a way of improving pedagogy in public secondary schools. With regard to the predetermined goals that the administrators agreed upon in the performance-based contracts for their schools, all TSC teachers had their performance evaluated.

Teacher performance appraisal, according to Maithya and Akala (2021), is a process for keeping track of and assessing a teacher's performance at the school level. It includes establishing performance goals, conducting regular assessments, providing feedback on evaluations, holding performance-based assessments, gathering evidence to support performance, rating performance, identifying performance gaps, and organizing teacher growth and aid initiatives. The Teacher Performance evaluation and Development (TPAD) is the name of a performance evaluation instrument used in Kenya for teachers. This is so that performance gaps may be addressed and performance evaluation can be included.

According to a 2017 Teacher Service Commission report, performance appraisals will help TSC achieve its goal of becoming an institution of excellence in the delivery of effective and efficient services for high-quality teaching by enhancing performance in all educational settings through the clarification of duties and obligations, an open assessment system aids in the promotion of a better knowledge of the teacher's position and provides insight into individual abilities and shortcomings in relation to expected performance objectives; enhances the supervisor-teacher connection by facilitating better communication and providing constructive criticism, which helps the teacher integrate the institution's culture, norms, and values.

Effective evaluation of performance is not without its challenges, though, and they include inexperienced executives and managers, a dearth of useful measures, uneven teacher evaluations, and unstable incentive schemes. In Kisumu Municipality, Wafula (2019) notes that performance appraisal policy is rarely regarded as a critical factor in a school in improving the teacher's performance.

In accordance with Wafula (2019), the majority of teachers who have their performance reviewed frequently feel defensive. The management is perceived as prejudiced whenever a teacher's performance is ranked below the best or below the level at which the teacher subjectively believes that he or she has contributed. However, the effectiveness of such teacher performance appraisal practices in improving teacher performance offered in public secondary schools is still low.

Makueni County is not an exception with teacher performance appraisal practices regarded as a major contributor to teacher productivity in public secondary schools. Nonetheless, there has been a lack of productivity among teachers in Makueni County's publicly funded secondary schools. For instance, 59.3% of learners in public secondary educational institutions receive low results in national tests, according to research conducted in Makueni County by Kimayu (2018). To lessen these difficulties, the Ministry of Education introduced teacher performance appraisal strategies through effective training.

For instance, research done by Kyule and Kasivu (2020) found that, as a mitigant to dwindling teacher productivity, the government embarked on training stakeholders on performance appraisal. Kyule and Kasivu (2020) established that most of the teachers and all principals have at least attended some training on performance appraisal approaches. But there hasn't been any appreciable improvement in teacher productivity as a result of this. The purpose of this study was to investigate the ways in which performance appraisal influence teacher productivity in public secondary schools.

1.2 Statement of the Problem

Performance appraisal undertaken on teachers contributes significantly to bettering learning environments, syllabus coverage, classroom pedagogy, and above all, teacher productivity in government-owned secondary schools. But things are different in Makueni County, where there is low teacher productivity in several governmental secondary educational institutions. Many teachers struggle to finish the syllabus on time and miss deadlines, which has led to the learners performing poorly on national exams. As indicated earlier in the background, Kimayu (2018), found out that 59.3% of students in public secondary educational institutions in Makueni County have low scores on national exams.

By implementing certain performance review procedures, the government, acting through the Teachers' Service Commission, has launched a number of measures to address the issue of teacher productivity such as appraisal of teachers' differentiated instruments, adherence to national professional standards, portfolios and involvement in co-curricular pursuits. The study was necessary since the efficacy of these strategies in raising teacher productivity has not been thoroughly examined.

1.3 Purpose of the Study

The purpose of the study was to investigate performance appraisal practices as determinants of teacher productivity in public secondary schools in Makueni County, Kenya.

1.4 Objectives of the Study

The study was guided by the following objectives;

1. To examine the influence of appraisal of teachers' differentiated instruments on teacher productivity in public secondary schools in Makueni County;
2. To establish the influence of appraisal of teachers' adherence to national professional standards on teacher productivity in public secondary schools in Makueni County;
3. To investigate the influence of appraisal of teachers' portfolios on teacher productivity in public secondary schools in Makueni County;
4. To determine the influence of appraisal of teachers' participation in co-curricular activities on teacher productivity in public secondary schools in Makueni County.

1.5 Research Hypotheses

The study tested the following hypotheses;

- H₀₁:** There is no statistically significant influence of appraisal of teachers' differentiated instruments on teacher productivity in public secondary schools in Makueni County;
- H₀₂:** There is no statistically significant influence of appraisal of teachers' adherence to national professional standards on teacher productivity in public secondary schools in Makueni County;
- H₀₃:** There is no statistically significant influence of appraisal of teachers' portfolios on teacher productivity in public secondary schools in Makueni County;

H₀₄: There is no statistically significant influence of appraisal of teachers' participation in co-curricular activities on teacher productivity in public secondary schools in Makueni County.

1.6 Research Questions

The study was based on the following research questions:

1. How does appraisal of teachers' differentiated instruments influence teacher productivity in public secondary schools in Makueni County?
2. What is the influence of appraisal of teachers' adherence to national professional standards on teacher productivity in public secondary schools in Makueni County?
3. To what extent does appraisal of teachers' portfolios influence teacher productivity in public secondary schools in Makueni County?
4. What is the influence of appraisal of teachers' participation in co-curricular activities on teacher productivity in public secondary schools in Makueni County?

1.7 Significance of the Study

School community might profit from this research in that the quality of education offered to their children may improve and thus, improve their socio-economic status. Administrators of secondary schools might find this investigation useful in the identification of performance appraisal dynamics which might support and bolster a teacher's motivation to do well, which could add to our understanding of teachers' productivity. Principals and members of school Board of Management may use the results of the study to acquire an in-depth understanding of performance appraisal practices and their effectiveness in improving teacher productivity.

Principals may find the recommendations of this study vital in the management of teachers as well as improving utilization of resources in public secondary schools. Teachers, principals and Education officers may benefit from the study in identifying training needs for effective implementation of secondary school education curriculum. TSC may benefit from this study since it could offer helpful details on the state of the teacher performance evaluation which may inform their policy interventions. The findings from this research might help the Ministry of Education and Teachers' Service Commission better understand what is expected of teachers so they can put policies in place that will make their job more productive and voluntary. The investigation could be useful to the Ministry of Education in that it may be advised to allocate a larger portion of funds toward teachers' professional development.

This study may help the Ministry of Education comprehend and identify the variables influencing teacher effectiveness, which in turn influences students' test results. The research's outcomes may potentially be used by education management policymakers to provide fresh approaches to teacher evaluation. The results might help academicians and researchers alike establish a solid basis for future research of this kind.

1.8 Limitations of the Study

Throughout the investigation, the researcher ran into the following restrictions. Among them were the following: some respondents were unwilling to give information out of concern that they might become victimized. In this instance, the researcher gave them an explanation of the study's purpose, which was to support the attempts to enhance teacher productivity within public secondary schools in Makueni County.

Additionally, anonymity was guaranteed. For fear of being victimized, it may be difficult to access important records like teacher work records and student academic achievement records in the Kenya Certificate of Secondary Education. In this instance, the researcher informed the respondents that the study was meant to support their efforts to increase productivity among educators in government-run secondary schools and that the data was solely for educational purposes. Due to the inadequate road system in the research region, several of the secondary institutions that were tested are not reachable by car. To get around this, the investigator rode motorcycles to the sampling secondary educational institutions, which were located in rural regions.

1.9 Delimitation of the Study

The study was undertaken in public secondary schools in Makueni County. This study investigated how performance appraisal practices determine teacher efficiency in secondary public educational institutions. It focused on the appraisal of teachers' differentiated instruments, teachers' adherence to national professional standards, teachers' involvement in co-curricular activities and their portfolios are factors that determine how productive they are in public secondary schools. Any other method of evaluation was outside the purview.

On teacher productivity, the focus was only on students' performance in KCSE. In this research, adopting a mixed approach allowed for the implementation of both quantitative and qualitative methodologies simultaneously and with equal weight, allowing for the deployment of concurrent triangulation research design. In the present research, administrators' qualitative feedback was gathered using guidelines for interviews, while teachers' quantitative data was gathered through

surveys. The data for this study were collected from principals and teachers. The study was conducted between July and September 2023.

1.10 Assumptions of the Study

The investigation made the assumptions that teacher productivity in public secondary schools is determined by teacher performance appraisal procedures that interviewees would be capable of responding to the research inquiries, and that respondents would cooperate with the investigators and provide precise data. It also assumed that the principals and teachers implement teacher performance appraisal practices as stipulated by the T.S.C.

1.11 Theoretical Framework

This study relied on two theories. These are; the Teacher evaluation theory and Education Production Function theory.

1.11.1 The Teacher Evaluation Theory

Shadish, Cook and Leviton's (2001) Teacher Evaluation Theory served as the foundation for this investigation. The majority of teacher performance evaluation theories are prescriptive in nature, providing a framework of guidelines, prohibitions and regulations that define what constitutes acceptable or legitimate educator performance appraisal practices and how they should be carried out. Accordingly, these theories of teacher performance appraisal procedures tackle enduring themes like how to appraise programs and their performance, how to create knowledge and how to apply the knowledge created to enhance educational experiences (Shadish et al., 2001).

The philosophy behind teacher performance rating procedures has grown to be a crucial component of the social fabric around teacher evaluation. It makes it easier for appraisers working in different parts of the world to communicate with one

another, helps appraisers comprehend and exchange best practices, and explains the reasoning behind the many methods that appraisers suggest and employ in their work. Comparably, assessors can assess the teaching profession and educators of potential customers more accurately if they are knowledgeable with teacher performance rating procedures. Sponsors and users need to be aware that many methodologies and views are available in professional teacher performance appraisal processes, which means that there are variances in the assessments. Performance appraisal practices may differ rather dramatically across different secondary schools. Discovering a concurrence between the team undertaking performance appraisal practices and the needs as well as the interests of sponsors and stakeholders of the same practices is arguably of the most crucial elements in figuring out if the appraisal activities are useful.

Effective methods for teacher performance appraisals generally have the ability to significantly enhance the work of stakeholders and future clients. Stakeholders may make better judgments regarding services, policies, and direction for the organization with the use of professional teacher performance assessment procedures; acquire information, abilities, and the capacity for evaluative thinking; promote organizational learning and continuous quality improvement; and offer responsibility or defend the worth of an organization, policy, or program to potential donors, volunteers, employees, and investors. The likelihood that a teacher performance appraisal practice will fulfill its potential increases when evaluators and stakeholders thoroughly weigh the possible advantages and disadvantages of implementing a particular practice in addition to taking other options and approaches into account. This makes expectations and plans more reasonable.

Comprehending the theory behind teacher performance appraisal practices can aid evaluators in comprehending feedback they receive about their work and in fending off criticism that unfairly uses a fundamentally different theory of practice to undermine the work or makes assumptions about the design of teacher performance appraisal practices. Ultimately, logically sound governing frameworks for teacher performance evaluation procedures that are considerate of accepted academic norms and principles have to be a major component of these processes.

1.11.2 The Education Production Function Theory

The Educational Production Function (EPF) Theory (Hanushek, 2000) also served as a guide for this investigation. This theory's central tenet is that the policies and procedures that educational institutions implement have an effect on the productivity of their teachers. Teachers' productivity is compared to a company's production process by proponents of the EPF theory (Hanushek, 2000). Two categories—inputs and productivity—are created by the theory to separate the variables (inputs).

The theory links several inputs that impact teacher productivity, such learning settings and methods for evaluating teacher effectiveness, with quantifiable outcomes. Hanushek's concept sparked interest in additional study, which found that the marginal impact of various educational activities such as teacher performance appraisal and evaluation on teacher productivity. In other words, teacher performance appraisal practices are forms of contributions that are expected to provide outputs with good returns. According to this view, human capital is an input into education that should result in changes in behaviour as well as understanding and abilities.

The main issue is that investing in education yields long-term advantages including social and economic growth, which in turn raises incomes. Technological advancement is accompanied by a rise in human capital since skilled teachers are in high demand because they can comprehend the industrial process. The Ministry of Education is an input in this investigation, and since it is investing in teacher management, it needs to provide similarly relevant outputs to justify its expenditure. The theory's justification is that the association between teacher performance rating techniques and student success in the KCSE, which measures teacher productivity (syllabus covering), was articulated. This theory was expressed as follows: $E = f(X_1, X_2, X_3, X_4)$ whereby: E-is the teacher productivity and X1, X2, X3 and X4 are teacher performance appraisal practices such as differentiated instruments, adherence to national standards, teachers' portfolios and participation in co-curricular activities.

In summary, the aforementioned two theories were appropriate for the purpose of this investigation because they emphasize that, if performance assessment procedures center on what teachers are expected to be evaluated on and both the appraiser and the appraisee concur on goals that can be accomplished in a specific amount of time. It is anticipated that the appraiser will exert pressure on the appraisee, the teacher, in order for them to commit to actions (inputs) that might result in the establishment of a performance assessment system in schools.

At the completion of the assessment process, the appraiser can then speak with the teacher and ascertain how well the productivity objectives were met using quantifiable indicators. The education production function theory (productivity) and the teacher evaluation theory (performance assessment) may therefore have a good relationship.

To ensure the appraisee is actively engaging in the procedure of learning and instruction while fully aware that their productivity is determined by the learners' academic success, the performance assessment procedure is required to be clearly stated and agreed upon by both the appraiser and the appraisee.

1.12 Conceptual Framework

The conceptual foundation for this study was based on performance appraisal practices focusing on the appraisal of teachers' differentiated instruments, adherence to national professional standards, teachers' portfolios and teachers' participation in co-curricular activities which constituted the independent variables whereas teacher productivity constituted the dependent variables. TSC policy on appraisal, physical facilities and instructional resources constituted the intervening variables as shown in Figure 1.1;

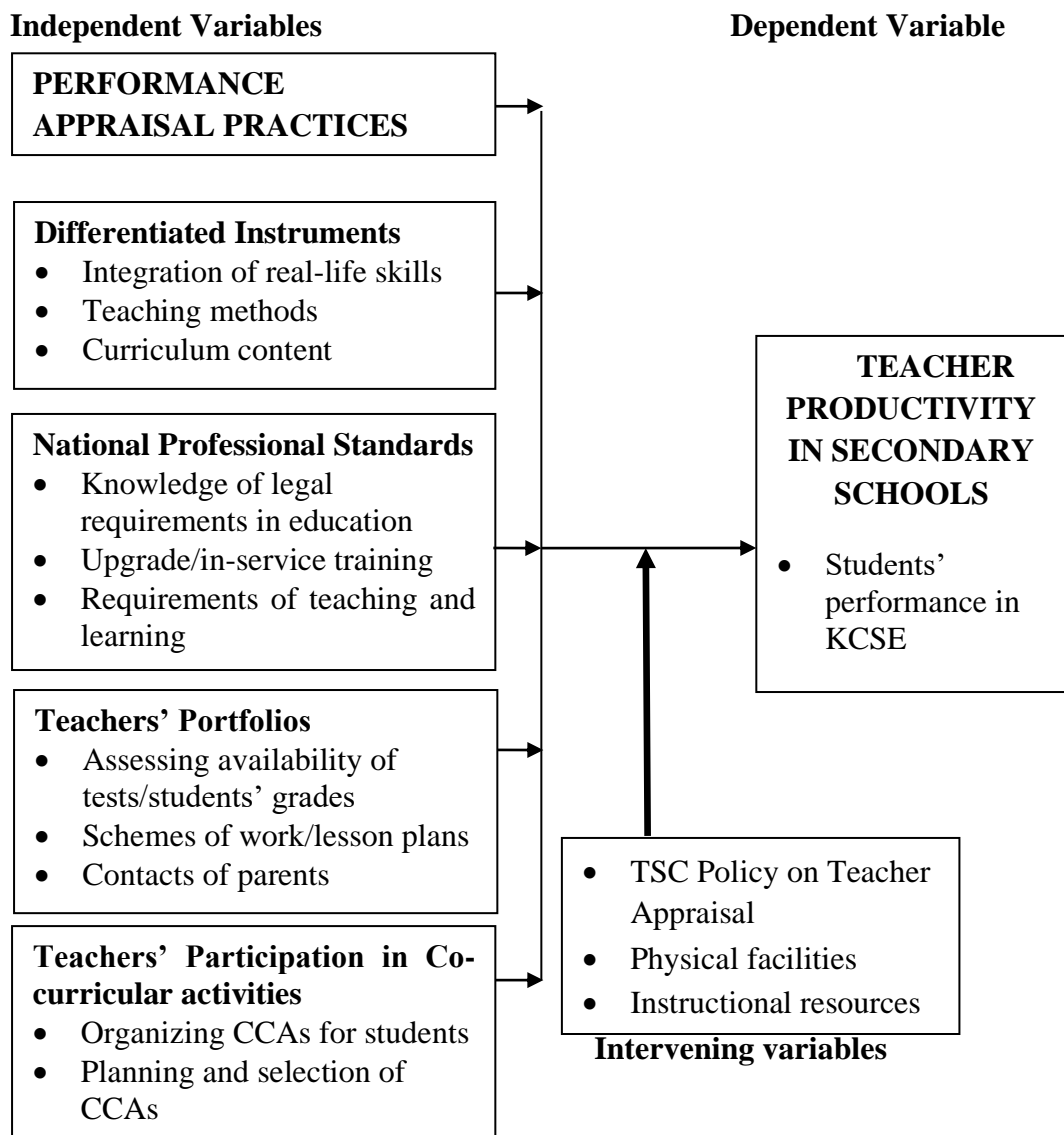


Figure 1.1: Conceptual Framework
Source: Researcher (2023)

Figure 1.1 illustrates the correlation between the dependent and independent variables in the study. The figure demonstrates that teacher productivity, which serves as the dependent variable, can be enhanced through effective teacher performance appraisal practices. These practices include the use of differentiated instruments, adherence to national professional standards, the preparation of portfolios by teachers, and their frequency of participation in CCAs. It is important to note that if these practices are not implemented effectively, teacher productivity is expected to be low.

Moreover, the impact of the aforementioned teacher performance appraisal practices on teacher productivity in public secondary schools can also be influenced by external factors. These factors include the presence of sound TSC policy on teacher appraisal, the availability of adequate physical facilities and instructional resources. These external factors are considered intervening variables in the study, although they were not the primary focus. It is assumed that these intervening variables, along with any other variables, did not interfere with the study's outcome.

1.13 Operational Definition of Terms

Adherence to national professional standards: This is the extent to which teachers comply with the requirements of teaching as outlined by the Ministry of Education and Teachers' Service Commission.

Appraisal: refers to a process of ascertaining whether teachers achieve the objectives of secondary education as designed by the Ministry of Education and Teachers' Service Commission.

Public secondary schools: these are institutions which are government-owned and offers post-primary education.

Teacher performance appraisal practices: refer to a set of activities undertaken by the Ministry of Education and Teachers' Service Commission to ensure that teachers achieve the objectives of education in secondary schools.

Teacher productivity: This is the expected level of output from teachers by the employer (TSC). In this study, this output was measured based on KCSE performance.

Teachers' differentiated instruments: These are the various tools and approaches adopted by teachers such as integrating real-life skills, teaching methods they adopt and their mastery of curriculum content.

Teachers' participation in co-curricular activities: This involves the assessment of teachers' level of participation in co-curricular activities in their schools in line with the guidelines of the Ministry of Education.

Teachers' portfolios: These are professional teaching tools such as schemes of work, lesson plans prepared and kept by teachers such as students' and parents' contacts, students' grades, tests, etc. as require by TSC.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter focuses on examining the literature surrounding teacher appraisal practices and how they impact teacher productivity. It delves into the concept of teacher productivity, the concept of teacher performance appraisal practices and the influence of appraisal of teachers' differentiated instruments, teachers' adherence to national professional standards, teachers' portfolios and teachers' participation in co-curricular activities on teacher productivity in secondary schools. The researcher presents divergent views which are critical to different authors who raised various versions related to the issues being investigated. Additionally, a summary of the literature review is provided, highlighting the research gaps that were uncovered during the analysis.

2.1 The Concept of Teacher Productivity

At the heart of any successful learning endeavor is the essential role of the teacher. The selection of individuals to undertake pedagogical roles requires not only a level of competence in knowledge and skills but also a rational approach that reflects the pedagogical approach that contributes to the achievement of educational objectives (Fullan & Langworthy, 2014). This rigorous recruitment process seeks individuals who embody a multifaceted commitment to creating a learning environment that transcends traditional boundaries. The interrelated principles of competence, positive attitude, and alignment with educational goals demonstrate the important relationship between quality of work done by teachers and the overall success of the institution. Fullan and Langworthy's (2014) seminal

research on the global perspective of teacher quality offers a comprehensive exploration of the obstacles and possibilities encountered by educators on a global scale. The study delves into the intricate dynamics of educational systems, emphasizing the necessity of a holistic approach to teacher professional development that goes beyond isolated initiatives. One of the key insights provided by Fullan and Langworthy (2014) is the recognition that successful strategies for enhancing teacher quality are not limited to specific regions but can be identified and adapted globally. This perspective aligns with the understanding that education is a collaborative endeavor with shared challenges and aspirations that transcend geographical boundaries.

Fullan and Langworthy's (2014) work underscores the need for a paradigm shift in how we approach teacher professional development. The research not only identifies successful global strategies but also sheds light on the challenges faced by educators internationally. Understanding these challenges is essential for developing nuanced and context-specific interventions. The pivotal role of teachers in the realm of education cannot be overstated, as they serve as the linchpin for successful learning endeavors. With their influence extending beyond the confines of the classroom, teachers play a crucial part in shaping the future trajectory of any nation (Stronge, 2018).

The selection of teachers is a critical task, as the overall success of educational institutions is directly influenced by the quality of educators. It is not merely a matter of competence in knowledge and skills, but rather a rational approach aligned with pedagogical principles that contribute to the achievement of educational objectives (Stronge, 2018). The process of recruiting individuals for pedagogical roles is a testament to the commitment to finding educators who

embody competence, a positive attitude, and alignment with educational goals. This rigorous recruitment process aims to ensure that educators contribute to creating a learning environment that surpasses traditional boundaries. The interconnected principles of competence, positive attitude, and alignment with educational goals underscore the vital relationship between teacher quality and the overall success of educational institutions (Stronge, 2018). The increasing number of school-age children is accompanied by the problem of increasing demand for qualified teachers who do not yet meet the rigorous requirements of the profession. This wave indicates that teaching is a major source of jobs globally, a phenomenon noted by Babalola (2018).

As noted earlier, the work output that teachers record, which includes covering the curriculum and giving learners high marks on internal and external exams, is referred to as teacher productivity. This suggests that there are two ways to quantify productivity: in monetary terms or in terms of physical outputs per unit of labor time. Therefore, it is helpful to assess the output that an educational institution is producing for a certain amount of input when discussing increased productivity. Babalola (2018) states that a common misconception is that raising pay, lengthening the workday, and expanding the labor pool would boost productivity. Nadeem (2019) posits that teacher productivity is the primary school-based component that determines a student's performance.

In her work, Darling-Hammond (2017) delves into the essential aspects of effective teaching, emphasizing the intricate relationship between teacher quality and student achievement. A recent study conducted in Rome by Tehseen and Hadi (2020) sheds light on this significance by revealing that students who are guided by highly effective teachers not only complete their syllabi promptly but also

achieve a remarkable 50.0% higher score on achievement tests compared to their peers who are taught by less effective teachers. This correlation between teacher effectiveness and student success is of utmost importance, as it demonstrates the extensive impact that proficient educators have on the academic trajectory of their students. Tehseen and Hadi (2020) further elaborate that, in many cases, students' knowledge is distilled into a quantifiable test score, and teachers' effectiveness is measured by their contribution to improving this metric. In the realm of teacher development, Ingersoll and Strong (2018) conducted a critical review that delves into the multifaceted landscape of teacher preparation. Their study evaluates the effects of mentorship and induction programs for new teachers on various aspects, including teacher retention, instructional practices, and overall job satisfaction. One crucial insight from their research is the importance of sustained support during the early years of a teacher's career, emphasizing the potential benefits for both educators and students when effective induction and mentoring programs are implemented.

By synthesizing the insights from both Ingersoll and Strong's (2018) critical review and their report on seven trends, a comprehensive understanding of teacher development emerges. This synthesis offers a nuanced perspective that serves as a valuable resource for educators, policymakers, and researchers dedicated to enhancing the quality and resilience of the teaching force. It underscores the interconnected nature of induction, ongoing development, and the broader trends that shape the teaching profession.

Onuma's (2016) examination of teacher productivity in secondary education in Nigeria offers valuable insights into the challenges faced by educators in an African context. The study highlights the profound impact of low teacher

productivity on students' educational outcomes, manifested in skills acquisition, repetition, and dropout rates. This scenario is not just a concern for the educational sector but has broader implications for society at large. One of the critical aspects emphasized by Onuma (2016) is the ripple effect of low teacher productivity on students' future opportunities. School dropout at the secondary level, attributed to poor teacher productivity, restricts students' access to higher education and subsequently limits their prospects for future success. This limitation not only affects individual students but it constitutes a substantial drain on the meager funds allotted to the nation's secondary school system.

The study further underscores the reported deterioration in the evolution of teacher productivity in secondary educational institutions in Nigeria. Students' dismal performance on both internal and external exams is indicative of this decrease. Onuma's (2016) findings shed light on the multifaceted challenges faced by educators in Nigeria, including issues related to teaching methodologies, resource constraints, and systemic factors contributing to the decline in teacher productivity. A study by Moyo (2017) examines the difficulties that secondary school teachers encounter in Zimbabwe and their impact on students' academic performance. This study is particularly relevant in the context of the global discourse on teacher quality and its impact on educational success. Moyo (2017) explores the complex dynamics of the teaching profession in Zimbabwe, highlighting the unique challenges teachers face and the impact they have on their students. An important topic in Moyo's (2017) research is the impact of adversity on academic performance. Research has shown that secondary school teachers' difficulties contribute to poor student performance on both internal assessments and external tests.

It also highlights the need for a thorough comprehension of the difficulties teachers encounter in implementing effective improvement strategies. Challenges identified in the study range from limited resources to pedagogical constraints. Moyo explains that the lack of educational resources in Zimbabwean secondary schools creates an environment where teachers have to contend with problems such as large classes, limited learning materials and inadequate infrastructure. These limitations create serious barriers to quality education and influence teachers' ability to foster meaningful learning experiences. Moyo (2017) also addresses the pedagogical challenges facing teachers, including outdated teaching methods and inadequate teaching opportunities.

Research has shown that these factors hinder the development of innovative, student-centered educational approaches. These limitations of pedagogical diversity can lead to student dropout and an overall decline in the quality of education provided. The research conducted by Ndlovu (2019) focuses on the dynamics of teacher quality and its impact on educational success in South Africa. This study adds a nuanced perspective to the global discourse on teacher effectiveness, taking into account the unique challenges and opportunities within the South African educational landscape. Ndlovu's (2019) work investigates the multifaceted nature of teacher quality, considering factors such as pedagogical skills, subject knowledge, and the ability to create an inclusive learning environment.

The study emphasizes the importance of a holistic approach to teacher development, aligning with global trends that recognize the interconnectedness of various elements contributing to effective teaching. The analysis of data from the Senior School Certificate Examination (SSCE) in South Africa throughout the

years reveals a striking reality concerning the performance of students, specifically in English Language and Mathematics. In 2015, an astonishing 64.9% of candidates experienced failure in the English Language examination, while only 9.71% managed to pass with grades ranging from A1 to C6 (Ndlovu, 2019). The situation in Mathematics was equally troubling, with a notable 50.35% of candidates failing. Subsequent years exhibited a fluctuating trend in the failure rates for English Language, with 64%, 42.6%, and 33.8% failures recorded in 2016, 2017, and 2018, respectively (Ndlovu, 2019). This concerning pattern highlights the crucial role of teachers as determinants of students' academic success, emphasizing the necessity for effective teaching practices to address these persistent challenges and enhance overall educational outcomes.

Similar to other educational systems, Kenya grapples with the fundamental requirement for teachers to cover syllabi promptly and ensure students attain commendable grades in examinations. This places a significant responsibility on educators to enhance their productivity and make substantial contributions toward elevating the academic achievements of their students. The issue of teacher productivity in governmental secondary educational institutions in Makueni County is a significant challenge that needs to be addressed.

According to a study conducted by Kimayu (2018), a concerning 67.2% of teachers in these schools struggle to meet the required timelines for completing syllabi. This is further compounded by the fact that a significant portion of students, specifically 59.3%, tend to achieve lower grades in both internal and national examinations. These statistics emphasize the urgent need for intervention and call for a thorough examination of the factors that either contribute to or hinder teacher productivity.

Consequently, this study sought to understand how the productivity of educators in secondary schools that were publicly funded is influenced by performance assessment procedures.

2.2 The Concept of Teacher Performance Appraisal Practices

Performance appraisal plays a crucial role in the comprehensive performance management system of an organization. A credible system's execution has to be predicated on predetermined goals. According to Wendel (2021), performance appraisal and review refers to a structured, methodical evaluation of an employee's job performance in relation to predetermined benchmarks and the discussion of the evaluation with the employees in question. According to Graham and Bennet (2019), performance assessment refers to the evaluation of an employee's work performance that takes into account factors other than productivity.

In the practice of teacher evaluation, the work of Strong and Tucker (2019) serves as a comprehensive guide and provides an in-depth exploration of the fundamental aspects of teacher evaluation from pre-session to summative evaluation. Research emphasizes the importance of a structured and holistic approach in evaluating teachers' performance, emphasizing the need for clear goals and established standards. One of the key elements highlighted by Strong and Tucker (2019) is the pre-meeting phase, which sets the stage for the evaluation process. This stage involves a dialogue between the evaluator and the teacher, which focuses on the upcoming assessment and allows the joint setting of goals.

Emphasizing the importance of effective communication and goal alignment, the authors work to develop a constructive and supportive evaluation system. Further, as discussed by Strong and Tucker (2019), summative assessment is the pinnacle

of the assessment process. The final evaluation assesses the teacher's performance against predetermined standards and goals. The authors emphasize the importance of fair and transparent summative assessment and acknowledge its impact on professional development and the overall effectiveness of teaching teams. In addition, Stronge and Tucker (2019) discuss the multifaceted nature of teacher evaluation, acknowledging considerations beyond just productivity. They argue that performance evaluations should cover all aspects of instruction and provide a comprehensive understanding of the teacher's impact on student learning and overall classroom dynamics. In summary, the work of Strong and Tucker (2019) makes a significant contribution to the discussion of teacher performance evaluation practices.

By examining the evaluation process in detail, from pre-session discussions to summative assessments, this study recommends a systematic and objective approach to teacher evaluation that is consistent with the broader goals of improving instructional quality and ultimately student success. Within educational policy and teacher management, the evaluation of teacher performance plays a crucial role in shaping the quality of education. To provide a comprehensive understanding of the evolving landscape of teacher appraisal, this discussion draws insights from Smith and Johnson's (2017) comprehensive review.

Smith and Johnson (2017) shed light on the changing trends in teacher performance appraisal, highlighting a shift from traditional and rigid models to more flexible and nuanced approaches. The authors explore the integration of technology in the appraisal process, emphasizing the potential benefits of data-driven insights and evidence-based evaluations. The study identifies the emergence of competency-based frameworks, aligning with the contemporary call

for a more holistic assessment that takes into account not only classroom productivity but also the broader skills and qualities that contribute to effective teaching. This resonates with Graham and Bennet's (2019) assertion that performance appraisal should extend beyond solely judging teachers based on productivity. Examining the challenges faced in teacher performance appraisal, Smith and Johnson (2017) address issues such as subjectivity and bias in the evaluation process. The study delves into the difficulties of quantifying qualitative aspects of teaching, emphasizing the need for continuous training for appraisers to enhance their observational and assessment skills.

Furthermore, the authors discuss the tension between standardized assessments and the need for individualized, context-specific evaluations. This tension echoes the sentiments expressed by Wang and Berger (2018), emphasizing the limitations of traditional models in capturing the diverse dimensions of teaching effectiveness. Smith and Johnson (2017) delve into the realm of teacher performance appraisal, shedding light on areas that can be enhanced. They stress the significance of adopting a well-rounded and diverse approach. The authors advocate for the provision of professional development opportunities that are in line with the identified challenges, with a particular focus on addressing biases and bolstering the reliability of the appraisal process.

Brown and Rodriguez (2016) provide a comprehensive analysis of teacher performance appraisal, highlighting the need for a holistic understanding of educators' contributions. The authors delve into various dimensions of appraisal, including pedagogical skills, subject knowledge, classroom management, and the creation of a positive learning environment. This approach aligns with the current trend of advocating for a broader, competency-based assessment, as noted by

Smith and Johnson (2017). The study critically examines the challenges and criticisms surrounding teacher performance appraisal. Brown and Rodriguez (2016) address issues related to the reliability and validity of appraisal measures, acknowledging the inherent subjectivity in evaluations. They emphasize the importance of addressing these challenges to ensure fair and accurate assessments, echoing concerns raised by Wendel (2021) regarding the need for systematic evaluations. Furthermore, Brown and Rodriguez (2016) emphasize the significance of incorporating multiple perspectives in the appraisal process. The study advocates for involving not only administrators but also students, parents, and peers in the evaluation of teacher performance.

The authors also highlight the role of teacher self-reflection and the integration of professional development opportunities within the appraisal framework. Brown and Rodriguez (2016) argue that a system that encourages educators to reflect on their practices and actively engage in ongoing professional growth contributes to a more effective and sustainable appraisal process. This perspective aligns with the views of Smith and Johnson (2017) regarding the potential for improvement in teacher appraisal. Brown and Rodriguez's (2016) comprehensive review adds depth to the discourse on teacher performance appraisal.

By exploring various dimensions, addressing challenges, and advocating for stakeholder inclusion, the study offers valuable insights into creating a robust and equitable appraisal system. The research underscores the importance of continuous improvement and reflective practices to enhance the overall effectiveness of teacher performance appraisal. The study places great emphasis on the potential of teacher self-assessment and reflection, aligning with the dialogue-centric approach advocated by Wendel (2021).

By empowering teachers to actively participate in their appraisal process, the authors argue for a more collaborative and growth-oriented evaluation system. To enhance understanding, Harris and Thompson (2019) delve into a comparative analysis of different models used to appraise teacher performance. The study examines the strengths and weaknesses of traditional quantitative models, such as value-added measures, and compares them to qualitative approaches that prioritize classroom observations and professional growth. This comparative perspective aligns with the ongoing debate on the most effective methods for evaluating teacher performance, as discussed by Wendel (2021).

The review offers valuable insights into the implications of various teacher appraisal models for educational policy. Harris and Thompson (2019) emphasize how policy decisions regarding the selection of appraisal methods can impact teacher morale, professional development, and the overall culture within educational institutions. The study contributes to the broader discussion on the intersection of teacher evaluation and policy formulation, echoing the findings of Graham and Bennet (2019). A significant aspect of the analysis focuses on the equity implications of teacher performance appraisal. Harris and Thompson (2019) critically examine how appraisal systems may either perpetuate or mitigate disparities among educators, taking into account factors such as teacher demographics, school context, and student populations. This aligns with current discussions on the importance of fairness and inclusivity in performance assessments, as highlighted by Darling-Hammond (2017).

The study also explores the role of teacher performance appraisal in promoting professional development. Harris and Thompson (2019) investigate how appraisal practices can be designed to support continuous learning, skill enhancement and

collaborative engagement among educators. This perspective resonates with the insights provided by Brown and Rodriguez (2016) regarding the significance of reflection and ongoing improvement in teacher appraisal. Harris and Thompson's (2019) comparative analysis offers a thought-provoking exploration of teacher performance appraisal models and their implications for educational policy. By scrutinizing the diverse approaches and considering their impact on equity and professional development, the study enriches the ongoing conversation on refining teacher appraisal practices to align with the broader goals of education.

Leithwood et al. (2008) present a set of seven robust assertions concerning effective school leadership, each offering valuable insights into the factors that contribute to positive educational outcomes. These assertions encompass various aspects, including establishing a clear direction, nurturing the growth of individuals, restructuring the organization, ensuring responsibility, providing moral guidance, responding to external influences, and maintaining a well-ordered and safe environment. The comprehensive nature of these assertions aligns with the multifaceted approach to evaluating teacher performance discussed by Wendel (2021).

The claims put forth by Leithwood et al. (2008) have direct implications for the practices of assessing teacher performance. The assertion related to developing individuals emphasizes the crucial role of leadership in fostering the growth and development of educators. This resonates with the notion that effective appraisal should extend beyond mere evaluation, aligning with Graham and Bennet's (2019) argument that appraisal encompasses more than just making judgments. The authors also emphasize the significance of moral leadership in their assertions. This underscores the role of school leaders in shaping a positive and ethical school

culture. In the context of teacher performance appraisal, this claim highlights the need for an appraisal system that promotes fairness, transparency, and ethical conduct. These ideas align with the broader discussions on the ethical dimensions of evaluating teachers, as discussed by Darling-Hammond (2017). Furthermore, Leithwood et al.'s (2008) claims regarding responding to the external environment and ensuring accountability emphasize the importance of adapting to external pressures and maintaining transparency in leadership. These assertions have implications for teacher appraisal by emphasizing the alignment of evaluation processes with external standards and fostering accountability among educators, as argued by Wendel (2021).

Leithwood, Harris, and Hopkins (2008) provide a comprehensive framework for successful school leadership. The claims put forward in their work offer valuable insights into the intricate dynamics of educational leadership, with implications for the design and implementation of teacher performance appraisal practices. This review positions their claims within the broader context of contemporary discussions on effective educational leadership and its impact on teacher evaluation. Smith and Johnson's (2017) research offers valuable insights into the current trends, challenges, and opportunities surrounding teacher performance appraisal.

As educational institutions navigate the complexities of evaluating teacher effectiveness, this review provides a thoughtful analysis of the ever-evolving landscape and presents practical recommendations for enhancing appraisal practices. Graham and Bennet (2019) highlight the importance of performance appraisal, also known as merit rating, in distinguishing between employees when the primary objective is to determine salary or wage increases.

This nuanced perspective emphasizes the multifaceted nature of performance appraisal and its potential impact on remuneration decisions. Similarly, Nzuve (2020) agrees with these definitions and explains that employee performance appraisal is a formalized review mechanism that evaluates how well an employee has been fulfilling their job responsibilities. It is worth noting that this evaluation is typically conducted regularly, spanning a period of six months to one year. The significance of performance appraisals goes beyond mere formality; they play a crucial role in effectively managing and evaluating staff. This process not only informs individual career development but also contributes to overall organizational effectiveness by identifying areas for improvement and recognizing excellence among employees.

In the field of evaluating teacher performance, Stronge and Tucker (2019) provide a thorough guide that explores the fundamental aspects of teacher appraisal, ranging from the initial pre-conference phase to the final summative evaluation. The authors emphasize the importance of adopting a structured and holistic approach to assess teacher performance, with a focus on clear objectives and established standards. A significant aspect highlighted by Stronge and Tucker (2019) is the pre-conference phase, which plays a crucial role in setting the foundation for the evaluation process.

During this phase, there is a constructive dialogue between the evaluator and the teacher, with a specific emphasis on the upcoming evaluation and the opportunity for collaborative goal-setting. By emphasizing effective communication and goal alignment, the authors contribute to the development of a supportive and constructive appraisal system. Moving forward, the summative evaluation, as discussed by Stronge and Tucker (2019), represents the culmination of the

appraisal process. This final assessment takes into account the teacher's performance concerning predetermined standards and objectives. The authors stress the importance of conducting a fair and transparent summative evaluation, recognizing its impact on professional development and the overall effectiveness of the teaching workforce. Furthermore, Stronge and Tucker (2019) acknowledge the multifaceted nature of teacher evaluation, going beyond mere productivity. They argue that performance appraisal should encompass various aspects of teaching, providing a comprehensive understanding of the teacher's influence on student learning and the overall dynamics of the classroom.

The work by Stronge and Tucker (2019) significantly contributes to the discourse on teacher performance appraisal practices. By offering a detailed exploration of the evaluation process, from pre-conference discussions to summative assessments, the study advocates for a systematic and objective approach to teacher evaluation, aligning with the broader goal of enhancing teaching quality and, consequently, student success. In their study, Davies and Ellison (2018) provide a comprehensive analysis of teacher appraisal practices within the context of an Australian secondary school. This extended review aims to examine the study in detail, including its methodologies, key findings, and implications for teacher evaluation and professional standards in the Australian educational landscape.

Davies and Ellison (2018) utilize a case study methodology to investigate teacher appraisal practices within the specific context of an Australian secondary school. The study explores the mechanisms and criteria used for evaluating teachers, offering insights into the unique approaches employed in the Australian educational system.

By focusing on a single school, the research provides a thorough examination of the complexities involved in teacher appraisal at a micro-level. An important aspect of the study is the exploration of how teacher appraisal aligns with professional standards. Davies and Ellison (2018) investigate the extent to which the appraisal processes in the Australian secondary school under examination integrate established professional standards. This inquiry is crucial for understanding the coherence between evaluation practices and broader expectations for teacher professionalism. Davies and Ellison (2018) delve into the identification of challenges and successes within the teacher appraisal system of the Australian secondary school. The study acknowledges the complexities involved in evaluating teachers' performance and sheds light on both areas of effectiveness and potential areas for improvement.

By recognizing and analyzing challenges, the study contributes to the ongoing dialogue on refining teacher appraisal practices. Davies and Ellison (2018) delve into the effects of teacher appraisal on the motivation and professional growth of educators. Through their examination of how the appraisal processes influence teachers' motivation levels and contribute to their ongoing development, the authors provide valuable insights that contribute to the existing body of literature on the intersection of evaluation and teacher growth.

Although the research is centered on a specific Australian secondary school, its implications extend beyond this localized context to the broader educational landscape in Australia. The study's localized approach serves as a case study that can inform educational policies and practices at a national level. As such, it becomes a valuable resource for educators, policymakers, and researchers seeking to gain a deeper understanding of the intricacies of teacher appraisal within the

Australian context. To conclude, Davies and Ellison's (2018) study offers a comprehensive exploration of teacher appraisal practices within an Australian secondary school. This extensive review provides a thorough analysis of the study's methodologies, key findings, and implications. By focusing on the integration of professional standards, identifying challenges and successes, and evaluating the impact on teacher motivation and development, the research contributes to the broader discourse on effective teacher appraisal in the Australian educational landscape. The localized case study serves as a valuable point of reference for educators and policymakers, offering insights that can shape and inform teacher appraisal practices at both the school and national levels in Australia.

According to Armstrong (2021), the field of employee performance appraisal or management is transforming into an integrated human resource strategy. This strategic shift aims to cultivate a shared vision regarding the organization's purpose, goals, and values. This integration underscores the interconnectedness of performance appraisal within the broader organizational context, emphasizing that evaluating employee performance is not simply an isolated task but a vital component in aligning individual contributions with organizational objectives. Day (2021) expands on this perspective by highlighting the increasing intensity of change and the corresponding necessity for educational institutions to swiftly adapt, particularly in the face of global competition.

In this regard, an effective performance appraisal system assumes a pivotal role, ideally assisting school systems in meeting the demands of a dynamic environment. Such a system becomes a tool for accountability, addressing subpar performance, while simultaneously enhancing overall performance and

professional practices. The transparency ingrained in a well-structured performance appraisal system contributes to organizational adaptability and competitiveness in the ever-evolving global economy. In the secondary school context, Principals are urged to coach, counsel, and provide teachers with training to help them perform better, according to Newhouse (2021). It is helpful to compile and evaluate employee performance periodically. This is useful for comparing the performance of a group of employees or over time.

Rating refers to assessing a worker's or a group's performance in relation to the components and benchmarks in their performance plan. The work completed over the whole assessment period is used to determine the performance grade. Performance reviews are a good indicator of this mindset because they are sometimes months late. According to McGregor (2019), as a result of these issues, assessment systems have frequently been abandoned or reduced to a hasty, pointless yearly routine. Several management theorists, like Heathfield (2017), have suggested that traditional performance reviews need to be eliminated completely.

Murphy (2018) does, however, suggest that there is general agreement that formal performance reviews are a crucial and essential component of any modern business. All forms of performance reviews work well when they are carried out correctly, and even better when everyone involved understands and approves of the process. This suggests that carefully thought out and executed performance reviews provide special chances to support the growth and development of administrators and teachers, as well as the organizations they work for. The implementation of teacher performance appraisal in Tanzania presents several challenges for school principals.

These challenges encompass resource constraints, inadequate training for school leaders, resistance from teachers, and a lack of understanding of the appraisal process. These findings contribute to the ongoing discourse surrounding the complexities associated with effectively implementing teacher appraisal systems in diverse educational settings. One notable challenge highlighted by Ngaka (2019) is the issue of resource constraints. This finding is particularly significant in the African context, where many educational institutions face limitations in terms of resources. It underscores the importance of developing context-specific approaches to teacher performance appraisal. This prompts a consideration of how appraisal systems can be designed to be effective even in resource-constrained environments, aligning with discussions on inclusive and adaptable appraisal practices.

Furthermore, Ngaka's (2019) findings emphasize the crucial role of providing adequate training for school leaders involved in the appraisal process. This aligns with the assertion made by Leithwood et al. (2008) regarding the significance of leadership in developing individuals. Effective teacher appraisal necessitates skilled and knowledgeable leaders who can navigate the complexities of the evaluation process. This reinforces the notion that successful appraisal is intricately linked to effective leadership.

Additionally, Ngaka (2019) highlights the resistance faced by teachers towards performance appraisal as another significant challenge. This finding aligns with broader discussions on the importance of teacher buy-in and engagement in the appraisal process. It underscores the need for a collaborative and participatory approach to appraisal, resonating with the principles advocated by Darling-Hammond (2017) regarding the significance of teacher involvement in evaluation

systems. Overall, the challenges identified in the study shed light on the complexities associated with implementing teacher appraisal systems in Tanzania. These findings emphasize the need for context-specific approaches, adequate training for school leaders, and a collaborative and participatory approach to appraisal. By addressing these challenges, educational institutions can strive towards more effective and inclusive teacher appraisal practices. Ngaka's (2019) study provides valuable insights into the challenges specific to the Tanzanian educational context, yet these findings have broader implications for teacher appraisal practices across Africa. The resource constraints resonate with the common challenges faced by many African countries, highlighting the need for tailored approaches that consider the unique circumstances of each educational system.

Ngaka's (2019) research sheds light on the challenges faced by school leaders in Tanzania during the implementation of teacher performance appraisal. The identified challenges have broader implications for teacher appraisal practices in the African context, emphasizing the need for context-specific and collaborative approaches to overcome hurdles in the implementation process. This review positions Ngaka's findings within the ongoing discourse on effective teacher appraisal and leadership in African educational settings. The research commences by providing a comprehensive examination of the teacher evaluation methods commonly used in public secondary schools in Lesotho.

Mokhele and Gamede (2018) delve into the techniques, criteria, and frameworks employed in appraising teachers. Gaining an understanding of the intricacies of these practices is crucial for comprehending the contextual factors that influence the assessment of educators in Lesotho's educational environment.

This contextualization is vital for identifying both the strengths and areas for improvement within the existing evaluation system. A significant aspect of the study aims to uncover the impact of teacher appraisal practices on the overall performance of educators. Through empirical research, Mokhele and Gamede (2018) explore how appraisal processes contribute to or impede the professional development and effectiveness of teachers. This emphasis aligns with contemporary perspectives on teacher appraisal, highlighting its role not only as an evaluative tool but also as a catalyst for continuous improvement and growth. The findings of the study shed light on the opportunities for professional development embedded within teacher appraisal practices.

Identifying these opportunities is crucial for understanding how the appraisal process contributes to the ongoing growth and enhancement of teachers' skills and knowledge. This aspect resonates with the broader viewpoints expressed by scholars such as Darling-Hammond (2017), who emphasize the pivotal role of professional development in the effectiveness of teacher evaluation systems. Mokhele and Gamede (2018) provide valuable insights that transcend the boundaries of Lesotho, shedding light on teacher appraisal practices in an African context. Their study emphasizes the importance of localized approaches tailored to the unique educational landscapes of African nations.

Consequently, the Lesotho case study serves as a significant point of reference for other African countries grappling with similar challenges in improving teacher performance through effective appraisal strategies. The implications of this study extend beyond Lesotho and have broader significance for the African education system as a whole. By understanding the impact of teacher appraisal practices on performance and professional development, policymakers and educational

reformers can make informed decisions that benefit the entire continent. The examination of the Lesotho case by Mokhele and Gamede (2018) provides a glimpse into the larger trends and obstacles faced by educators throughout Africa, making it a valuable microcosm for understanding the challenges and opportunities in the region. Mokhele and Gamede's (2018) study contributes significantly to the discourse on teacher appraisal in the African educational context. By examining the specific practices in Lesotho's public secondary schools, the study offers nuanced insights into the strengths and potential areas of improvement within the existing system.

The findings have broader implications for teacher appraisal in Africa, emphasizing the need for context-specific approaches that prioritize professional development and contribute to the overall enhancement of teacher performance on the continent. This review positions the study within the larger conversation on effective teacher appraisal practices in African educational contexts, highlighting its relevance and potential impact on shaping future educational policies and practices across the continent. The evaluation of teacher performance is a crucial element in educational systems worldwide, as it serves as a means to assess and enhance the effectiveness of educators.

In their research, Mpofu and Machingambi (2019) delve into the specific dynamics of teacher appraisal practices within the Zimbabwean context. This comprehensive review aims to provide an in-depth analysis of the study, examining its methodologies, key findings, and broader implications for education in Zimbabwe. Mpofu and Machingambi (2019) conducted a thorough examination of teacher performance appraisal practices in selected secondary schools in Harare, Zimbabwe.

The study adopts a qualitative case study approach, which offers a nuanced understanding of the methodologies and criteria employed in the teacher appraisal process. By focusing on specific schools in Harare, the study acknowledges the diversity within the educational landscape of Zimbabwe. A significant aspect of the study involves identifying and analyzing the challenges and opportunities inherent in the teacher performance appraisal system in Zimbabwe. The study discusses challenges such as potential biases and limitations in the appraisal process, while also highlighting opportunities for improvement. Mpofu and Machingambi (2019) emphasize the interconnectedness of teacher evaluation and professional development, which is crucial for cultivating effective educators.

By considering the unique challenges and opportunities faced by educators in Zimbabwe, this context-specific exploration contributes to the ongoing discussion on context-specific approaches to teacher appraisal in African nations. The study acts as a bridge between global frameworks and the specificities of Zimbabwean education. This comprehensive review positions the study within the larger conversation on effective teacher appraisal practices in Zimbabwe, highlighting its relevance and potential impact on shaping future educational policies and practices in the country.

In another study conducted by Makoni and Chireshe (2019), a focused examination of teacher appraisal practices within the specific context of Zimbabwe is provided. This comprehensive review aims to delve into the methodologies, key findings, and implications of the study, offering insights into teacher evaluation and professional standards in the Zimbabwean educational setting. Makoni and Chireshe (2019) adopt a case study approach to investigate teacher performance appraisal practices in Zimbabwean secondary schools.

The study explores the mechanisms and criteria employed in evaluating teachers, shedding light on the unique approaches and challenges within the Zimbabwean educational system. By concentrating on a case study, the research allows for a nuanced understanding of teacher appraisal at the micro-level. A crucial aspect of the study is the examination of how teacher appraisal aligns with the local context in Zimbabwe. Makoni and Chireshe (2019) explore the extent to which appraisal processes resonate with the specific challenges and needs of the Zimbabwean educational landscape. This inquiry is essential for understanding how teacher evaluation practices are contextualized within the broader sociocultural and educational framework of Zimbabwe.

Makoni and Chireshe (2019) delve into the identification of challenges and opportunities within the teacher appraisal system in Zimbabwean secondary schools. The study acknowledges the multifaceted nature of teacher evaluation, highlighting areas of success and potential improvement. By recognizing challenges and opportunities, the research contributes to the ongoing discourse on refining teacher appraisal practices in Zimbabwe. Makoni and Chireshe (2019) investigate how the appraisal processes influence teachers' growth, motivation, and commitment to ongoing professional development. This aspect of the research provides valuable insights into the role of teacher evaluation in shaping the professional trajectory of educators in Zimbabwe.

In the Kenyan context, the process of evaluating performance is closely linked to the establishment of mutually agreed targets at the beginning of the assessment period, as stated by the Teachers Service Commission (TSC, 2017). Teachers who fall under the jurisdiction of the TSC undergo performance evaluation based on the targets that have been endorsed by both principals and head teachers in their

respective schools' performance contracts. This represents a departure from the previous closed performance evaluation system, as reported by the TSC. Historically, the teaching service operated within a closed framework where the head of an institution conducted confidential assessments of teachers. According to TSC (2017), the transition towards a target-based evaluation system that is agreed upon signifies a shift towards a more transparent and collaborative approach, promoting accountability and aligning individual teacher performance with the goals and expectations of the institution. Since the teacher was not participating, this was surrounded by secrecy. The appraiser participates in the appraisal process and bargains with the appraisee on predetermined objectives under the new, more inclusive method.

The study defines teacher performance appraisal as a process that includes periodic assessment, performance objective setting, and monitoring and evaluation of a teacher's work at the school level; evaluative feedback, performance-based consultations, obtaining proof of performance, performance rating, identifying performance gaps, and organizing teacher support and development initiatives (TSC, 2017). The Teacher Performance Appraisal and Development (TPAD) is the name of the performance appraisal instrument used by educators. This is due to the fact that it covers both performance evaluation and performance gap remediation mechanisms.

The study goes on to say that TSC's use of performance appraisals will help it achieve its goal of being an institution of excellence in the delivery of effective and efficient services for high-quality teaching by enhancing performance in every learning environment; By outlining obligations and responsibilities, an open assessment system facilitates a better understanding of the teacher's position

(TSC, 2017). Improved communication and feedback between the supervisor and teacher foster stronger interpersonal relationships and aids in the teacher's internalization of the institution's culture, norms, and values. It also provides a better understanding of one's own strengths and weaknesses in relation to expected performance targets. A study conducted by Oduol and Juma (2017), critically examines the complexities and issues surrounding teacher performance appraisal in the context of Kenyan secondary schools. This comprehensive review aims to give a summary of the main findings of the study, the methodologies employed, and the implications it holds for the improvement of teacher appraisal systems in Kenyan education.

Oduol and Juma (2017) adopt a case study methodology to investigate the challenges faced in teacher performance appraisal within Kenyan secondary schools. The study probes into the appraisal mechanisms, processes, and contextual factors that contribute to the difficulties in effectively evaluating teachers' performance. The case study approach allows for an in-depth analysis of the challenges in the local context. A crucial aspect of the study is its focus on providing a contextual analysis of the challenges encountered in teacher performance appraisal in Kenyan secondary schools.

Oduol and Juma (2017) identify and explore the specific obstacles and hindrances that affect the appraisal process, considering the sociocultural and institutional factors that contribute to the complexities of teacher evaluation in the Kenyan educational setting. The research delves into the identification of key issues affecting teacher performance appraisal. Oduol and Juma (2017) scrutinize factors such as the adequacy of appraisal criteria, the role of school leadership, and the involvement of stakeholders in the appraisal process.

By highlighting these key issues, the study contributes to a nuanced understanding of the systemic challenges within the Kenyan teacher appraisal framework.

2.3 Appraisal of Teachers' Differentiated Instruments and Teacher Productivity

Differentiated instruments are indispensable tools that enable educators to adopt flexible, fair, and intelligent approaches to teaching and learning. According to Fox and Hoffman (2019), differentiated instruction highlights the limitations of a one-size-fits-all teaching approach, especially when it fails to meet the various requirements of the learners. In this regard, differentiated assessment emerges as a crucial element that impacts teacher effectiveness. The ability of teachers to customize their assessments according to the unique requirements and learning preferences of students plays a pivotal role in enhancing instructional efficacy.

By recognizing and addressing individual differences, differentiated assessment not only promotes a more inclusive learning environment but also significantly contributes to optimizing teacher productivity by ensuring better alignment between teaching strategies and student needs. Tomlinson's (2014) seminal work serves as a foundational exploration of the principles and practices of differentiated instruction (Tomlinson, 2014). In this work, Tomlinson delves into the core concepts that underpin differentiated instruction, emphasizing its role in addressing the variety of learning requirements that students have.

Differentiated instruction, as elucidated by Tomlinson (2014), represents a paradigm shift from the traditional one-size-fits-all teaching approach. Tomlinson's (2014) insights into differentiated instruction align with the broader educational discourse that acknowledges the limitations of uniform teaching methods, especially when confronted with the diverse cognitive, emotional, and

cultural backgrounds of students. The foundational principles outlined in this work set the stage for a comprehensive exploration of differentiated assessment and its implications for teacher productivity. Tomlinson's work emphasizes the practical application of differentiated instruction in tailoring teaching methods to meet the diverse needs of learners (Tomlinson, 2014). The author contends that by recognizing and responding to varied learning styles and abilities, educators can create a more inclusive and productive learning environment. This resonates with contemporary educational ideals that prioritize individualized learning experiences, promoting student engagement and academic success.

This underscores the symbiotic relationship between differentiated instruction and teacher productivity (Tomlinson, 2014). By tailoring teaching methods, educators can create a more efficient and effective instructional process. Tomlinson's insights suggest that a nuanced understanding of students' strengths and challenges allows teachers to streamline their efforts, allocating resources more effectively (Tomlinson, 2014). In doing so, differentiated instruction not only benefits students by catering to their individual needs but also enhances the professional satisfaction and productivity of teachers. As educators continue to navigate the complexities of today's classrooms, Tomlinson's insights remain integral in fostering inclusive, effective, and productive educational practices.

Wormeli's (2017) study stands as a crucial contribution to the discourse on differentiated instruction, specifically focusing on the realm of assessment (Wormeli, 2017). This foundational work delves into the intricacies of evaluating student progress within the context of diverse learning needs, offering practical strategies to guide educators in creating fair and tailored assessment methods. This discussion critically examines Wormeli's insights, emphasizing the book's

significance in enhancing teacher productivity through the implementation of differentiated assessment practices. Wormeli's (2017) work is situated within the broader landscape of differentiated instruction, acknowledging the limitations of traditional one-size-fits-all assessment approaches. The book recognizes the importance of assessment as a fundamental aspect of instructional design and explores how it can be adapted to meet the diverse needs of learners. Wormeli (2017) challenges the notion that fair assessment always equates to equal assessment, advocating for an approach that recognizes and accommodates the unique strengths and challenges of individual students.

Wormeli (2017) unfolds a toolkit of practical strategies designed to reshape assessment practices within the differentiated classroom. At its core, the work emphasizes the idea that assessment should be responsive to the individual needs of students. Wormeli contends that fair assessment requires a departure from uniform evaluation methods, urging educators to tailor assessments to accommodate the diverse learning styles, abilities, and preferences of their students (Wormeli, 2017). One key aspect of differentiated assessment highlighted by Wormeli is the need for educators to consider a variety of factors when designing assessments. These factors may include students' prior knowledge, learning styles, and individual progress.

This approach resonates with the principles of differentiated instruction, where the ultimate goal is to establish a setting for learning that is responsive to the unique needs of each student. Furthermore, Wormeli's (2017) strategies extend beyond merely accommodating individual differences; they also contribute to a more efficient use of instructional time. By employing assessments that are designed with differentiation in mind, educators can streamline their evaluation processes.

This targeted approach enables educators to concentrate on the unique requirements of each student, optimizing their efforts and ultimately enhancing productivity in the classroom (Wormeli, 2017). Wormeli's (2017) study emerges as a pivotal resource for educators seeking to implement differentiated assessment practices. The book's insights into fair and tailored evaluation methods align with the principles of differentiated instruction, providing a roadmap for creating a more inclusive and productive learning environment. As teachers navigate the complexities of diverse classrooms, Wormeli's (2017) practical strategies offer valuable guidance, fostering equitable assessment practices that enhance both student learning and teacher productivity.

The empirical study conducted by Moon, Brighton and Callahan (2017) holds a significant place in the discourse on the impact of differentiated teaching on student outcomes. This study represents a valuable contribution to the field, aiming to investigate the impact of differentiated instruction on student growth and achievement. Moon et al. (2017) situated their research within the framework of differentiated instruction, acknowledging the increasing recognition of its potential to meet the various requirements of the students.

Moon et al. (2017) give concrete examples of how varied instruction affects student achievement. Through a thorough examination of teachers implementing differentiated practices, the researchers aimed to uncover how these strategies contribute to enhanced student growth and achievement. The findings reveal a nuanced and positive connection between differentiated instruction and overall teacher effectiveness. Moon et al. (2017) highlight that teachers who effectively implement differentiated practices demonstrate a heightened ability to tailor their instruction to the unique requirements of individual students.

This adaptability, in turn, is associated with increased student engagement, a factor that has been consistently linked to positive academic outcomes. By catering to varied learning styles and abilities, differentiated instruction emerges as a powerful tool for fostering a more inclusive and productive learning environment. The researchers found that students exposed to differentiated practices demonstrated more significant academic growth compared to their counterparts in traditional classrooms. This suggests that the tailored approaches employed by teachers practicing differentiation contribute to improved academic outcomes and, subsequently, enhanced overall teacher effectiveness (Moon et al., 2017).

In conclusion, (Moon et al., 2017) study significantly advances our understanding of the impact of differentiated instruction on students' growth and achievement. The results highlight how crucial teachers' abilities to adapt their instruction to diverse learner needs and provide empirical support for the positive connection between differentiated practices and overall teacher effectiveness. As educators strive to enhance student outcomes, the insights from this study offer valuable considerations for the adoption of diversified education in modern classrooms.

Gregory and Chapman (2019) offer a comprehensive guide to differentiated instructional strategies, emphasizing the need for a tailored approach to teaching. This book stands as a valuable resource for educators seeking to navigate the complexities of diverse classrooms, providing insights into wide assortment of methods and instruments that empower teachers to meet the unique needs of students. This discussion critically examines Gregory and Chapman's (2019) work, exploring the range of differentiated instructional strategies presented in the book and how these strategies can influence teacher productivity by aligning

teaching methods with individual learning profiles. Gregory and Chapman's (2019) work situates itself within the broader context of differentiated instruction, challenging the notion that a one-size-fits-all approach is sufficient in today's diverse classrooms. The authors advocate for an instructional paradigm that recognizes and accommodates the individual differences among students. The core of Gregory and Chapman's (2019) lies in the exploration of differentiated instructional strategies. The book provides a rich array of techniques and tools that educators can leverage in order to meet the various learning demands of their students. The strategies encompass various dimensions, including content, process, and product differentiation, catering to a spectrum of learning styles and abilities.

Gregory and Chapman (2019) argue that by employing such strategies, teachers can create a more inclusive and responsive learning environment. One key aspect highlighted in the book is the role of technology in differentiated instruction. The authors delve into how technology can be harnessed to individualize learning experiences, allowing students to progress at their own pace and explore content in ways that suit their learning preferences. This integration of technology aligns with contemporary educational trends and showcases how instructional tools can be tailored to accommodate students in the twenty-first century.

Gregory and Chapman (2019) contend that by aligning teaching methods with individual learning profiles, educators can streamline their instructional efforts. In conclusion, Gregory and Chapman (2019) emerge as a valuable guide for educators navigating the intricacies of differentiated instruction. The book's exploration of various strategies and tools, coupled with its emphasis on aligning teaching methods with individual learning profiles, provides educators with

practical insights to enhance their instructional practices. As teachers strive to create inclusive and responsive classrooms, the strategies presented in this book offer a roadmap for optimizing productivity and fostering positive learning outcomes. Heacox (2012) emerges as a valuable resource in the realm of differentiated instruction, providing practical insights and strategies for teachers navigating the complexities of academically diverse classrooms (Heacox, 2012). The focus of this discussion is to critically explore the content of Heacox's book, with particular attention to the practical strategies it offers for embedding differentiation into daily teaching practices.

Heacox's (2012) work is grounded in the acknowledgment of the diverse academic needs present in contemporary classrooms. Rather than offering a theoretical exploration of differentiation, the book takes a pragmatic approach, providing educators with tangible tools and strategies for seamlessly integrating differentiation into their daily routines. The notion of making differentiation a habit becomes a central theme, implying a shift from viewing differentiation as an occasional strategy to an intrinsic part of daily teaching practices. Heacox (2012) advocates for ongoing professional development and reflection as essential components for making differentiation a habit. This emphasis on continuous learning aligns with the idea that differentiation is not a one-size-fits-all approach but a dynamic set of practices that require adaptability and responsiveness.

The practical strategies presented by Heacox (2012) include flexible grouping, tiered assignments, and curriculum compacting, all designed to be user-friendly and adaptable to various classroom contexts. These strategies are not presented as additional burdens on teachers but as tools that seamlessly integrate into existing practices.

By offering practical, user-friendly strategies, Heacox makes a compelling case for how educators can incorporate differentiation without significantly increasing their workload. The impact of habitual differentiation on teacher productivity is a central theme in a study conducted by Heacox (2012). By making differentiation a habitual practice, educators can streamline their efforts, moving beyond isolated instances of differentiation to a more consistent and integrated approach. This shift is not only about efficiency but also about fostering a mindset where differentiation becomes second nature to teachers, reducing the cognitive load associated with constantly adapting strategies.

In conclusion, Heacox (2012) stands as a pragmatic guide for educators seeking to embed differentiation into their daily teaching practices. As teachers embrace differentiation as a habitual practice, it not only contributes to sustained teacher productivity but, more importantly, positively influences student learning outcomes, marking a significant stride toward creating more inclusive and effective learning environments. In the landscape of educational research, Hattie and Donoghue (2016) stands out as a seminal contribution. By identifying differentiated instruction as an effective approach, the synthesis informs teacher decision-making processes.

Teachers are faced with the continuous challenge of choosing instructional methods that will best serve their students, considering the diverse backgrounds, abilities, and learning styles present in their classrooms. The synthesis offers empirical evidence that can guide teachers in making informed decisions about the incorporation of differentiated strategies (Hattie & Donoghue, 2016). It provides a research-backed foundation for teachers to justify and implement differentiated instruction in their classrooms.

This not only contributes to the efficacy of their teaching methods but also enhances their confidence and competence in addressing the unique needs of their students. Furthermore, understanding the effectiveness of differentiated instruction equips teachers with the tools to navigate the complexities of diverse classrooms. Teachers become more adept at recognizing when and how to employ differentiated strategies based on the specific context and needs of their students (Hattie & Donoghue, 2016). This level of informed practice fosters a dynamic and responsive teaching environment, where educators can adapt their methods based on evidence rather than relying on only one approach.

Teacher productivity is intricately linked to the effectiveness of instructional practices (Hattie & Donoghue, 2016). This implies that productivity, in the context of teaching, is not solely about maximizing output but also about achieving meaningful and positive outcomes for students. The synthesis suggests that by recognizing the effectiveness of differentiated instruction, teachers can streamline their efforts more effectively (Hattie & Donoghue, 2016). Instead of using a generic approach that might not be suitable for all students, differentiated strategies allow teachers to tailor their methods to address specific learning needs. This targeted approach can lead to more efficient use of instructional time and resources, ultimately contributing to enhanced teacher productivity.

Differentiated instruction, when embedded in teachers' practices, becomes a habitual and integral part of their teaching repertoire (Hattie & Donoghue, 2016). As teachers become adept at differentiating instruction, they can navigate the diverse needs of their students more efficiently. This habitual incorporation of differentiated strategies aligns with Heacox's (2012) concept of making differentiation a habit.

The meta-analysis, coupled with Heacox's perspective, emphasizes the transformative potential of habitual differentiation in enhancing teacher productivity. Hattie and Donoghue's (2016) synthesis and conceptual model extend beyond the examination of individual strategies, providing a holistic understanding of the interconnectedness of various learning interventions. The meta-analysis emphasizes the need to consider multiple factors that influence student achievement and how these factors interact. This comprehensive view allows teachers to move beyond isolated interventions and consider the synergies among different strategies, including differentiated instruction, in shaping positive student outcomes.

The interconnected nature of various strategies highlighted in the synthesis offers teachers a more nuanced understanding of the complexity of the learning process. Teachers can explore how differentiated instruction interacts with other effective strategies, creating a more integrated and impactful instructional approach (Hattie & Donoghue, 2016). This holistic perspective contributes to teacher efficacy and productivity by encouraging a more strategic and informed selection of instructional methods. In conclusion, Hattie and Donoghue (2016) provides a comprehensive exploration of effective learning strategies, with a specific focus on differentiated instruction.

Through meticulous examination and synthesis of existing research, the meta-analysis informs teachers' decision-making processes, enhances their understanding of effective instructional practices, and contributes to overall teacher productivity in diverse educational settings. In a recent investigation carried out in Hungary, Varsavsky and Rayner (2021) discovered that differentiated assessment is an educational framework that strives to meet

students' varied requirements by offering flexibility with regard to the kinds of assessment items, levels of information acquisition, and skill development. The study highlights the significance of evaluating teachers' competencies in integrating real-life skills into their teaching practices, assessing their instructional methods, and evaluating their implementation of the curriculum in classrooms. This perspective aligns with the belief that teacher productivity should not be solely measured based on the completion of syllabi, but rather on their ability to effectively engage students, adapt instruction to individual needs, and foster the development of practical skills. In this context, differentiated assessment emerges as a crucial element in evaluating and enhancing teacher productivity by acknowledging the multifaceted nature of effective teaching.

In the realm of teacher evaluation and how it affects output, a study carried out by Ololube and Nworgu (2019) focused on the challenges and complexities surrounding teacher appraisal in secondary schools, shedding light on the nuanced factors influencing educators' performance. As teacher appraisal is a pivotal aspect of educational systems globally, this study serves as a valuable exploration of the unique challenges faced within the Nigerian context. Ololube and Nworgu employ a rigorous methodology to unravel the intricacies of teacher appraisal in Nigerian secondary schools (Ololube & Nworgu, 2019).

Through a thorough examination of the challenges and issues, the study contributes to a nuanced understanding of the factors shaping teacher performance. The specific focus on secondary schools in Nigeria provides context-specific insights, acknowledging the diverse educational landscape within the country. This approach allows for the identification of challenges that may be unique to the secondary school level, contributing to a more targeted and

applicable set of findings. The study uncovers a spectrum of challenges inherent in the teacher appraisal process in Nigerian secondary schools (Ololube & Nworgu, 2019). Among the highlighted challenges is the issue of insufficient training and professional development opportunities for educators. This finding echoes a broader concern about the inadequacy of resources allocated to the continuous improvement of teaching skills. Additionally, the study identifies the lack of clear and standardized appraisal criteria as a significant challenge, fostering ambiguity and subjectivity in the evaluation process.

Furthermore, the challenges related to the timing and frequency of appraisals, emphasizing the importance of regular and timely assessments to provide meaningful feedback and support (Ololube & Nworgu, 2019). The findings underscore systemic issues that extend beyond individual teacher experiences, revealing broader structural inadequacies that need to be addressed for a more effective and equitable appraisal process. The challenges identified by Ololube and Nworgu have profound implications for the Nigerian education system (Ololube & Nworgu, 2019). The insufficiency of training and prospects for professional growth underscores the need for strategic investments in teacher capacity building.

The lack of clear and standardized appraisal criteria points to the necessity of establishing comprehensive guidelines to ensure fairness and objectivity in the appraisal process (Ololube & Nworgu, 2019). This requires a systematic review and enhancement of existing appraisal frameworks to align with best practices in educational assessment. The study's emphasis on the timing and frequency of appraisals indicates the importance of establishing a well-structured and consistent appraisal schedule, allowing for meaningful and continuous feedback to support

teachers' professional growth. Ololube and Nworgu provide insightful recommendations based on their findings, offering a roadmap for addressing the challenges identified in teacher appraisal within Nigerian secondary schools (Ololube & Nworgu, 2019). Among these recommendations is the imperative to enhance training and professional development opportunities for educators. The study calls for a comprehensive review of existing professional development programs to ensure their relevance and effectiveness in meeting the evolving needs of teachers.

The establishment of clear and standardized appraisal criteria is another crucial recommendation (Ololube & Nworgu, 2019). This involves collaborative efforts from educational stakeholders to develop and implement guidelines that promote fairness, consistency, and transparency in the appraisal process. Furthermore, the study suggests addressing the timing and frequency of appraisals by establishing a well-structured and consistent schedule that aligns with the goals of providing timely and meaningful feedback. In terms of future directions, the study prompts the need for continued research to monitor changes in teacher appraisal practices over time (Ololube & Nworgu, 2019). This longitudinal perspective could provide valuable insights into the effectiveness of implemented reforms and the sustainability of positive changes.

Additionally, comparative research across different educational levels or regions within Nigeria could offer a more comprehensive understanding of variations and commonalities in teacher appraisal challenges. Ololube and Nworgu's study provides a significant contribution to the discourse on teacher appraisal and performance in Nigerian secondary schools (Ololube & Nworgu, 2019). The challenges unearthed underscore the importance of strategic interventions to

enhance teacher capacity, refine appraisal criteria, and establish a well-structured appraisal schedule. As Nigeria navigates its educational reforms, studies like this play a crucial role in informing policies that promote a fair, transparent, and supportive environment for teachers. By addressing the identified challenges, policymakers and educators can collectively work towards building a robust teacher appraisal system that nurtures professional growth and, ultimately, enhances the quality of education in Nigerian secondary schools.

In the landscape of performance appraisal within public secondary schools, Mugenda's (2016) study offers a comprehensive examination of the hurdles encountered in the implementation of performance appraisal in the specific context of Kiambu East District. As a critical component of educational management, performance appraisal influences the quality of teaching, student outcomes, and overall educational effectiveness. By employing both quantitative and qualitative research methods, including surveys and interviews, the study by Mugenda (2016) strives to capture a holistic understanding of the multifaceted issues surrounding performance appraisal in the targeted district.

The investigation reveals a range of challenges encountered in the implementation of performance appraisal in Kiambu East District's public secondary schools (Mugenda, 2016). Among the identified challenges is the issue of inadequate training and capacity building for those involved in the appraisal process. This underscores the importance of investing in professional development to equip educators and administrators with the necessary skills to conduct fair and effective performance appraisals. Additionally, Mugenda (2016) points out challenges related to the lack of clear appraisal criteria and standards, contributing to ambiguity and subjectivity in the evaluation process.

This finding emphasizes the need for well-defined and standardized appraisal frameworks that align with educational best practices. Furthermore, issues surrounding the perceived fairness and transparency of the appraisal process are highlighted, suggesting potential disparities that may impact educators' morale and engagement. The challenges identified by Mugenda hold significant implications for educational management and beyond (Mugenda, 2016). Inadequate training and capacity building imply a need for strategic investments in professional development programs. Educational managers must recognize the pivotal role of continuous training in ensuring that those responsible for conducting performance appraisals possess the expertise required for fair and meaningful evaluations.

The absence of clear appraisal criteria calls for a systematic review and enhancement of existing frameworks to promote fairness, consistency, and transparency (Mugenda, 2016). This suggests a role for educational managers in collaborating with relevant stakeholders to develop comprehensive guidelines that align with established standards. Addressing issues of perceived fairness and transparency implies a need for proactive communication strategies, fostering a supportive and trusting environment that enhances the overall effectiveness of the performance appraisal process.

Mugenda's (2016) study offers valuable recommendations based on the identified challenges, providing a roadmap for addressing issues in the implementation of performance appraisal in public secondary schools. The imperative to enhance training and capacity building emerges as a critical recommendation, emphasizing the need for ongoing professional development programs for educators and administrators involved in the appraisal process (Mugenda, 2016).

This involves collaborative efforts to define and implement standardized frameworks that minimize subjectivity and ambiguity. Additionally, the study suggests the importance of actively addressing issues related to perceived fairness and transparency, highlighting the need for open communication channels and measures to ensure that educators perceive the appraisal process as equitable and just. In terms of future directions, Mugenda proposes continued research to monitor changes in the implementation of performance appraisal over time (Mugenda, 2016). Additionally, comparative studies across different districts or regions may offer a more comprehensive understanding of variations and commonalities in performance appraisal challenges within the broader educational system.

Mugenda's study serves as a critical examination of the challenges faced in the implementation of performance appraisal in Kiambu East District's public secondary schools (Mugenda, 2016). The findings underscore the importance of addressing issues related to training, criteria definition, and perceived fairness for the overall improvement of the educational system. As educational managers and policymakers consider the implications and recommendations of this study, they are presented with an opportunity to enact meaningful reforms that enhance the effectiveness of performance appraisal, contributing to the professional growth of educators and the overall quality of education in the district.

In the intricate landscape of education, the performance appraisal of teachers serves as a critical mechanism for ensuring effective teaching and learning outcomes (Oduol & Odebero, 2017). Oduol and Odebero delve into this crucial area in their study published in the *International Journal of Education and Research*.

Oduol and Odebero (2017) adopt a case study approach, focusing specifically on Bondo District, to examine the performance appraisal of teachers in public secondary schools. The choice of a case study methodology allows for a detailed exploration of the local context, acknowledging the diversity of challenges and practices within different regions of Kenya. By utilizing both quantitative and qualitative research methods, including surveys and interviews, the researchers aim to capture a comprehensive understanding of the complexities surrounding teacher performance appraisal in Bondo District. The study by Oduol and Odebero (2017) reveals multifaceted challenges in the performance appraisal of teachers in public secondary schools.

One prominent challenge is the issue of inadequate resources and infrastructure for conducting thorough and effective appraisals (Oduol & Odebero, 2017). This sheds light on the broader systemic constraints that impact the appraisal process, emphasizing the need for investment in resources to facilitate fair and comprehensive evaluations. The scarcity of resources for teacher appraisals raises concerns about the fairness and comprehensiveness of the evaluation process. Inadequate tools, technology, and training can hinder the ability of evaluators to conduct thorough assessments, potentially overlooking important aspects of a teacher's performance. This challenge extends beyond the immediate context of teacher evaluations, pointing to systemic issues within the educational infrastructure that require attention and investment.

Additionally, the study identifies challenges related to the clarity and communication of appraisal criteria. The lack of clear guidelines and transparent communication about the criteria for evaluation can contribute to ambiguity and subjectivity in the appraisal process.

This underscores the importance of establishing well-defined and standardized appraisal frameworks, accompanied by effective communication strategies, to ensure consistency and fairness. The absence of clear appraisal criteria introduces challenges in ensuring a standardized and fair evaluation process. Teachers may face uncertainty about the expectations and standards against which they are being assessed. This lack of clarity can contribute to feelings of injustice and frustration among educators (Oduol & Odebero, 2017). To address this challenge, educational managers and policymakers must collaborate to develop and communicate clear, standardized appraisal criteria that align with best practices in education.

Furthermore, issues surrounding the perceived fairness and transparency of the appraisal process are highlighted, suggesting potential disparities that may impact educators' morale and engagement. The subjective nature of evaluations, coupled with unclear criteria, can lead to perceptions of bias and inequity. Such perceptions may have profound effects on teachers' job satisfaction, motivation, and commitment to their profession (Oduol & Odebero, 2017). The implications indicate that inadequate resources not only hinder the immediate effectiveness of teacher appraisals but also point to systemic issues within the educational infrastructure that need to be addressed. The lack of clarity in appraisal criteria has broader implications for the overall quality of teacher evaluations, potentially affecting the professional development and morale of educators.

For educational managers and policymakers, the challenges highlighted by Oduol and Odebero (2017) underscore the imperative of investing in resources and infrastructure to support effective teacher performance appraisals. This includes providing training and capacity building for those involved in the appraisal

process and ensuring the availability of tools and technology that facilitate comprehensive evaluations (Oduol & Odebero, 2017). Moreover, the study emphasizes the need for a standardized and transparent approach to teacher performance appraisal. Educational managers play a pivotal role in collaborating with stakeholders to develop and communicate clear appraisal criteria. Establishing guidelines that align with educational best practices ensures that appraisals are fair, consistent, and contribute meaningfully to teacher professional development (Oduol & Odebero, 2017).

In terms of recommendations, Oduol and Odebero (2017) call for strategic investments in resources, training, and technology to enhance the efficiency and effectiveness of teacher performance appraisals. They advocate for the development and implementation of clear and standardized appraisal criteria, accompanied by transparent communication strategies to ensure that educators understand the evaluation process and criteria (Oduol & Odebero, 2017). Looking toward future directions, Oduol and Odebero (2017) suggest continued research to monitor changes in teacher performance appraisal practices over time. This longitudinal perspective could provide valuable insights into the effectiveness of implemented reforms and the sustainability of positive changes. Additionally, comparative studies across different districts or regions within Kenya may offer a more comprehensive understanding of variations and commonalities in teacher performance appraisal challenges (Oduol & Odebero, 2017).

In conclusion, Oduol and Odebero's study contributes significantly to the discourse on teacher performance appraisal in the Kenyan context, specifically in Bondo District. The challenges identified underscore the need for strategic interventions to enhance the efficiency and fairness of the appraisal process.

As educational stakeholders reflect on the implications and recommendations of this study, they are presented with an opportunity to enact meaningful reforms that contribute to the professional growth of teachers and, ultimately, the improvement of the overall quality of education in Bondo District and similar contexts across Kenya. In the study conducted by Uzoka and Osabuohien (2019), the authors explore the intricate relationship between human resource management (HRM) practices and the job performance of teachers in the specific context of secondary schools in Akwa Ibom State. This research contributes valuable insights into how HRM practices can significantly influence the professional effectiveness and overall performance of educators.

One of the pivotal findings of the study is the positive correlation between training and development opportunities and teachers' job performance. The research underscores the importance of continuous professional development as a key factor contributing to enhanced skills, knowledge, and overall effectiveness in the classroom (Uzoka & Osabuohien, 2019). Teachers who have access to ongoing training are better equipped to adapt to evolving educational landscapes, integrate innovative teaching methods, and address the diverse needs of students. This aligns with broader literature emphasizing the role of professional development in fostering teacher growth and, subsequently, improving job performance (Ingersoll & Strong, 2011; Darling-Hammond et al., 2017).

The study sheds light on the impact of performance appraisal systems on teachers' job performance. Uzoka and Osabuohien (2019) highlight that a well-designed and transparent performance appraisal process serves as a motivational tool for educators, encouraging them to strive for excellence in their professional roles. Effective performance appraisal provides teachers with constructive feedback,

recognizes their achievements, and identifies areas for improvement (Danielson, 2013). This aligns with research indicating that feedback and recognition positively influence teacher motivation and job satisfaction (Hattie & Timperley, 2007; Kluger & DeNisi, 1996). Moreover, a supportive appraisal system contributes to a culture of continuous improvement and professional growth among teachers (Harris, 2013). Compensation and rewards emerge as significant factors influencing teachers' job performance in the study by Uzoka and Osabuohien (2019). Adequate and fair compensation, coupled with recognition for outstanding performance, is identified as fostering a positive work environment and contributing to heightened job satisfaction among educators.

This finding aligns with existing literature highlighting the importance of competitive and equitable compensation in attracting and retaining high-quality teachers (Ingersoll, 2003; Hanushek et al., 2004). Moreover, the recognition of teachers' efforts through rewards and incentives is shown to enhance their morale and commitment, positively impacting overall job performance (Bascia & Fredua-Kwarteng, 2016; Gagné & Deci, 2005). The study by Uzoka and Osabuohien (2019) delves into the relationship between staffing practices, particularly teacher recruitment and selection processes, and job performance.

The research suggests that a rigorous and merit-based recruitment process positively influences the assembly of a competent and motivated teaching workforce, ultimately contributing to enhanced job performance. This finding aligns with literature emphasizing the importance of attracting and selecting high-caliber educators to ensure the overall effectiveness of educational institutions (Ingersoll & Strong, 2011; Darling-Hammond, 2017). Rigorous recruitment practices not only bring in qualified teachers but also contribute to a positive and

professional school culture (Ronfeldt et al., 2011). The implications of these findings extend beyond the specific context of Akwa Ibom State, offering valuable insights for educational policymakers and practitioners globally. The positive correlation between training and development opportunities and teachers' job performance underscores the importance of investing in continuous professional development programs (Uzoka & Osabuohien, 2019). Policymakers should prioritize the design and implementation of targeted and context-relevant professional development initiatives that address the evolving needs of educators in the 21st-century classroom.

The role of performance appraisal systems as a motivator for teachers highlights the need for transparent and constructive evaluation processes in educational institutions (Uzoka & Osabuohien, 2019). Policymakers should consider the development and implementation of fair appraisal systems that provide valuable feedback to educators, encouraging continuous improvement in their professional practice. This requires a nuanced approach that balances accountability with support, ensuring that teachers perceive the appraisal process as a tool for growth rather than a punitive measure (Danielson, 2013; Stronge, 2018).

Compensation and rewards systems, identified as crucial factors in influencing teachers' job performance, pose significant implications for policymakers (Uzoka & Osabuohien, 2019). Policymakers should evaluate and adjust compensation structures to align with the contributions of teachers, recognizing their efforts and promoting job satisfaction. Moreover, the strategic use of rewards and incentives can contribute to a positive and motivated teaching workforce, ultimately enhancing overall educational outcomes (Gagné & Deci, 2005; Bascia & Fredua-Kwarteng, 2016).

The findings related to staffing practices and recruitment processes carry implications for educational leaders and policymakers involved in human resource management (Uzoka & Osabuohien, 2019). This requires an emphasis on fair and transparent hiring practices, aligned with the overarching goal of assembling a competent and motivated teaching workforce. In conclusion, Uzoka and Osabuohien's (2019) study offers valuable insights into the multifaceted relationship between human resource management practices and teachers' job performance.

The findings underscore the significance of training and development opportunities, performance appraisal systems, compensation and rewards, and staffing practices in shaping the effectiveness and satisfaction of educators. These insights have broader implications for educational policymakers and leaders, emphasizing the need for strategic investments in HRM practices that prioritize the continuous development, motivation, and recognition of teachers. As educational institutions strive for excellence in the ever-evolving landscape of teaching and learning, a holistic and informed approach to HRM is imperative for fostering a positive and thriving educational environment.

Agangiba and Ngomane's (2018) study provides valuable insights into the dynamics of teacher appraisal within the unique context of Mpumalanga Province. The research, published in the *Journal of Educational and Social Research*, adopts a case study approach to comprehensively explore the practices, challenges, and implications of teacher appraisal in the South African public school system. The study's research design involves a careful examination of two primary schools, employing both qualitative and quantitative methods, including interviews, surveys, and document analysis.

This approach allows the authors to delve into the specifics of teacher appraisal processes in Mpumalanga Province and provides a nuanced understanding of the local context. One of the key focal points of the study is the exploration of teacher appraisal processes and criteria within the selected primary schools. Agangiba and Ngomane (2018) shed light on the various methods used for assessing teacher performance, including classroom observations, student evaluations, and portfolio reviews. The study emphasizes the importance of clear and transparent criteria in the appraisal process. This finding aligns with broader literature that underscores the significance of well-defined and standardized frameworks for teacher evaluation (Danielson, 2013; Stronge, 2018).

Furthermore, the study delves into the perceptions and experiences of teachers regarding the appraisal process. Agangiba and Ngomane (2018) provide valuable insights into how teachers perceive the fairness, transparency, and usefulness of the appraisal system. Understanding teachers' perspectives is crucial as it sheds light on the impact of appraisal on their professional growth and job satisfaction. Existing literature acknowledges the influence of teacher perceptions on the effectiveness of appraisal systems, emphasizing the need to consider educators' experiences in the design and implementation of such processes (Hargreaves, 1994; Coladarci, 1992).

However, the study also uncovers challenges within the teacher appraisal system. These challenges may include resource constraints, insufficient training for evaluators, and potential disparities in the implementation of the appraisal process. Agangiba and Ngomane (2018) offer a nuanced understanding of the obstacles that schools face in effectively conducting teacher appraisals. This aligns with broader discussions on the challenges inherent in implementing

teacher appraisal systems, including issues related to resources, training, and consistency in application (Kim, 2019; Peterson, 2000). The implications of the study extend beyond the specific schools studied, offering insights for educational policymakers, school administrators, and practitioners. The examination of appraisal processes and criteria suggests the importance of establishing clear and standardized frameworks for teacher evaluation (Agangiba & Ngomane, 2018). Teachers' perceptions and experiences, as highlighted in the study, carry implications for school administrators and policymakers seeking to enhance the effectiveness of teacher appraisal (Agangiba & Ngomane, 2018).

The findings suggest the importance of soliciting feedback from teachers and incorporating their perspectives in the ongoing development and refinement of the appraisal system. This collaborative approach fosters a sense of ownership and engagement among educators. The challenges identified in teacher appraisal underscore the need for strategic interventions to address systemic issues (Agangiba & Ngomane, 2018). Policymakers should consider allocating resources for training evaluators, providing necessary tools and technology for efficient appraisal processes, and addressing potential disparities in the implementation of the system. A proactive approach to overcoming these challenges can contribute to the overall effectiveness of teacher appraisal in South African public schools.

Comparing the findings of Agangiba and Ngomane's (2018) study with existing literature on teacher appraisal in South Africa, certain consistencies and divergences emerge. While the study aligns with broader literature emphasizing the importance of clear criteria, teacher involvement, and addressing challenges in the implementation of teacher appraisal (Mncube et al., 2013; Reddy & Juan, 2016), the case study approach allows for a more context-specific understanding

of these dynamics within Mpumalanga Province. In conclusion, Agangiba and Ngomane's (2018) case study on teacher appraisal in South African public schools contributes significantly to the broader discourse on teacher evaluation. As the education landscape continues to evolve, a nuanced and context-specific approach to teacher appraisal becomes increasingly imperative to ensure the professional growth and job satisfaction of educators, ultimately impacting the quality of education in South Africa.

In the study conducted by Akpan (2017), the author delves into the intricate relationship between teacher appraisal and professional development within the Nigerian educational context. This research investigates the practices, implications, and potential improvements in teacher appraisal systems, with a specific focus on their connection to professional growth. Akpan's (2017) research design involves a comprehensive exploration of teacher appraisal and its implications, offering insights into the Nigerian educational landscape. The study employs a qualitative approach, utilizing interviews, surveys, and document analysis to provide a thorough understanding of the subject matter. The study underscores the significance of teacher appraisal as a critical component of the educational system.

Akpan (2017) explores the processes and criteria involved in teacher appraisal within Nigerian schools. This includes the methods used for assessing teacher performance, such as classroom observations, student evaluations, and portfolio reviews. The research emphasizes the importance of clear and transparent criteria in the appraisal process, aligning with broader literature that emphasizes well-defined and standardized frameworks for effective teacher evaluation (Danielson, 2013; Stronge, 2018).

The study provides valuable insights into how teacher appraisal influences professional growth and job satisfaction. Understanding these implications is critical for educational policymakers, school administrators, and practitioners seeking to enhance the effectiveness of teacher appraisal in fostering continuous professional development. Akpan (2017) identifies systemic issues, including resource constraints, insufficient training for evaluators, and disparities in the implementation of the appraisal process. These challenges resonate with discussions in the literature regarding the obstacles faced in effectively implementing teacher appraisal systems, emphasizing the need for strategic interventions (Kim, 2019; Peterson, 2000).

The implications of the study extend beyond the specific Nigerian schools studied, offering insights for educational policymakers and practitioners globally. The examination of appraisal processes and criteria suggests the importance of establishing clear and standardized frameworks for teacher evaluation (Akpan, 2017). Policymakers should consider providing guidelines that align with national educational standards, ensuring consistency and fairness in the appraisal process. Teachers' perceptions and experiences, as highlighted in the study, carry implications for school administrators and policymakers seeking to enhance the effectiveness of teacher appraisal (Akpan, 2017).

The findings suggest the importance of soliciting feedback from teachers and incorporating their perspectives in the ongoing development and refinement of the appraisal system. This collaborative approach fosters a sense of ownership and engagement among educators. The challenges identified in teacher appraisal underscore the need for strategic interventions to address systemic issues (Akpan, 2017).

The study offers valuable insights into the local practices, challenges, and implications of teacher appraisal within the Nigerian context. Policymakers and educational leaders can draw from this research to inform the design and implementation of effective teacher appraisal systems, taking into account the specific context and challenges faced by Nigerian schools. In the study conducted by Ayaya and Brent (2018), the authors delve into the intricate relationship between teacher performance appraisal and organizational citizenship behaviour (OCB) within the Kenyan educational context.

Ayaya and Brent's (2018) research design involves a comprehensive examination of teacher performance appraisal and its implications, focusing on secondary school teachers in Nairobi County. The study employs a quantitative approach, utilizing surveys and statistical analysis to draw meaningful conclusions about the relationships between teacher performance appraisal and organizational citizenship behaviour. Ayaya and Brent (2018) explore the processes and criteria involved in the performance appraisal of secondary school teachers. The study recognizes the significance of a transparent and fair appraisal system, aligning with broader literature that underscores the importance of clear and standardized frameworks for effective teacher evaluation (Danielson, 2013; Stronge, 2018).

Furthermore, Ayaya and Brent (2018) delve into the implications of teacher performance appraisal for organizational citizenship behaviour among secondary school teachers. Discretionary actions that go further than the responsibilities of a position and enhance the general operation of the business are referred to as organizational citizenship behaviour (Organ, 1988). The study provides insights into how teachers are appraised and can influence their willingness to engage in these discretionary behaviours.

Understanding these implications is crucial for educational policymakers, school administrators, and practitioners seeking to enhance both teacher performance and the overall organizational climate. The study contributes to the broader discourse on teacher appraisal by shedding light on the connection between appraisal practices and organizational citizenship behaviour. Ayaya and Brent (2018) identify a positive relationship between effective teacher performance appraisal and increased organizational citizenship behaviour among secondary school teachers.

This finding aligns with existing literature emphasizing the interconnectedness of employee appraisal and organizational behaviour (Eisenberger et al., 1999; Podsakoff et al., 2000). The implications of the study extend beyond the specific context of Nairobi County, offering insights for educational policymakers and practitioners globally. The examination of appraisal processes and criteria suggests the importance of cultivating a positive organizational culture through effective teacher performance appraisal (Ayaya & Brent, 2018). Policymakers should consider providing guidelines that promote a supportive and transparent appraisal process, ensuring consistency and fairness in teacher evaluation.

Teachers' perceptions and experiences, as highlighted in the study, carry implications for school administrators and policymakers seeking to enhance the effectiveness of teacher appraisal (Ayaya & Brent, 2018). The findings suggest the importance of considering the impact of appraisal practices on teachers' organizational citizenship behaviour. This insight can inform the ongoing development and refinement of teacher appraisal systems, fostering a positive organizational culture and enhancing teacher commitment and engagement. The positive relationship between effective teacher performance appraisal and

organizational citizenship behaviour identified in the study (Ayaya & Brent, 2018) has broader implications for the overall functioning of educational institutions. Policymakers and administrators should recognize the potential role of appraisal practices as a mechanism to encourage desirable behaviours that contribute to a healthy organizational climate. This aligns with literature suggesting that a positive work environment, facilitated by effective appraisal systems, can lead to increased job satisfaction and commitment among employees (Organ & Ryan, 1995; Eisenberger et al., 1999). However, it's important to note that the study, while providing valuable insights, may not capture the full complexity of the relationship between teacher performance appraisal and organizational citizenship behaviour.

Factors such as organizational culture, leadership style, and individual differences among teachers can also influence these dynamics (Podsakoff et al., 2000). Future research could explore these factors in greater detail to provide a more comprehensive understanding of the interplay between teacher appraisal and organizational behaviour. In conclusion, Ayaya and Brent's (2018) study on teacher performance appraisal and organizational citizenship behaviour among secondary school teachers in Nairobi County, significantly contributes to the broader discourse on teacher evaluation. The study offers valuable insights into the local practices, implications, and connections between teacher appraisal and organizational citizenship behaviour.

As educational institutions strive for excellence and positive organizational cultures, the findings of this study underscore the importance of cultivating a supportive and transparent appraisal process that encourages behaviours beneficial to the organization's success.

In the study conducted by Umukoro and Obiakor (2018), the authors delve into the complex landscape of teacher appraisal and evaluation within the Nigerian secondary school system. Published in *Educational Research and Reviews*, this research investigates the historical trends, current practices, and the potential implications of teacher appraisal, providing valuable insights into the challenges and opportunities faced by educators in Nigeria. Umukoro and Obiakor's (2018) research design involves a comprehensive examination of teacher appraisal and evaluation, offering a historical perspective and insights into the contemporary trends in Nigerian secondary schools. The study begins by highlighting the historical context of teacher appraisal in Nigerian secondary schools.

Umukoro and Obiakor (2018) explore the evolution of teacher evaluation practices, acknowledging the influence of historical, cultural, and policy factors. This historical lens is crucial for understanding the current state of teacher appraisal in Nigeria, aligning with broader literature that emphasizes the importance of considering historical factors in educational research (Fullan, 1991; Cuban, 1988). The findings contribute to the existing body of knowledge on teacher appraisal by offering a specific focus on the Nigerian context, where cultural, social, and economic factors can influence the effectiveness of appraisal systems (Oduol & Odebero, 2017; Mugenda, 2016).

The study also sheds light on the implications of teacher appraisal in Nigerian secondary schools. Umukoro and Obiakor (2018) discuss how the current trends in teacher evaluation impact educators, school administrators, and the overall educational system. Understanding these implications is crucial for educational policymakers and practitioners seeking to enhance the effectiveness of teacher appraisal in Nigeria.

The findings of Umukoro and Obiakor's (2018) study can be contextualized within the broader literature on teacher appraisal and evaluation. The challenges and opportunities identified in the Nigerian context may resonate with similar issues faced by educators in other countries. Comparative analyses with international practices can provide a more comprehensive understanding of effective strategies for teacher appraisal (Hargreaves, 1994; Darling-Hammond, 2017). The implications of the study extend beyond the specific context of Nigerian secondary schools, offering insights for educational policymakers and practitioners globally.

The examination of appraisal processes and criteria suggests the importance of considering cultural and contextual factors in the design and implementation of effective teacher evaluation systems (Umukoro & Obiakor, 2018). Teachers' perceptions and experiences, as highlighted in the study, carry implications for school administrators and policymakers seeking to enhance the effectiveness of teacher appraisal (Umukoro & Obiakor, 2018). The findings suggest the importance of soliciting feedback from teachers and incorporating their perspectives in the ongoing development and refinement of teacher appraisal systems.

The research may not capture the full complexity of the teacher appraisal landscape in Nigeria, considering the vast diversity within the country's educational system. Future research could explore regional variations, considering the impact of cultural and socioeconomic factors on teacher appraisal practices. In conclusion, Umukoro and Obiakor's (2018) study on teacher appraisal and evaluation in Nigerian secondary schools provides a valuable contribution to the broader discourse on teacher evaluation.

The study offers insights into the historical trends, current practices, and implications of teacher appraisal in the Nigerian context. Policymakers, educational leaders, and practitioners can draw from this research to inform the design and implementation of effective teacher appraisal systems, considering the unique challenges and opportunities faced by educators in Nigeria. As the education landscape continues to evolve, a nuanced and context-specific approach to teacher appraisal becomes increasingly imperative to ensure the professional growth and job satisfaction of educators, ultimately impacting the quality of education in Nigeria.

In the study conducted by Mbagwu and Ezeugwu (2017), the authors delve into the intricate relationship between performance appraisal and teacher motivation within the Nigerian educational context. Published in the *International Journal of Educational Administration and Policy Studies*, this research explores the practices, implications, and connections between how teachers are appraised and their motivation levels in Anambra State, Nigeria. Mbagwu and Ezeugwu's (2017) research design involves a comprehensive examination of performance appraisal and its implications, focusing specifically on teacher motivation in the context of Anambra State.

Mbagwu and Ezeugwu (2017) explore the processes and criteria involved in the performance appraisal of teachers in Nigerian secondary schools. The study recognizes the significance of a transparent and fair appraisal system, aligning with broader literature that underscores the importance of clear and standardized frameworks for effective teacher evaluation (Danielson, 2013; Stronge, 2018). Furthermore, Mbagwu and Ezeugwu (2017) delve into the implications of performance appraisal for teacher motivation in Nigerian secondary schools.

Teacher motivation is a critical factor in ensuring a positive and productive learning environment. The study provides insights into how teachers are appraised can influence their motivation levels. Understanding these implications is crucial for educational policymakers, school administrators, and practitioners seeking to enhance both teacher performance and the overall motivational climate. The study contributes to the broader discourse on teacher appraisal by shedding light on the connection between appraisal practices and teacher motivation. Mbagwu and Ezeugwu (2017) identify a positive relationship between effective performance appraisal and increased teacher motivation in Anambra State.

This finding aligns with existing literature emphasizing the interconnectedness of employee appraisal and motivation (Eisenberger et al., 1999; Podsakoff et al., 2000). The implications of the study extend beyond the specific context of Anambra State, offering insights for educational policymakers and practitioners globally. The examination of appraisal processes and criteria suggests the importance of cultivating a positive organizational culture through effective teacher performance appraisal (Mbagwu & Ezeugwu, 2017). Teachers' perceptions and experiences, as highlighted in the study, carry implications for school administrators and policymakers seeking to enhance the effectiveness of teacher appraisal (Mbagwu & Ezeugwu, 2017).

The findings suggest the importance of considering the impact of appraisal practices on teachers' motivation. This insight can inform the ongoing development and refinement of teacher appraisal systems, fostering a positive organizational culture and enhancing teacher commitment and engagement. The positive relationship between effective performance appraisal and teacher motivation identified in the study (Mbagwu & Ezeugwu, 2017) has broader

implications for the overall functioning of educational institutions. This aligns with literature suggesting that a positive work environment, facilitated by effective appraisal systems, can lead to increased job satisfaction and commitment among employees (Organ & Ryan, 1995; Eisenberger et al., 1999). However, it's essential to acknowledge potential challenges and variations in different educational contexts. Cultural, regional, and institutional differences may impact the generalizability of findings. Future research could explore these factors in greater detail to provide a more comprehensive understanding of the interplay between performance appraisal and teacher motivation.

In conclusion, Mbagwu and Ezeugwu's (2017) study on performance appraisal and teacher motivation in Nigerian secondary schools, specifically in Anambra State, significantly contributes to the broader discourse on teacher evaluation. The study offers valuable insights into the local practices, implications, and connections between performance appraisal and teacher motivation. As the education landscape continues to evolve, a nuanced and context-specific approach to performance appraisal becomes increasingly imperative to ensure the professional growth and job satisfaction of educators, ultimately impacting the quality of education in Nigeria.

In the examination of teacher appraisal in the Sub-Saharan African country, Kenyan education system, Adera and Kimemia's (2019) study stands out as a comprehensive exploration of the challenges faced by educators. Teacher appraisal is a multifaceted process that influences professional growth, instructional efficacy, and the overall educational experience. By focusing on Nakuru County, the study provides a localized perspective that is crucial for understanding the nuances of teacher appraisal in diverse educational contexts.

To unravel the intricacies of teacher appraisal challenges, Adera and Kimemia employ a case study methodology, centering their investigation on public secondary schools in Nakuru County (Adera & Kimemia, 2019). This approach allows for an in-depth analysis of the specific challenges faced by teachers in this region, offering valuable insights that may not be captured in broader, more generalized studies.

The study illuminates instances where teacher evaluations are influenced by personal biases rather than objective criteria, introducing a level of inconsistency that could impact the fairness and credibility of the entire appraisal system. The research also underscores challenges related to the availability of resources and training for those responsible for conducting teacher appraisals (Adera & Kimemia, 2019). This sheds light on systemic issues that extend beyond individual teacher experiences, revealing broader structural inadequacies that need to be addressed for a more effective and equitable appraisal process.

Communication gaps emerge as a substantial challenge in the teacher appraisal process, according to the study (Adera & Kimemia, 2019). Inadequate communication between appraisers and teachers can lead to misunderstandings, hindering the effectiveness of the appraisal system. Furthermore, the study draws attention to the significant impact of appraisal outcomes on teachers' morale and job satisfaction, hinting at potential repercussions for the overall quality of education delivery. Communication gaps identified in the study underscore the necessity of establishing clear and transparent communication channels within the appraisal system (Adera & Kimemia, 2019). Addressing this challenge may involve the development of comprehensive communication strategies and training programs for both appraisers and teachers.

Additionally, the study emphasizes the need for a supportive and constructive appraisal environment that fosters professional development rather than punitive measures. Understanding the impact of appraisal outcomes on teacher morale highlights the interconnectedness of the appraisal process with broader aspects of the education system (Adera & Kimemia, 2019). A negative appraisal experience can potentially lead to demotivation and decreased commitment among teachers, influencing the overall quality of education. Therefore, the implications extend beyond the appraisal itself, emphasizing the need for a holistic approach to teacher support and development.

Adera and Kimemia (2019) offer insightful recommendations based on their findings, providing a roadmap for addressing the challenges identified in teacher appraisal. Among these recommendations is the establishment of ongoing professional development programs for appraisers. This recognizes the need to enhance the competency and effectiveness of those responsible for conducting teacher appraisals. The implementation of regular feedback mechanisms is another key recommendation (Adera & Kimemia, 2019). This approach encourages continuous improvement in the appraisal process, allowing for adjustments based on the experiences and perspectives of both appraisers and teachers. Additionally, the incorporation of teacher input into the appraisal process is proposed, recognizing the value of including educators in shaping the systems that directly impact their professional lives.

In terms of future directions, the study suggests the need for longitudinal research to track changes in teacher appraisal practices over time (Adera & Kimemia, 2019). This longitudinal perspective could provide valuable insights into the effectiveness of implemented reforms and the sustainability of positive changes.

Furthermore, the study proposes comparative research across different counties or regions to offer a more comprehensive understanding of the variations and commonalities in teacher appraisal challenges within the Kenyan education system. By recognizing the systemic issues and offering thoughtful recommendations, the study contributes to the ongoing discourse on teacher appraisal practices. As Kenya continues to evolve its education system, studies such as this play a crucial role in guiding policy changes and ensuring the development of a fair, transparent, and supportive environment for teachers. The challenges outlined by Adera and Kimemia are not insurmountable; rather, they present opportunities for growth, improvement, and the creation of a teacher appraisal system that truly supports the professional development of educators and, by extension, the enhancement of the overall education landscape in Kenya.

2.3.1 Integration of Real-life Skills

Teacher appraisal also entails assessing how they integrate life skills into their daily instructional activities. Pursuant to Venezuelan research by Brown, Bull, and Pendlebury (2021), evaluating teachers' diversified assessments fosters students' divergent and creative thinking in addition to providing high-quality data on students' academic achievement and instructional decisions. These results show how important it is to evaluate teachers at secondary schools in differentiated classes using authentic methods, which include giving them a range of tasks to demonstrate real-world skills, letting the assessor know whether the teacher has grasped the concepts or skills, basing the assessment on accepted criteria to ensure validity, and preparing students attending secondary schools for roles in adulthood. While differentiated assessment is widely acknowledged as the cornerstone of successful assessment and learning, research on teachers'

assessment literacy indicates that many teachers are still ill-equipped to create, construct, and administer assessments in an efficient manner. Glatthorn (2020) created a differentiated assessment model in Austrian research that combines traditional and modern methods for evaluating teacher effectiveness. The argument made by the author was that competent evaluation and supervision of secondary school teachers does not need adhering to rigid traditions. This suggests that both the clinical model of evaluation and self-directed choices under the guidance of the teacher in question, as well as cooperative options that let high-school teachers collaborate with peers, have a role. One appealing feature of the investigator's model is that it offers the administrator many options to assess various secondary school teachers based on requirements.

Using this tactic, the tenured department chairman can have greater leeway while the non-tenured teacher receives a more thorough evaluation. The aforementioned researcher also said that differentiated assessment is based on the idea that educators in secondary schools should have more influence over their professional growth as members of a profession, provided that they adhere to widely recognized professional norms, because teaching is a profession. The aforementioned results highlight the fact that secondary school teachers, being trained professionals, require feedback and assistance from peers and learners as well as from administrators and supervisors.

In the study conducted by Brown, Bull and Pendlebury (2021), the authors delve into the complex landscape of differentiated instruction assessment within the Venezuelan secondary school system. Brown, Bull, and Pendlebury's (2021) research design involves a comprehensive examination of differentiated instruction assessment, employing a case study approach to provide in-depth

insights into the Venezuelan secondary school system. The study employs qualitative methods, utilizing interviews, observations, and document analysis to explore the various facets of differentiated instruction assessment. The study begins by highlighting the significance of differentiated instruction in the educational landscape. Brown et al. (2021) explore the principles and practices of differentiated instruction, emphasizing the need to tailor teaching methods to address diverse learning styles and abilities. The study recognizes the importance of assessing differentiated instruction to ensure its effective implementation, aligning with broader literature that underscores the importance of evaluating pedagogical approaches (Tomlinson, 2014; Wormeli, 2017).

Furthermore, Brown et al. (2021) delve into the specific context of Venezuelan secondary schools, providing a detailed analysis of the challenges and opportunities associated with assessing differentiated instruction. The study acknowledges the unique cultural and educational factors that may impact the assessment practices in Venezuela, contributing to a more nuanced understanding of the complexities involved in evaluating pedagogical strategies within diverse contexts.

The study contributes to the broader discourse on differentiated instruction by shedding light on the assessment practices in Venezuelan secondary schools. Brown et al. (2021) explore the methodologies and tools used to assess differentiated instruction, providing valuable insights into the ways educators and administrators navigate the assessment landscape. This information is crucial for educational policymakers and practitioners seeking to enhance the effectiveness of differentiated instruction in diverse educational settings. The implications of the study extend beyond the specific context of Venezuelan secondary schools,

offering insights for educational policymakers and practitioners globally. The examination of differentiated instruction assessment processes suggests the importance of considering cultural and contextual factors in the design and implementation of effective evaluation systems (Brown et al., 2021). Educators' perceptions and experiences, as highlighted in the study, carry implications for school administrators and policymakers seeking to enhance the effectiveness of differentiated instruction assessment (Brown et al., 2021). The findings suggest the importance of soliciting feedback from educators and incorporating their perspectives in the ongoing development and refinement of assessment systems.

This collaborative approach fosters a sense of ownership and engagement among educators, contributing to the overall success of differentiated instruction. However, it's essential to acknowledge potential challenges and variations in different educational contexts. Differentiated instruction assessments may face unique obstacles in various cultural and institutional settings. Future research could explore these factors in greater detail to offer a more thorough comprehension of the interplay between differentiated instruction and assessment.

In conclusion, Brown, Bull, and Pendlebury's (2021) study on assessing differentiated instruction in Venezuelan secondary schools significantly contributes to the broader discourse on pedagogical evaluation. The study offers valuable insights into the local practices, challenges, and opportunities associated with assessing differentiated instruction. As the education landscape continues to evolve, a nuanced and context-specific approach to assessing differentiated instruction becomes increasingly imperative to ensure the professional growth and learning outcomes of students, ultimately impacting the quality of education in Venezuela and beyond. In the study done by Glatthorn (2020), the author explores

the evolving landscape of teacher performance assessment, particularly focusing on differentiated appraisal models. Glatthorn (2020) begins by acknowledging the dynamic nature of teacher performance assessment and the need for models that can adapt to the evolving demands of education. The author highlights the importance of differentiated appraisal models, emphasizing their potential to blend traditional practices with innovative strategies. This sets the stage for a discussion on how such models can enhance the accuracy and relevance of teacher performance assessments. The differentiation of appraisal models is presented as a way to address the diverse needs and contexts in which teachers operate.

Glatthorn (2020) explores how these models can provide a more nuanced understanding of teacher effectiveness by considering individual strengths, areas for growth, and the specific dynamics of the learning environment. Glatthorn (2020) discusses how these models consider various factors, including teaching styles, student demographics, and the unique challenges of different subject areas. The author suggests that by incorporating such diverse elements, differentiated appraisal models can offer a more holistic and accurate picture of teacher performance. Traditional assessment methods, such as classroom observations and student evaluations, are considered alongside innovative approaches, including technology-enhanced assessments and data-driven insights.

Glatthorn (2020) provides examples of differentiated appraisal models in action, showcasing instances where traditional and innovative assessment methods work synergistically. The article underscores the importance of aligning assessment strategies with the broader goals of education, including fostering student learning and promoting continuous professional development among teachers. The author also discusses potential challenges and considerations in implementing

differentiated appraisal models. Glatthorn (2020) addresses issues such as standardization, scalability, and the need for ongoing professional development to ensure effective implementation. These insights are valuable for educators, administrators, and policymakers contemplating the adoption of differentiated appraisal models in their respective contexts. The author suggests that by providing a more accurate and comprehensive assessment of teacher performance, these models can contribute to professional growth, job satisfaction, and ultimately enhance overall teacher productivity. The alignment between assessment strategies and the unique qualities of individual teachers is emphasized as a key factor in optimizing productivity.

In conclusion, Glatthorn's (2020) exploration of differentiated appraisal models in teacher performance assessment contributes to the ongoing dialogue on effective evaluation practices in education. The article provides insights into the potential of blending tradition and innovation to create assessment models that better serve the needs of teachers and students. As the field of education keeps changing, the integration of differentiated appraisal models represents a promising avenue for improving the standard of instruction in various learning environments.

Madziva and Musindo's (2019) research delves into the dynamics surrounding teacher appraisal practices and their impact on teacher performance within the context of primary education in Zimbabwe. Through an exploration of the specific appraisal processes, the unique educational landscape of Zimbabwe, and the implications for actual teaching effectiveness, the study contributes valuable insights to the ongoing discourse on teacher evaluation and educational quality in the country. In Zimbabwean primary schools, the study likely uncovers a diverse array of teacher appraisal practices, including the methods employed, the criteria

used for evaluation, and the frequency of performance assessments. These elements collectively shape the appraisal landscape and significantly influence how teachers are evaluated. Examining these processes is crucial for understanding the intricacies of teacher appraisal and forming the basis for evaluating their effectiveness in enhancing teacher performance (Madziva & Musindo, 2019). Contextualizing the study within the broader educational landscape is essential for interpreting the implications of teacher appraisal on performance within Zimbabwean primary schools (Madziva & Musindo, 2019).

By assessing the correlation between specific appraisal processes and tangible improvements in teaching methods, student engagement, and overall professional development, the study aims to reveal the tangible consequences of teacher appraisal on the ground. This nuanced understanding is critical for shaping recommendations that not only refine appraisal practices but also enhance the overall quality of teaching in Zimbabwean primary schools (Madziva & Musindo, 2019).

A qualitative dimension may be incorporated into the study, capturing the perspectives of key stakeholders in Zimbabwe's primary education sector. Teachers, school administrators, and education policymakers likely contribute diverse viewpoints on how teacher appraisal practices are perceived, how they influence teacher morale, and whether they align with the broader goals of the education system. Qualitative insights add depth to the study, providing a more comprehensive analysis of the effects of evaluations on teachers on teacher performance (Madziva & Musindo, 2019). Stakeholder perspectives in Zimbabwe are crucial for understanding the lived experiences of those directly involved in the appraisal process.

For instance, teachers' views on the fairness and relevance of appraisal criteria, administrators' perspectives on the administrative feasibility of appraisal practices, and policymakers' considerations for aligning appraisals with educational objectives contribute to a holistic understanding. Integrating these qualitative insights enhances the richness of the study, allowing for a more nuanced interpretation of the implications of teacher appraisal (Madziva & Musindo, 2019).

The findings of Madziva and Musindo's (2019) research likely carry implications for educational policy in Zimbabwe. Recommendations derived from the study could inform policy adjustments aimed at refining teacher appraisal processes and aligning them more closely with the broader educational goals of the country. Consequently, the study actively contributes to the ongoing discourse on educational governance and quality assurance in the Zimbabwean context (Madziva & Musindo, 2019). In conclusion, Madziva and Musindo's (2019) research enriches our understanding of the intricate relationship between teacher appraisal and teacher performance in Zimbabwean primary schools.

By exploring the specific appraisal practices, contextualizing them within the unique educational landscape of Zimbabwe, and assessing their implications on the ground, the study provides valuable insights. The findings have the potential to influence not only the refinement of teacher appraisal processes but also broader educational policies, contributing to the enhancement of teacher performance and, subsequently, the quality of primary education in Zimbabwe. Again, Shumba and Mbakile's (2018) research article in Hwange District, Zimbabwe, delves into the intricacies of teacher performance appraisal within the unique context of Hwange District.

Through an examination of the specific processes, challenges, and implications of teacher appraisal, the study contributes valuable insights to the discourse on teacher evaluation and educational quality in this particular region. Within the landscape of teacher performance appraisal, the study likely identifies and explores the specific processes employed in Hwange District. This investigation may encompass the methods used for evaluation, the standards by which educators are evaluated, and the frequency of performance appraisals. Understanding these processes is crucial for evaluating the effectiveness of teacher appraisal practices and comprehending how they contribute to or hinder teaching effectiveness in the district (Shumba & Mbakile, 2018). To appreciate the findings fully, it's essential to consider the unique context of Hwange District in Zimbabwe.

The socio-economic factors, cultural influences, resource availability, and administrative practices within the district shape the dynamics of teacher performance appraisal. Administrative hurdles, resistance from educators, and systemic obstacles may be among the challenges explored. Identifying and understanding these challenges is critical for devising targeted strategies to overcome them and improve the overall effectiveness of teacher performance appraisal in primary schools in Hwange District (Shumba & Mbakile, 2018).

A central aspect of the study may involve assessing the implications of teacher performance appraisal on the actual performance of teachers. By exploring how specific appraisal processes correlate with observable improvements in teaching methods, student engagement, and overall professional development, the study aims to uncover the impact of teacher appraisal on the ground. This nuanced understanding is fundamental for shaping recommendations that aim not only to

refine appraisal practices but also to enhance the overall quality of teaching in primary schools. Stakeholder perspectives provide valuable insights into how teacher appraisal practices are perceived, how they influence teacher morale, and whether they align with the broader goals of the education system. This qualitative aspect adds depth to the study, allowing for a more comprehensive analysis of the implications of teacher appraisal on teacher performance (Shumba & Mbakile, 2018).

Teachers' views on the fairness and relevance of appraisal criteria, administrators' perspectives on the administrative feasibility of appraisal practices, and policymakers' considerations for aligning appraisals with educational objectives contribute to a holistic understanding. Integrating these qualitative insights enhances the richness of the study, allowing for a more nuanced interpretation of the implications of teacher appraisal (Shumba & Mbakile, 2018). The findings of Shumba and Mbakile's (2018) research may have implications for educational policy in Hwange District and, more broadly, in Zimbabwe.

Recommendations derived from the study could inform policy adjustments aimed at refining teacher appraisal processes and aligning them more closely with the broader educational goals of the district and the country. Consequently, the study actively contributes to the ongoing discourse on educational governance and quality assurance, particularly in the context of Hwange District (Shumba & Mbakile, 2018). In conclusion, Shumba and Mbakile's (2018) research enriches our understanding of the intricate relationship between teacher appraisal and teacher performance in primary schools. The findings have the potential to influence not only the refinement of teacher appraisal processes but also broader educational policies, contributing to the enhancement of teacher performance and,

subsequently, the quality of primary education in Hwange District. In their article, Popham (2018) engages in a comprehensive exploration of assessment literacy and its role in the field of education. Through critical analysis and historical contextualization, Popham aims to determine whether assessment literacy is a passing trend or an essential and enduring skill that lies at the core of effective teaching practices. Popham (2018) initiates the discussion by raising a fundamental question of whether assessment literacy is merely a fad in education, subject to the ebb and flow of trends, or is it a fundamental aspect of teaching that transcends time and educational shifts.

The author starts by defining assessment literacy, portraying it as the understanding and application of sound assessment practices by teachers. Assessment literacy, as described by Popham, goes beyond the technicalities of assessment tools; it involves a profound comprehension of the underlying principles and purposes of assessment in education. By framing assessment literacy in this manner, Popham (2018) establishes it as a multifaceted and sophisticated skill set that demands more than a surface-level understanding. The historical context of assessment literacy is a crucial aspect addressed by Popham (2018). The author contends that assessment literacy has emerged as a response to the changing landscape of education, including shifts in curriculum standards, educational policies, and the escalating demand for accountability.

By situating assessment literacy within a historical framework, Popham emphasizes its contextual relevance and adaptive nature, dispelling the notion that it is a fleeting trend. Popham (2018) argues that possessing assessment literacy empowers teachers to make informed decisions about instructional strategies, identify student learning needs, and enhance overall teaching effectiveness.

The author contends that assessment literacy is not a set of isolated skills; rather, it is a fundamental aspect of teacher professionalism, integral to the art and science of teaching. This perspective positions assessment literacy as a key factor in equipping teachers with the tools needed to navigate the complexities of the educational landscape. Popham's exploration of assessment literacy extends beyond its definition and benefits to address its enduring significance. He addresses the skepticism surrounding assessment literacy and examines whether it is a passing trend or a lasting educational imperative.

Popham (2018) argues that assessment literacy is fundamental because it directly influences teaching practices and student learning outcomes. The article advocates for a broader recognition of assessment literacy as an integral component of teacher education and professional development. However, Popham (2018) also confronts challenges and misconceptions related to assessment literacy. The study by Popham (2018) highlights potential pitfalls, such as misinterpretation of assessment results and the risk of relying on inadequate assessment practices. Popham encourages educators to approach assessment literacy with a critical mindset, recognizing both its potential benefits and challenges. This balanced perspective adds depth to the article by acknowledging the complexities and potential pitfalls associated with the practical implementation of assessment literacy.

Popham (2018) incorporates examples and practical insights to illustrate key points. The author uses real-world scenarios to demonstrate how teachers can enhance their practice by developing assessment literacy. These examples contribute to a more tangible understanding of assessment literacy for teachers, grounding the theoretical concepts in practical applications.

The critical examination of assessment literacy includes an exploration of its relationship with teaching effectiveness. Popham contends that assessment literacy is not an isolated skill set but an integral component of effective teaching. The article argues that teachers who are adept in assessment literacy are better equipped to make informed decisions about instructional strategies, tailor their approaches to student needs, and foster improved learning outcomes. This alignment between assessment literacy and teaching effectiveness positions it as a foundational skill for educators.

In conclusion, Popham's (2018) article serves as a thought-provoking and comprehensive exploration of assessment literacy for teachers. By critically examining its definition, historical context, benefits, enduring significance, challenges, and practical applications, Popham makes a compelling case for the fundamental nature of assessment literacy in education. As education continues to evolve, assessment literacy emerges not as a fleeting trend but as an enduring imperative for educators seeking to navigate the complexities of teaching and contribute to improved student outcomes.

William (2019) offers a comprehensive exploration of contemporary educational challenges and proposes alternative strategies for fostering meaningful learning experiences. William's (2019) work draws on his extensive expertise in assessment, teaching, and learning, providing a critical analysis of current educational practices and suggesting transformative approaches to meet the evolving needs of students. William (2019) initiates the discussion by highlighting the limitations of existing educational efforts, arguing that despite substantial investments in improving schools, progress has been limited. While recognizing the importance of assessments for accountability purposes, William (2019)

suggests that the current emphasis on high-stakes testing may be counterproductive and argues that assessments should serve the purpose of informing and guiding instruction rather than merely evaluating students. By shifting the focus from summative assessment to formative assessment, educators can create a more supportive and conducive learning environment. In other words, Wiliam contributes to the broader discourse on effective educational practices, urging stakeholders to prioritize meaningful and student-centered approaches to teaching and learning.

Mokuku and Ndaruhutse (2018) provide a comprehensive examination of the teacher performance appraisal system in Kenya, focusing on the role of the Teachers Service Commission (TSC). This study explores various facets of the appraisal process, including its structure, impact on professional development, teachers' perceptions, and implications for the overall quality of education in Kenya. In the context of teacher performance appraisal in Kenya, the Teachers Service Commission (TSC) plays a pivotal role in shaping policies and practices related to teacher evaluation. This contextual backdrop sets the stage for a nuanced exploration of the appraisal system's intricacies within the unique educational landscape of Kenya (Mokuku & Ndaruhutse, 2018).

Delving into the specific components of the teacher performance appraisal framework employed by the TSC, the study aims to unveil the inner workings of the system. This examination is vital for assessing the fairness, transparency, and comprehensiveness of the appraisal process. By scrutinizing the criteria used for teacher evaluation, the study sheds light on how performance is measured and what aspects are considered in the assessment (Mokuku & Ndaruhutse, 2018). One focal point of the article is the impact of teacher performance appraisal on

professional development. The outcomes of the appraisal process play a crucial role in determining teachers' growth within the education system. By exploring this aspect, the study aims to understand how the appraisal system aligns with broader goals of enhancing the quality of teaching and learning in Kenya. The article investigates whether the appraisal system serves as a constructive tool for guiding teachers' professional journeys and contributing to their continuous development (Mokuku & Ndaruhutse, 2018).

A qualitative dimension is introduced into the study to capture teachers' perceptions and experiences regarding the appraisal system. This qualitative inquiry provides a nuanced perspective that complements the quantitative aspects of the research. Understanding how teachers perceive the appraisal process and how it impacts their professional lives is crucial for assessing the acceptability and effectiveness of the system on the ground. The qualitative data adds depth to the study, offering insights into the human aspect of teacher evaluation (Mokuku & Ndaruhutse, 2018). By analyzing the connections between appraisal outcomes and educational outcomes, the authors contribute to the ongoing discourse about the role of teacher evaluation in shaping the overall effectiveness of the education system.

Benchmarking the Kenyan teacher performance appraisal system against global standards provides insights into potential areas for improvement and adaptation within the local context. This comparative dimension enhances the study's relevance and utility for educators and policymakers by offering a broader understanding of the strengths and weaknesses of the Kenyan approach in the global educational landscape (Mokuku & Ndaruhutse, 2018). Throughout the article, Mokuku and Ndaruhutse integrate relevant literature and theoretical

frameworks to contextualize their findings. The scholarly engagement enhances the academic rigor of the study, providing readers with a broader theoretical framework for understanding teacher performance appraisal in Kenya. By synthesizing existing literature, the authors contribute to the scholarly conversation around teacher evaluation, making the article a valuable resource for researchers and practitioners in the field of education (Mokuku & Ndaruhutse, 2018).

In conclusion, Mokuku and Ndaruhutse's (2018) article presents a thorough and multifaceted exploration of teacher performance appraisal in Kenya. The study's flow seamlessly integrates various aspects of the appraisal system, offering a holistic understanding of its dynamics, impact, and implications. The comprehensive nature of the research makes it a valuable resource for educators, policymakers, and researchers interested in understanding and improving teacher performance appraisal systems in diverse educational contexts. The study not only contributes to the specific context of Kenya but also adds valuable insights to the broader global discourse on effective teacher evaluation.

Weisberg, Sexton, Mulhern, and Keeling (2021) found that differentiated appraisal gives teachers choices about the kind of supervision and evaluation services they get, which is in line with these claims. The study was carried out in Mexico. The authors claim that self-directed development is typified by individual teachers creating their own personal development objectives, following through on those goals, getting input from secondary school learners, and finishing a final evaluation of success. They also disclosed that there are two evaluation alternatives—intensive appraisal and basic assessment—in addition to the three appraisal options.

The intense development option is accompanied with intensive assessment. Toch (2021) also believes that an administrator does thorough evaluations based on teacher responsibility rather than professional development. Research-backed standards, conferences, observations, and carrying out non-teaching tasks are some of the methodologies used. For seasoned educators who are well-known for their skill, the second evaluation option—standard appraisal—is connected to the cooperative and self-directed growth programs.

Administrators use minimum observations and conferences with the main objective being to satisfy state and district appraisal policy requirements. These results witness to the fact that differentiated assessment, or evaluation, promotes collegiality and collaboration, highlights the need of professionalizing teaching, and offers administrators a workable answer to the time crunch associated with providing efficient appraisals. In several countries in Sub-Saharan Africa, there is a growing trend in secondary schools where teachers are given the freedom to choose from a variety of supervisory and evaluative methods, known as differentiated appraisal. This shift away from a standardized approach to supervision aims to acknowledge and accommodate the diverse teaching styles and contexts found in secondary education.

According to Timperley, Wilson, Barrar, and Fung (2019), it is suggested that teachers actively participate in the decision-making process regarding which appraisal options best suit their needs and take responsibility for ensuring the effectiveness of their chosen options. This approach not only empowers teachers in the appraisal process but also acknowledges the significance of tailoring appraisal strategies to the unique characteristics of each teacher, thereby contributing to a more nuanced understanding of teacher productivity.

The research by Lichuma and Gicharu (2019) provides a comprehensive exploration of the interplay between performance appraisal processes and the effectiveness of teachers in an urban educational context. To comprehend the implications of Lichuma and Gicharu's (2019) study, it is crucial to consider the distinctive features of Nairobi City County's educational landscape. As an urban area, Nairobi introduces complexities related to diverse student demographics, varying resource availability, and specific administrative challenges. These factors shape the context within which performance appraisal practices operate, influencing their effectiveness and impact on teacher performance.

Acknowledging these nuances is vital for interpreting the study's findings and deriving meaningful insights for improving educational quality. The study likely delves into the specific performance appraisal practices implemented in public secondary schools in Nairobi City County. An examination of the methods, criteria, and frequency of performance evaluations is fundamental for evaluating their effectiveness. Lichuma and Gicharu (2019) may scrutinize whether these practices align with established best practices in teacher appraisal and if they are adaptable enough to address the unique needs and challenges prevalent in an urban educational environment.

Through quantitative data analysis and potentially qualitative insights, the study aims to unveil correlations between specific appraisal processes and observable improvements in teaching methods, student engagement, and overall professional development. Understanding the causal relationship between appraisal practices and teacher performance is crucial for shaping effective strategies to enhance the overall quality of education. The insights derived from these perceptions provide invaluable context for understanding how educators and administrators perceive

the fairness, relevance, and effectiveness of the appraisal process. In summary, Lichuma and Gicharu's (2019) study navigates through the complexities of performance appraisal in an urban educational setting, offering insights into the nuanced relationship between appraisal practices and teacher effectiveness. The findings contribute not only to the specific context of Nairobi City County but also to the broader discourse on improving educational quality in urban areas, shaping the ongoing conversation around effective teacher evaluation practices.

Mulwa's (2016) research provides a comprehensive examination of the obstacles encountered in the implementation of teacher performance appraisal within the specific context of Ruiru Sub-County in Kenya. By delving into the challenges faced by educators and administrators, contextualizing them within the unique features of Ruiru Sub-County, and exploring their implications for teacher professional development, Mulwa's study offers valuable insights into the complexities surrounding the teacher performance appraisal system.

Within the landscape of teacher performance appraisal, Mulwa's (2016) research critically identifies and explores the multifaceted challenges faced by educators and administrators in Ruiru Sub-County. A central aspect of Mulwa's (2016) research likely involves assessing the impact of these challenges on teacher professional development. The teacher performance appraisal process is not only an evaluative tool but is also intrinsically linked to opportunities for growth and improvement. Understanding how challenges in the implementation of performance appraisal affect teachers' ability to engage in meaningful professional development activities is vital. The identified challenges may inform recommendations for policy adjustments aimed at improving the teacher performance appraisal system.

Mulwa's (2016) research provides a nuanced exploration of the challenges facing the effective implementation of teacher performance appraisal in Ruiru Sub-County. The study navigates through the intricacies of the educational landscape, offering valuable insights into the specific obstacles within this context. By doing so, it lays the groundwork for actionable recommendations to improve teacher appraisal processes, enhance professional development opportunities, and contribute to the broader discourse on effective educational quality assurance.

Mule and Murithi (2018) delve into the intricacies of implementing teacher performance appraisal within the specific context of secondary schools in Nakuru Municipality, Kenya. Within the context of secondary education in Nakuru Municipality, Mule and Murithi (2018) address the critical issue of implementing teacher performance appraisal. This study sets the stage by acknowledging the importance of evaluating teacher performance as a means to enhance educational quality. Understanding the unique challenges faced by secondary schools in Nakuru Municipality is essential for contextualizing the study and identifying specific issues that may arise in the implementation of performance appraisal.

By investigating the practical aspects of implementation, the study sought to uncover the nuances and complexities associated with incorporating performance appraisal systems into the daily operations of secondary schools (Mule & Murithi, 2018). An essential aspect of the study is the identification and analysis of challenges faced during the implementation of teacher performance appraisal. Mule and Murithi (2018) delve into the specific issues that educators and administrators encounter, providing a nuanced understanding of the obstacles that may hinder the effective execution of the appraisal system. By highlighting instances where the appraisal system has been effective, Mule and Murithi

provide a balanced perspective on the overall impact of performance evaluation. Identifying success stories and positive outcomes is crucial for understanding the potential benefits and strengths of the appraisal system within Nakuru Municipality's secondary schools (Mule & Murithi, 2018). In addition to challenges and successes, Mule and Murithi consider the perceptions of teachers and administrators regarding the implementation of performance appraisal. This qualitative dimension adds depth to the study, capturing the lived experiences and perspectives of those directly involved in the appraisal process.

Understanding how educators and administrators perceive the implementation efforts is integral to evaluating the system's acceptability and effectiveness on the ground (Mule & Murithi, 2018). By analyzing the connections between appraisal outcomes and educational outcomes, the authors contribute to the ongoing discourse about the role of teacher evaluation in shaping the overall effectiveness of the education system at the local level. By addressing challenges, successes, perceptions, and broader implications, the study offers a holistic perspective on the complexities of incorporating performance appraisal systems at the local level. The findings contribute to the broader discourse on effective teacher evaluation, providing valuable insights for educators, researchers, and policymakers involved in shaping educational quality within Nakuru Municipality.

2.3.2 Teaching Methods

The integration of differentiated assessment in secondary schools in South Africa, as emphasized by Nolan and Hoover (2019), goes beyond formal evaluations to include informal classroom observations that aim to evaluate and support individual teachers. This inclusive approach envisions school principals as mentors who actively engage with teachers in collaborative activities such as

lesson planning, co-teaching, and gaining a comprehensive understanding of classroom dynamics. In line with this perspective, Timperley et al. (2019) highlight the potential impact of principals adopting a coaching-by-walking-around style of supervision, which promotes trust-building, mutual learning, and meaningful support for secondary school teachers. This approach acknowledges the significance of hands-on, collaborative practices in enhancing teacher productivity and performance. The introduction of differentiated assessment in secondary schools in Kenya represents a broader educational philosophy that focuses on improving the quality of teaching and learning.

According to Kamau (2019), this pedagogical approach involves a comprehensive strategy that aims to personalize the learning experience for secondary school students. This personalization encompasses various aspects, such as offering different pathways for acquiring knowledge, facilitating the processing and development of ideas, and creating teaching materials. Kamau (2019) notes that it is important to note that the philosophy of differentiated assessment goes beyond the confines of the classroom and includes evaluation and assessment methods.

By acknowledging and accommodating the diverse abilities of students, this approach promotes inclusivity and fairness in the educational environment. It demonstrates a commitment to recognizing and embracing the unique characteristics of learners, fostering their engagement, and ultimately enhancing the overall effectiveness of the educational system. The importance of recognizing the various characteristics present among secondary school students, such as their cultural background, socioeconomic status, language proficiency, gender, motivation levels, and personal interests, emphasizes the necessity for teachers to implement differentiated instruction and assessment methods.

According to Kamau (2019), the primary goals of utilizing these strategies in secondary schools revolve around the development of stimulating tasks that both challenge and enhance the learning experiences of every individual student. By taking into account the multifaceted nature of student diversity, educators can customize their curriculum planning to cater to the distinct needs, interests, and abilities of each student. This approach not only improves the effectiveness of teaching but also contributes to a more inclusive and student-centered educational environment.

2.3.3 Curriculum content

The content, method, product, and educational environment are the bases and metrics for evaluating the adaptability of instructional activities. Here, information gathered from student evaluation outcomes and other screening tool outputs inform the instructional strategy and topic selection. Pre-assessments, according to Kamau (2019), may be used to learn more about each student's areas of comfort, strength, and weakness. This results in differentiation that is suitable and meets the learning requirements and preferences of every secondary school student. Each secondary school student should be guided toward hard but manageable tasks by using the results of these evaluations as a tool to help generate clear and relevant instruction.

Kimeu (2021) discovered in secondary schools in Makueni County that figuring out what secondary school students already know is crucial to differentiated instruction and assessment. This prevents covering material that secondary school students have mastered or using teaching strategies that wouldn't work for secondary school students. According to the researcher mentioned above, the purpose of pre-assessment is to ascertain the secondary-school student's

knowledge, comprehension, and skill before to the unit of study. These are learning evaluations, which can be diagnostic or pre-assessments that the teacher can utilize to assist personalize education for every learner. Stated differently, they are informal and offer teachers and secondary school students meaningful input to address gaps and strengths during the course. However, Kimeu (2021) has not indicated how secondary school teachers address the secondary school students' strengths and needs during instruction when they strategically administer pre-assessments before planning their lessons.

Teachers at secondary levels can identify, locate, and compile appropriate resources as well as decide on timelines and priorities for upcoming units, but Kimeu (2021) has not examined how various types of differentiated appraisal and prior assessments are used to design tasks for students. This is especially relevant when a student may need support, enrichment, or has different learning styles, intelligence, or interests. Further, the above researcher failed to provide evidence that secondary schools using differentiated systems are more effective than those using only the standard clinical approach. These are the research and knowledge gaps that this study sought to address.

2.4 Appraisal of Teachers' Adherence to National Professional Standards and Teacher Productivity

Teacher productivity depends on the extent to which teachers adhere to national professional standards. There is mention of teacher standards, standards for instruction, and teacher standards of excellence, notes Sachs (2016). The term "teacher standards" describes the proficiency levels anticipated of each teacher, either for admission to the teaching profession or for monitoring continued performance. Rather than focusing on specific teachers, the teaching profession is

the focus and scope of educational requirements (Sachs, 2016). The definition of standards varies throughout systems. Coughlin (2016) conducted research in Scotland and discovered that while the terms "competence" and "standards" have very similar meanings, the term "competence" is used more commonly in the professional sector (standards for teachers and school leaders) and in other European or French-speaking nations.

2.4.1 Knowledge of Legal Requirements in Education

The teaching profession is characterized by a multitude of legal obligations and standards that teachers must adhere to. These regulations are essential in shaping the behaviour, duties, and ethical considerations of educators. By complying with these legal requirements, teachers ensure that they maintain the highest level of professionalism, prioritize the well-being of their students, and contribute to the overall integrity of the educational system. Navigating the intricate landscape of legal obligations is a fundamental aspect of being a teacher, and educators must continuously stay updated on the ever-changing legal framework that governs their profession.

This commitment to legal compliance not only reinforces the trust placed in teachers by students, parents, and the community but also enhances the overall effectiveness of the education system. The goals of professional standards' introduction and implementation are intimately related to how they are conceived. Teaching standards aid in improving teacher performance, certifying new teachers or those who have attained a certain status as educators, assessing teacher performance, and assessing and accrediting teacher preparation programs, according to the Centre of Study for Policies and Practices in Education (CEPPE) (2017).

This suggests that there are several goals for professional requirements, all of which need to be stated. Professional standards may have specific goals, but this does not guarantee that they will be comprehended or implemented fairly. This suggests that the purpose of standards is to show the necessary level of competency for entry into the field, maintain that level of competency to guarantee the maintenance of teaching credentials, and foster increased skill and expertise. It also highlights a source of conflict in the development and implementation of these standards and raises concerns about how professional standards should be applied to teachers at all stages of their careers.

In accordance with Clinton, Dinham, Savage, Aston, Dabrowski, Gullikson, Calnin, and Arbour's (2018) evaluation of the Australian Professional Teacher Standards (APTS) implementation in 2015, the program offers a framework and a common national language for self-reflection as well as for giving and receiving helpful criticism on how to improve teaching practice. In a similar vein, an OECD Working Paper by Revai (2018) on standards for professional educators and education for teachers reiterated the usefulness of regulations as legislative instruments by noting that the main benefit of standards is their capacity to promote mutual dialogue among stakeholders as well as between various artifacts (standards requirements, curriculum, course descriptions, accreditation standards, etc.).

A critical component of the policy-making process should involve periodically renegotiating the criteria in light of these discussions and reflections (Revai, 2018). For instance, there are four stages in research done in Australia by the Australian Professional Standards for Teachers (AITSL, 2022): lead, competent, graduate, and highly accomplished.

The National Board for Professional Teaching Standards (NBPTS) in the United States of America establishes the professional requirements for qualified educators (NBPTS, 2018). By using these criteria as the definition of competence for serving teachers with significant experience, these methods aim to resolve the conflict that exists between the standards that define the degree of competence necessary for admission into the profession (Forde & McMahon, 2018). This keeps practice relevant and oriented toward developmental change without slowing it down or stopping it, according to Forde, McMahon, Hamilton, and Murray (2016).

Forde et al. (2016) assert that teachers' professional responsibility is demonstrated by the way they interact with their students and other members of the teaching fraternity. This supports the claims made by Murad (2017) that productive teachers work together with their peers to develop their pedagogical expertise and ultimately increase productivity. This suggests that if teachers' performance is to increase, then teaching must be student-focused.

2.4.2 Upgrade Training

Teachers' professional training plays an important role in equipping teachers with contemporary skills and knowledge to improve their productivity. Thus, appraisal of such upgrade training cannot be ignored. Teaching professionalism is demonstrated by respecting moral principles and allowing colleagues to freely discuss pedagogies. Teachers should adapt their professional methods to problem-solving and decision-making to meet the demands of their learners. Teaching and learning in schools have an impact on social and emotional elements as well as intellectual ones, as noted by Wang and Walberg (2017). McAdamis (2019) conducted a study in Malaysia and found that the goals of standards influence how

they are designed and used later on. As a result, there are contradictions regarding the regulation-development balance, the standards' perceived normative and generative qualities, and the specificity versus genericity of the standards. Therefore, standards represent historical, contemporary, and prospective perceptions of educators and teaching as a profession as well as what is deemed significant and valuable, both openly and implicitly.

Based on a separate investigation conducted by CEPPE (2017), standards define what a person must know and be able to do in order to be deemed competent in a specific (professional or educational) domain. They also serve as a means of describing and communicating what is most worthy or desirable to attain, what constitutes high-quality learning or good practice, and they can be used as benchmarks or measures, which can be used as a tool for decision-making by showing the gap between actual achievements and the minimal performance necessary to be deemed competent. The report emphasizes that generic standards provide a comprehensive overview of effective teaching practices, but they do not delve into the specific application of these practices in various phases of professional growth, student grade levels, or teaching disciplines.

Essentially, these standards offer a foundational framework for good teaching that goes beyond subject-specific or developmental nuances. While generic standards lay the foundation for essential teaching principles, the report suggests that a more customized and context-specific approach may be necessary to address the diverse and evolving needs of students, teachers, and the educational landscape. This recognition highlights the importance of supplementing generic standards with discipline-specific guidelines and considerations to ensure a comprehensive and adaptable framework for evaluating and enhancing teaching practices.

In 2017, a study was conducted that observed a notable shift towards more specific standards. These standards were particularly focused on delineating expected levels of practice based on subject or discipline, grade levels (such as nursery, primary, or secondary), or career stages. However, the study also found that comprehensive standards that integrated all three elements—subject, grade, and career stage—were relatively uncommon. This emerging trend indicates a growing recognition of the necessity for nuanced and context-specific criteria to effectively evaluate teaching performance. Furthermore, the report highlights the dual function of standards.

On one hand, they specify the deemed valuable performance parameters or learning areas. On the other hand, they serve as tools to assess whether the desired outcomes are being achieved. This dual role underscores the importance of aligning standards with both aspirational goals and practical assessments of teaching effectiveness. By doing so, standards can effectively guide and evaluate teaching practices in a meaningful way. In their thesis on professional standards for educators, Taylor and Tyler (2021) observe that this is a reflection of the shift in the broader adoption of standards, leading to the existence of national-level professional standards for educators where none previously existed. However, this has been a recipe for decontextualized, or "reified," standards that are disconnected from the real-world experiences of educators.

Authorities favor general professional norms because they are more politically and technically convenient, claim Taylor and Tyler (2021). The focus has shifted from the quality of the topic of interest (teachers) to the quality of the tool used to audit them (professional standards), according to the author, who also notes another trend in this direction.

In the words of Sachs (2016), while a "one size fits all" set of standards may appeal to governments, it may not be the best option for teachers working in challenging classroom environments, remote locations, or multi-age classrooms, where their effectiveness will be evaluated according to "some idealized notion of what competent or excellent teaching might be." Sachs (2016) argues that standard-setting in all professions needs to be on the lookout for the following potential problems: practice could become stifled by codifying knowledge that fails to recognize legitimate diversity of approaches or advancements in the field; practice could become unduly restricted on grounds unrelated to competence; or candidates might not have equitable access to sufficient learning opportunities to meet standards.

As previously said, Ceulemans (2017) makes the case for the necessity for additional information about the creation of standards. She says that in order for standards to be effective, they must be used by a certain kind of person; otherwise, they are just pieces of paper that nobody is interested in. A standard will have a greater impact the more flexible it can be used. Ceulemans (2017) argues that as individuals start to connect with a standard in their actions and speech, it becomes less noticeable. This suggests that there has been a change in power between the established norm and its user(s).

According to Ceulemans (2017), the ability to exert control is vested in the entities that are subject to the standard. The author emphasizes that the impact of a standard is determined by its association with various methods of implementation, instruments of measurement, procedures of evaluation, and systems of reward and discipline. The argument suggests that the effectiveness of standards is not solely inherent, but rather contingent upon how they are integrated into wider systems.

Essentially, the influence of standards is molded by the mechanisms through which they are put into action, measured, evaluated, and linked to incentives or penalties. This perspective underscores the necessity for a comprehensive and well-coordinated approach to implementing standards, recognizing their interconnectedness with other elements of the educational system.

2.4.3 Requirements of Teaching and Learning

The above-mentioned considerations emphasize the crucial importance of assessing teachers' adherence to professional standards. These evaluations are essential in establishing a solid foundation for fostering trust and control within the field of education. This evaluative process is key in unlocking the potential of educational standards to effectively benefit learners. In essence, national professional standards have become the cornerstone for evaluating teachers' teaching practices, producing ratings that demonstrate a higher level of consistency compared to alternative measures like value-added assessments. This recognition highlights the central role of professional standards in shaping the assessment landscape, contributing to a system that prioritizes reliability, accountability, and the overall improvement of teaching quality.

Wilson, Hallam, Pecheone and Moss (2020) conducted a study in the United States that found standards take into account classroom evidence of secondary school students' learning, and extensive research indicates that standards can predict the value-added effectiveness of secondary school teachers. Stated differently, Wilson et al. (2020) went on to show that national professional standards have contributed to secondary school students' learning experiences being grounded in more reliable methods for assessment. Performance evaluations usually necessitate teachers to record lesson plans and instruction for a unit of

study connected to state standards, modify them for English language learners and special education secondary school students, record and analyze videos of classes, and gather and analyze data demonstrating secondary school students' learning. Put another way, localized teacher performance assessment practice tools have also been adapted to meet professional norms. Analogously, the Cincinnati Public Secondary School has a rigorous standards-based approach for evaluating teachers' performance, which is distinguished by a multi-phase procedure that includes several in-class observations and extensive written comments given to teachers (Taylor & Tyler, 2021).

The same source claims that this all-inclusive system—which is utilized by a number of other nearby districts—has proven successful in producing ratings that fairly represent teachers' contributions to secondary school students' learning achievements. Moreover, it has demonstrated to be crucial in augmenting educators' present-day efficacy and favorably impacting their prospective efficacy. This example underscores the significance of implementing robust standards-based approaches in performance appraisal systems, emphasizing their impact on both accurate assessments and continuous improvement in teaching quality. In line with these claims, a local teacher performance assessment process is utilizing supplementary instruments that are validated against the academic progress of secondary school students and based on professional standards (Bill & Melinda Gates Foundation, 2020).

In this instance, the Measures of Effective Teaching (MET) Project has created a variety of instruments, such as teacher observations or videotapes, which are augmented with additional practice artifacts like lesson plans and assignments, among others, that can be graded in accordance with criteria that represent

methods connected to efficient teaching. The National Board for Professional Teaching Standards (2018) was founded in the United States of America. The Board's objectives are to create and manage a nationwide, voluntary system of teacher licensing and evaluation, set high and strict standards for what qualified teachers ought to understand and be able to do, and promote educational reforms to enhance secondary school students' education in secondary schools across the United States. The purpose of National Board Certification is to supplement state licensing, not to take its place. It is offered freely. Krantz and Fritzén (2017) conducted research in Austria and discovered that there is an increasing interest in the mechanisms by which professional standards for teaching are adopted and put into practice, as well as how standards become authoritative. This has a lot to do with the creation and execution of the process.

According to Krantz and Fritzén (2017), professional standards creation and implementation require input from the teaching profession. Stated differently, a wide range of stakeholders, such as academics and teacher education institutes, are involved in this kind of engagement. According to Krantz and Fritzén (2017), standards can be viewed as either an enforced regulation that limits instructional activities or as a banner and expression of professional identity depending on the type and degree of consultation processes. As was already said, the inclusion of teachers in the creation of professional standards increases their legitimacy and validity. Krantz and Fritzén (2017) did point out a few things that might make putting professional standards into practice difficult.

Changes and disruptions in the execution processes, a lack of clearly defined institutional responsibilities, insufficient focus on creating the conditions necessary for change, and, most importantly, teachers' active or passive resistance

were among the issues noted. This suggests that "good institutional practices" pertaining to the application of professional standards must be determined as a consequence of the investigation. These include a thorough and in-depth consultation process as well as a suitable ratio of pressure to support, with enough pressure to push the system in the direction of improvement and enough support to create the framework and develop the capabilities needed to make this change happen. Stated differently, the realization of this requires a number of factors, such as the development of a support system involving multiple institutions engaged in capacity building; the provision of sufficient resources, including time and the division of labor for the creation of these new capacities (ibid).

Murphy, Seashore Louis, and Symile (2018) found in another study conducted in Colombia that teachers' involvement with professional standards during the assessment process is crucial to how much the standards can be incorporated in practice. Murphy et al. (2018) found that even though the standards appear highly promising on paper, their practical application in professional practice is dependent upon individuals implementing them. Murphy et al. (2018) found that the new standards offer a fresh perspective on leadership and what it means for teachers in the course of their daily work in schools.

In the past, standards would have been carried out formally through the creation of principal preparation programs, accreditation and certification specifications, and recommendations for professional growth. According to Savage and Lewis (2018), an assessment of the ASPT standards' adoption in Australia revealed disparities in the assimilation of the standards and notable variations in the comprehension and implementation of the APST among educational institutions and teachers.

Savage and Lewis (2018) posit that the APST is only "made real" through material practices that are translated and assembled, and that these processes are heavily influenced by the surroundings in which the standards are being implemented, including various fields, jurisdictions, schools, and classrooms. This is because of the characteristics of policy development and enactment. The Board sets advanced criteria for experienced teachers in the United States, whereas state systems set minimal qualifications for new teachers (NBPTS, 2018). The skills of the seasoned teacher are evaluated using performance-based evaluation in comparison to the Board's requirements.

The Board believes that the basic prerequisites for competent teaching are fairly obvious: a solid foundation in the liberal arts and sciences; familiarity with the subjects to be taught, the skills to be developed, and the curriculum arrangements and materials that organize and embody that content; familiarity with both general and subject-specific teaching and assessment techniques; and familiarity with secondary school students and human development. The ability to teach students attending secondary schools from a variety of racial, ethnic, and socioeconomic settings is one of the additional requirements, as is having the capacities, personality traits, and skills to use that knowledge responsibly for the benefit of secondary educational institutions learners (The National Board for Professional Teaching Standards, 2018).

In order to support the conclusions of NBPTS (2018), Marzano and Toch (2021) carried out research to ascertain whether NBPTS certification had any effect on the secondary-school curriculum. A sample of administrators from Ohio secondary educational institutions in rural, suburban, and urban areas were polled by the team of investigators.

Among the administrators were three district superintendents, one county deputy superintendent, one director of staff development, and one director of curriculum. Marzano and Toch (2021) identified the following educational procedures as being of interest: teaching methods, professional growth, hiring practices, career pathways for teachers, teacher involvement in district issues, learning strategies, alignment of the course of study, parental and community involvement, and the achievement of students. One interpretation of the findings was that the NBPTS teachers shown an all-around increased commitment to teaching, concentrated more on best practices and teaching methodology, and incorporated research findings and NBPTS standards into their instruction.

A large number of the administration stated that NBPTS Secondary school teachers assumed a more active leadership position in the district and the educational institutions, as reported by Marzano and Toch (2021). An assessment may be a useful tool for teachers in most Sub-Saharan African nations, but school administrators are frequently untrained in the application of appraisal data to direct teachers toward professional development (Costa & Garmston, 2021). Nonetheless, the basis for decision-making for both the accountability and improvement outcomes of appraisals is the same: trustworthy and legitimate data on the performance of teachers and the learning of the students. Performance improvement and accountability appraisals can coexist in the same system.

In research conducted in Nigeria, Goldrick (2018) claimed that states must create teaching standards, also known as standards for instruction, which define the requirements for high-quality teaching, in order to guarantee justice, fairness, and a shared understanding in the performance of educators rating procedures. According to Goldrick (2018), professional standards ought to expand on the

knowledge of successful teaching techniques, define what constitutes excellent performance, and function as a roadmap for creating the associated elements. These results confirm that standards for secondary-level learners' instruction and expectations for teachers should be aligned. There is general agreement that adequate training is necessary to guarantee that assessors are conversant with the requirements being tested, the documentation that needs to be looked at, and how to properly score the proof presented. Secondary educational institutions in Kenya are no exception (Koops & Winsor, 2019).

According to Koops and Winsor (2019), training is the process of continuously improving one's comprehension of the ways in which professional development and teacher performance assessment procedures may be aligned via the use of standards, metrics, and instruments. This indicates that stakeholders get a deeper comprehension of the goals and standards ingrained in the system through training. It has been shown that evaluating parent-teacher communication inspires teachers, which raises their output. In addition to increasing academic desire, this link has the benefit of improving discipline and lowering the rate of school leavers.

The educational setting and the interactions students have with professionals continually influence their level of participation in the classroom (Aloo & Odongo, 2017). In addition to supporting students' cognitive growth, schools make sure they also help them develop interpersonal and emotional skills. It is the responsibility of educators to use research-based strategies that support students' cognitive, social, and emotional growth in order to improve their academic performance. To help them recognize and potentially meet each student's unique requirements, teachers must also help learners develop these skills.

Kadenyi (2020) asserts that evaluation both evaluates and enhances performance. Evaluation allows for the assessment of job quality, effort, and participation. Raising their hands, responding to questions, and paying attention in class are all examples of participation. Teachers are allowed to choose what and when to focus on the curriculum based on the results of assessment and evaluation. By identifying the learners who are in need, the assessment will group the learners according to their specific needs. Additionally, it helps teachers to recognize students who learn quickly and those who need more attention.

With the help of these comments, educators and worried parents may customize the most effective strategy to improve learners' academic achievement. Kinyua (2021), centered on Makueni County, asserts that in the absence of standards and standards-based metrics, opinion exists instead of proof. Kinyua (2021) said in the same sentence that in the absence of training, evaluations based on sightings and other metrics are determined by the individual rather than by facts. Teachers and evaluators should get training on the criteria and indicators in order to guarantee the legitimacy of the assessment system.

It is imperative that educators and assessors are in agreement about the meaning and practical application of the standards. Nevertheless, considering that several groups have offered standards and that numerous secondary educational institutions have created their own, accepted national standards, or modified standards from another source, Kinyua (2021) did not adequately clarify that there is no national consensus on what the requirements should be.

2.5 Appraisal of Teachers' Portfolios and Teacher Productivity

Teacher portfolios in secondary schools come in a variety of shapes and sizes, each with a distinct function. They can vary from a booklet full of samples of work completed by high school learners and educators, to a few structured items that record specific elements of the teacher's year. Illustrations of the former include recorded parent contacts, assessments and quizzes, instructional materials, and samples of the latter. This is defined by Robinson and Kakela (2018). The goal of these archives of work dictates their form, despite the fact that they may be assembled in a variety of ways and comprise a wide range of objects.

2.5.1 Assessing Availability of Tests and Students' Grades

Tests and students' grades constitute a bigger part of teachers' portfolios to be appraised at all times. For instance, Range, Scherz, Holt, and Young (2018) claimed in a study conducted in the US that a portfolio intended to assess how well students attending secondary schools are assessed and educated in a learning environment would include examples of tests, quizzes, and assignments created by the teacher, logs of the students' grades, samples of the assignments completed by students, and other details regarding the teacher's efficacy. Nevertheless, Range et al. (2018) suggested that a portfolio meant to promote professional growth would include other records that show a teacher's pursuit of knowledge and reflection in addition to a verification of coursework and events for professional growth.

To address the complex and personalized nature of teaching, Toch and Rothman (2019) conducted a study in New Zealand and proposed the implementation of a portfolio-based approach. This approach goes beyond traditional methods of evaluation, such as self-assessment, peer evaluations, and administrative reviews.

Instead, it encourages teachers to include diverse evidence, such as students' essays, lab reports, and other indicators of student learning, within their portfolios. By adopting this approach, teachers can showcase the breadth and depth of their teaching practices, moving away from rigid evaluation methods. The flexibility of the teacher's portfolio allows for a more comprehensive and personalized representation of their contributions to student learning, highlighting the creative freedom that secondary school teachers have in assembling and presenting their portfolios (Toch & Rothman, 2019).

2.5.2 Schemes of Work/Lesson Plans

According to research done in Latin America by Nor, Pihie, and Ali (2020), portfolios are adaptable and diverse, goal-based, and contain samples of work as well as documentation of progress over time. They also allow for reflection, criticism, and advancement. Teacher portfolios, according to Rucinski and Diersling (2020), are a compilation of data on a teacher's practice. Lesson planning, student work, teacher notes, class videotapes, and even official assessments can all be found in a portfolio. This implies that the portfolio can demonstrate what is instructed, how it is instructed, modifications to the teaching approach, the degree of rigor in the teacher's educational requirements, the views of students attending secondary school regarding the educator and their educational experience, and the views of the teacher's colleagues regarding the high-school teacher's work.

Balan, Manko, and Phillips (2017) investigated the effectiveness of portfolios in the evaluation of teacher performance for both professional development and accountability over the course of a multiyear study at a small secondary educational institution in Zimbabwe that had implemented the use of portfolios as

a component of an emerging appraisal system. Administrators discovered that the portfolio-based system was very helpful in recording teachers' output in the areas of professionalism and evaluation, which are difficult for them to see when they visit a classroom. According to Balan et al. (2017), administrators were able to draw more precise conclusions regarding the caliber of teacher performance with the use of portfolios, based on the outcomes of summative assessments. The perspectives of teachers and administrators on the fairness and accuracy of portfolios as tools for measuring performance were emphasized through the integration of survey and focus group data. However, concerns regarding the feasibility of portfolio development arose due to the time-consuming nature of the process (Balan et al., 2017).

Despite these concerns, portfolios were acknowledged for their effectiveness in supporting the accountability objectives of teacher performance appraisal practices. Nevertheless, it was noted that further research is necessary to explore the specific conditions under which portfolios can effectively facilitate professional development. This comprehensive understanding is essential for optimizing the usefulness of portfolios in both assessment and the continuous growth of educators.

In an intensive study carried out in Morocco, Gregory and Ripski (2018) found that when thoughtfully designed, portfolios can foster growth by offering a nuanced picture of instruction as it develops over time, allowing secondary-level learners as well as educators to assess, debate, and consider their academic achievement. An instructional portfolio typically consists of an assortment of instructional artifacts, written reflections, an introduction outlining the principles and objectives of the teacher, and a final portion showcasing proof of ongoing

professional growth and, if accessible, formal appraisals. The format of an instructional portfolio varies amongst secondary educational institutions in Kenya. Kinyua (2021) shed light on a significant contrast in the evaluation of teachers' portfolios, depending on whether they are used for personnel decisions or professional growth. The portfolios intended for personnel decisions undergo a more rigorous examination due to the significant consequences associated with such determinations. This heightened scrutiny has raised various concerns, with flexibility and subjectivity emerging as recurring points of apprehension. It is crucial to delve into these concerns in a nuanced manner, as it not only helps in understanding the complexities of utilizing teacher portfolios but also in navigating the potential challenges that come with their multifaceted applications. A deeper exploration of these concerns can provide valuable insights for improving the use of teacher portfolios for different purposes, thereby enhancing informed practices in both personnel evaluations and professional development.

2.5.3 Contacts of Parents

In the Makueni County context, teachers' portfolios hold more significance than just evaluating their academic competence. They serve as a comprehensive tool to assess teachers' broader engagement with various education stakeholders. According to Kinyua (2021), these portfolios provide a lens to examine educators' capabilities in fostering collaboration with parents, their proficiency in creating question banks, their adeptness in managing students' grades, and their preparation of essential professional instruments such as schemes of work, records of work, lesson plans, and lesson notes. In essence, teachers' portfolios are a dynamic medium that not only measures academic prowess but also encompasses the multifaceted responsibilities and skills essential for effective teaching practices.

A portfolio is often used in conjunction with other forms of genuine evaluations because it focuses on a meaningful collection of high-school the accomplishments of learners as well as significant deliberation and valuation of that work, rather than using scores from tests to tell a student's story. However, using teaching portfolios effectively in the appraisal of teaching, both to inform and improve practice and for making personnel decisions, has its own set of problems. Kinyua (2021) has not indicated how secondary schools review a portfolio and what kind of rationale arguments are made in reaching final assessments of the quality of teaching documented therein.

2.6 Appraisal of Teachers' Participation in Co-curricular Activities and Teacher Productivity

In the realm of education, the academic curriculum serves as the fundamental program provided to students, serving as the foundation of their academic journey. However, the educational experience of a student surpasses the boundaries of conventional coursework. According to Habber (2017), co-curricular activities offer an additional dimension to the learning environment. These activities, which are often voluntary for both students and teachers, encompass a wide range of endeavors such as sports, music, debates, Model United Nations participation, community service initiatives, and religious study groups.

Essentially, co-curricular activities contribute to a comprehensive educational experience by promoting personal development, teamwork, and a sense of community involvement. The significance of co-curricular activities in educational institutions is highlighted by their crucial role in promoting comprehensive development, encompassing physical, mental, social, and emotional growth among high school students.

According to La Torre and Gwynne (2018), engagement in co-curricular pursuits acts as a means to foster unity within the diverse fabric of school communities, serving as a bridge that transcends racial and cultural disparities. Furthermore, the authors argue that co-curricular activities offer a priceless platform for the cultivation of transferable skills among students. This comprehensive approach to education aligns with the broader objective of molding well-rounded individuals capable of navigating various challenges in both academic and real-life settings.

2.6.1 Organizing Co-curricular Activities for Students

There are many different kinds of activities that may be categorized as co-curricular in learning institutions and other educational settings. According to Sikkha and Agnihotri (2019), instructional designers worldwide present a variety of classes that are offered at educational institutions. They stated that a great deal of institutions of learning provide sports, theater, and music as co-curricular activities, but additional options such as field trips, science-related outings, and volunteer work might also be offered. There are a minimum of seven classes of co-curricular activities, according to Verma (2020). These include, among other things, intellectual, social, psychomotor, cultural, physical, and recreational activities; picnics and outings; and civic development activities (Verma, 2020).

Students gain a great deal by participating in co-curricular athletics and fitness programs in addition to their regular physical education classes. The Centers for Disease Control (2020) observed that physical activity for physical development helps learners develop strong bones, helps them maintain a healthy weight, prevents the occurrence of diseases like high blood pressure while lowering the incidence of depression, and helps participants develop an active way of life. According to Siedentop (2020), physical development activities help children

develop their motor skills, facilitate normal social and physical developmental milestones, strengthen interacting with others, self-esteem, self-perception, and psychological well-being, as well as lay the groundwork for a healthy lifestyle and a lifetime commitment to physical activity. According to Siedentop (2020), games that foster intellectual growth, like Monopoly and chess and Scrabble, are classified as co-curricular activities. When offering co-curricular activities, schools deal with a variety of problems. According to Morgan and Hansen (2021), there are obstacles in place in schools that prevent teachers from offering co-curricular activities. These obstacles can be categorized as institutional, which means they are beyond the teachers' control, or teacher-related, which means they are a result of the behaviour of the teachers.

Tschannen-Moran and Woolfolk (2021) assert that in Australia, the curriculum for sports is seen as complimentary to the curriculum, since both are essential to the development of a well-rounded individual on the physical, emotional, spiritual, and intellectual levels. A person's growth is therefore influenced by co-curricular activities, either directly or indirectly. Nevertheless, the introduction of co-curricular activities cannot be as successful if teachers are not able to evaluate their students' participation in them. The process of evaluating the co-curricular process entails communication between those in charge and those who take part in it.

The researcher added that co-curricular activity evaluation is still relatively young in comparison to other disciplines of study. It is a subfield of physical education, which is an older discipline. Nonetheless, professional co-curricular pursuits, facility appraisals, event appraisals, and other areas are now included in the assessment of co-curricular activities.

Put differently, it is crucial that co-curricular activity managers fully comprehend the significance of efficient and successful evaluation. The degree to which students and their coaches perform in co-curricular activities is mostly determined by how well the teacher collaborates with them and meets their requirements. They go on to say that the right choices and actions made by individuals in charge of overseeing co-curricular activities determine whether or not they succeed in realizing effective teacher productivity in secondary schools. These claims support the idea that, in almost every country, the evaluation of co-curricular activities serves as the foundation or cornerstone for their growth. In order to successfully support productivity among educators in secondary schools, this element is in charge of organizing, planning, directing, and managing the necessary inputs into various co-curricular activities.

Co-curricular activities play a crucial role in the comprehensive development of secondary school students within the educational framework. Despite their acknowledged importance in legislation, as highlighted in Vaisdy's (2021) study conducted in Asia, the actual implementation of these activities presents a different scenario. The practical execution of co-curricular activities has significantly declined to a mere 20%, which sharply contrasts with their legal recognition at 73%. This disparity poses a significant threat to the very existence of these activities.

Furthermore, Ashok's (2021) research conducted in Nepalese secondary schools further emphasizes this issue by revealing that co-curricular activities are often treated as occasional and optional rather than being integrated into a structured and organized program. This stark misalignment between theoretical recognition and practical application necessitates a reassessment of the current approach to co-

curricular activities, highlighting the importance of a more deliberate, consistent, and inclusive integration within the educational system. Addressing this gap has the potential to unlock numerous benefits offered by co-curricular activities, not only fostering academic growth but also promoting unity among students and nurturing essential life skills.

2.6.2 Planning and Selection of Co-curricular Activities

Evaluation of co-curricular activities is seen as essential to secondary school teacher productivity in the majority of Sub-Saharan African nations. However, much preparation and selection must be done in order to evaluate teachers' involvement in co-curricular activities. Effective evaluation of co-curricular activities is a fundamental secondary school activity that is crucial to children's well-being and both a need and a right, according to Ghanaian (Dzansi, 2019).

Co-curricular pursuits ought to be joyful, fervent, impromptu, self-initiated, and aimless since the process itself matters more than the result. This implies that children's play-related experiences—such as doing, exploring, learning, failing, and succeeding—have more significance. Dzansi (2019) also discovered that well-managed co-curricular activities improve kids' associations with a variety of enjoyable activities, which supports their physical, mental, and social growth, as well as their capacity for creative thought and problem-solving.

Dzansi (2019) persisted in stating that in order to effectively assess the outdoor play environment, it should be improved to provide a range of affordances that can arouse players' senses and develop their cognitive abilities. Children have the opportunity to play in an energetic and creative way in the outside setting, which also provides a social space for them to interact with peers. Co-curricular activities have become ingrained in Nigerian society, as they have in many other

countries around the globe. Co-curricular activities have received a lot of media attention. According to Morakinyo (2020), co-curricular activities are a social phenomenon that have evolved from their modest origins as a recreational and entertainment activity to become a noticeable and significant business phenomenon that is irresistible in the social, political, and economic spheres of any country. This is true for the majority of East African nations.

For instance, UNICEF (2021) launched a nationwide BECCAD program in Uganda, which promoted children's empowerment by equipping them with skills to examine potential obstacles and demands of everyday life. Schools prioritize class work above co-curricular activities like sports and games, according to a baseline UNICEF (2021) study on life skills among secondary school students in Uganda. It was also discovered that staff meetings were only focused on raising educational standards, staff welfare, and punishment; no discussion whatsoever was given to how to develop kids' abilities and talents. This was due to the already packed secondary-level curriculum in Uganda, which left no time or room for integrating LSE through co-curricular activities.

While most teachers struggled to arrange co-curricular activities that taught life skills, a small number of them had minimal experience with participatory teaching and learning (ibid). Co-curricular activities are divided into two groups in secondary schools in Kenya: term one activities and term two activities. Only academically focused events, such as study symposiums and field trips, are encouraged during term three. According to UNICEF (2021), debates, science conferences, and math competitions are the only events in Kenya that are recognized for fostering intellectual growth. Due to the high cost and manpower required for oversight of these sorts of activities, very few schools engage in them.

Wax (2021) suggests that the Kenyan government allocates a significant portion of its budget to education in recognition of these difficulties. These monies are utilized to support capacity building, teacher salary payments, and the acquisition of instructional materials. According to Otieno (2021), the government had previously considered assigning schools a score based on how well they performed in co-curricular activities; in 2013, over \$400 million had been allocated to these programs.

Wangai (2021) also observed that the performance of co-curricular activities was impacted by teachers' involvement in them. Through the Kenya Institute of Curriculum Development, the Ministry of Education in Kenya has not lagged behind in creating a curriculum that emphasizes a thematic learning approach and aims to provide students with critical psycho-social skills through a range of educational initiatives, including co-curricular activities. The study conducted by Kimeu (2021) on the involvement of teachers in co-curricular activities offers significant insights into the transforming potential of these activities for secondary school students. These co-curricular pursuits are essential for developing critical thinking, creative thinking, and problem-solving abilities.

By adopting a holistic approach to education, these activities empower students to transition from dependence to independence, allowing them to explore and unleash their innate talents. The significance of co-curricular activities in inner-city secondary schools, as highlighted by YESA (2015), lies in their proven positive effects on students. This highlights the need to acknowledge and appreciate the multifaceted contributions of co-curricular activities to the overall development and growth of secondary school students. These co-curricular activities are uncommon in Makueni County, but they might enhance students'

educational experiences, provide them a chance to get active in the community, and help them socialize with other students. The fact that this commitment extends to wider aspects of community life suggests that the main objective of co-curricular activities is to benefit each individual student, the school, and the larger community (Uwezo, 2017). Secondary educational institution design, which includes age-graded classrooms, uniform schedules, co-curricular activities, and teacher expectations, generally promotes sameness.

Wafula's (2019) observation brings attention to a significant obstacle in education policy and institutional practices. Often, there is an expectation for principals and students to conform to a standardized set of best practices without considering the unique contexts of individual schools. This approach promotes a sense of uniformity in secondary schools, disregarding the diverse environments that contribute to the distinctiveness of each school. By prioritizing conformity to an ideal norm, the inherent differences in surroundings are overshadowed, hindering the recognition of each school's character and challenges.

Additionally, the widespread use of an academic grid as a universal measure for school evaluations further reinforces the notion that all problems have one solution, potentially neglecting the known factors that contribute to the success or challenges faced by different schools. This raises inquiries about the necessity for educational policies and practices that are more sensitive to context and flexible, acknowledging and accommodating the unique characteristics of each school setting. The educational program is given exceptional priority as a result of the need for uniform academic performance (Wafula, 2019). High-school administrators, like other school administrators, are always challenged to enhance their educational offerings in order to maintain and enhance their track record for

overall success. Although co-curricular activities have been shown to benefit Makueni County students more than other activities, they have never been perceived as having a significant role in the lives of students and are thus not included in the secondary school educational program (Kimeu, 2021). Academically focused disciplines have received a lot of attention, whereas co-curricular activities that are not covered in the syllabus are neglected.

The primary focus of school administrators on covering the syllabus to improve student performance often leads to the belief that co-curricular activities may act as distractions, potentially endangering academic achievements and posing a risk to overall student performance. This prevailing mindset implies a prioritization of academic success over holistic development, resulting in students' abilities being inadequately explored and, in some cases, completely undiscovered. However, the effectiveness and impact of this perspective, particularly concerning the evaluation of co-curricular activities, are areas that require further investigation.

This prompts a critical examination of the extent to which assessing and acknowledging teachers' efforts in facilitating co-curricular engagements contribute to overall teacher effectiveness in secondary schools. This raises important questions about the balance between academic and holistic development, emphasizing the need for a more comprehensive and nuanced approach to evaluating teachers that recognizes the multifaceted roles educators play in shaping the overall growth and well-being of their students.

2.7 Summary of Literature Review and Research Gaps

The examination of the literature has shown how important teacher evaluations are to teacher productivity. Consequently, the notion of instructional productivity in secondary educational institutions, the notion of teacher performance

evaluation procedures, and the impact of evaluating teachers' distinguished equipment, adherence to national professional guidelines, portfolios, and co-curricular activities on teachers' productivity in secondary educational institutions form the basis of the literature review for this investigation. But many holes have been found, as the study has shown. Regarding the evaluation of teachers' distinguished instruments, Kimeu's (2021) inquiry and other reviewed studies have not provided information on how teachers address the needs and strengths of secondary school students during instruction when they effectively administer pre-assessments prior to lesson planning.

Teachers are able to identify, locate, and gather relevant resources as well as choose timelines and priorities for upcoming units, but the research articles reviewed have not explained how various forms of differentiated evaluation and preliminary assessments are utilized in developing learners and their tasks, especially when a student may need support, enrichment, or have distinct styles of learning, intelligence, or interests. Furthermore, there is little proof from the empirical research that secondary educational institutions with differentiated systems perform better than those that just employ the conventional therapeutic method.

Regarding compliance with national professional requirements, the research conducted by Kinyua (2021) did not show that there is a lack of agreement at the national level regarding standards that ought to be followed, considering that the majority of secondary educational institutions have either created their own standards, adopted national standards, or modified standards from another source of information. Regarding the evaluation of teachers' portfolios, a Kinyua (2021) research did not specify how secondary schools examine a portfolio or what kinds

of justifications are used to arrive at conclusions about the caliber of instruction recorded in it. According to Kimeu's (2021) evaluation of teachers' involvement in co-curricular activities, a significant amount of time has been devoted to academically focused subjects, leaving out co-curricular activities that are not included in the curriculum. The majority of school administrators place a strong emphasis on covering the curriculum in order to improve students' performance. They believe that co-curricular activities distract students from their studies and pose a risk to their grades, leaving their potential partially or even entirely untapped. Yet, as Kimeu (2021) and other empirical research have not examined the extent to which teacher productivity in secondary schools has been impacted by the evaluation of such co-curricular activities, there is still more work to be done. These were the research voids that the investigation aimed to fill.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter defines the research methodology that was used to carry out the study. It emphasizes on the research design, location of the study, target population, sample size, sampling techniques, research instruments, piloting of research instruments, reliability and validity, data collection techniques, data analysis, logistical as well as ethical considerations.

3.1 Research Methodology

The investigation used a mixed technique that included qualitative and quantitative techniques. This strategy worked well since the study collected and analyzed data that was in single research, both quantitative as well as qualitative. The investigator in this study utilized the advantages of both forms of methodologies to support one another. Creswell (2014) states that the quantitative approach involves the researcher posing targeted questions to a large sample size and gathering quantitative data from them. In this instance, questionnaires were used to gather data. Simultaneously, qualitative data was gathered mostly through participant word-of-mouth interviews and by depending on participant perspectives. In this instance, interview guidelines were used to gather data.

3.2 Research Design

The study adopted concurrent triangulation research design since it is a single-phase design so that both quantitative and qualitative methods were used. This provided a greater understanding of the study topic (Creswell, 2014). The strategy involved contemporaneous, nonetheless unique, collecting and analyzing of both quantitative and qualitative information (Creswell, 2014).

By combining the disparate findings in the comprehension, the investigator was able to combine the two data sets. Because it allowed the investigator to gather and examine data that was qualitative as well as quantitative, this design was appropriate for this investigation.

3.3 Location of Study

This investigation was carried out in Makueni County, which has a population density of 124 people per square kilometer (KNBS, 2019) with an area coverage of 8,008.9 km² and a population of 987,653. Appendix VIII has a map of Makueni County. The county is located between longitudes 37⁰ 10' and 38⁰ 30' East and latitudes 1⁰ 35' and 2⁰ 59' South. The climate is typically arid or semi-arid. The majority of Makueni County is made up of vast, arid lower lands, with the two notable highlands being Kilungu and Mbooni. The primary industries in this county are the sand, charcoal, and subsistence farming.

There are 9 sub-counties within the county: Kilungu, Mukaa, Kibwezi, Makueni, Makindu, Kathonzweni, Mbooni West, Mbooni East, and Nzau. The location under question is situated in Kenya's lower southeast. It shares boundaries with the counties of Taita Taveta in the south, Kitui in the east, Kajiado in the west, and Machakos in the north. At Wote Town, about 140 kilometers outside Nairobi, is where it is headquartered. The county is home to a number of private and public schools, as well as national and sub-county schools, as well as schools for boys and girls. According to MoE statistics, there are 393 public secondary schools in Makueni County that are now registered (MoE Makueni County, 2022). Because of the low productivity of educators in many of the county's public secondary schools as previously mentioned the study was carried out in Makueni County. Kimayu (2018) reports that 59.3% of learners in Makueni County's governmental

secondary educational institutions receive bad marks on both internal and external exams, hence the choice of Makueni County as the study site.

3.4 Target Population

As indicated in Table 3.1, the target population consisted of 3813 participants, or 393 principals as well as 3420 teachers from the 393 public secondary schools in Makueni County;

Table 3.1: Target Population of the Study

Respondents	Target Population
Principals	393
Teachers	3420
Total	3813

Source: Makueni County Education Office (2023)

3.5 Sampling and Sampling Techniques

The study outlined the methods for determining the sample size as well as the sampling strategies that were used in this part. The number of samples needed for this investigation was determined by the researcher using Yamane's Formula (1967). This was appropriate because it produced an exact, limited sample size that, with a high degree of certainty, was representative according to a finite population in question. The steps are displayed as follows:

$$n = \frac{N}{1 + N (e^2)}$$

Where n is the intended sample size at the 95% confidence interval.

N = Target Population e = Error margin at 5% (or 0.05 in decimal notation)

Therefore, the intended sample was:

$$n = \frac{3813}{1 + 3813(0.05)^2}$$

$$n = 362 \text{ subjects}$$

All nine of Makueni County's sub-counties' public secondary schools were sampled using stratified sampling. Using simple random sampling, at least four public secondary schools were chosen from each of the sub-counties to prevent bias, guarantee homogeneity, uniformity in behaviour, and a high degree of proportionate representation. From among the 39 public secondary schools that were sampled, purposive sampling was used to choose 39 principals, taking into account schools that had recorded both excellent and poor academic grades during the previous five years. From each sub-county, at least 35 teachers were selected using simple random sampling technique to avoid bias and favouritism. This procedure realized a sample size of 39 principals and 323 teachers as shown in Table 3.2;

Table 3.2: Sampling Grid

Respondents	Target Population	Sample Size	Sampling Method
Principals	393	39	Purposive sampling
Teachers	3420	323	Simple random sampling
Total	3813	362	

Source: Researcher (2023)

3.6 Research Instruments

These are the instruments that were employed to collect data on the particular set of themes. These were questionnaires for teachers and interviews for principals.

3.6.1 Questionnaire for Secondary School Teachers

To get quantitative data from teachers, the study used questionnaires with closed-ended questions (Appendix III). This is because, according to Morse (2010), a survey is a type of investigation instrument that entails asking a series of inquiries together with additional prompts in order to gather information from respondents. Often, statistical analysis of the replies is considered while creating it. The questionnaires were designed with six sections to collect information on the

different research aspects. Data on the participant's gender and level of education were among the demographic information gathered in the questionnaire's first section. Section B captured data on teacher productivity; section C captured data on appraisal of teachers' differentiated instruments; section D contained information on appraisal of teachers' adherence to national professional standards; while section F recorded information about teachers' involvement in co-curricular activities, section E collected information on the evaluation of teachers' portfolios. Since the Likert scale, as defined by Creswell (2014), represents a scale with allegedly equal intervals across responses, test items including 5-point Likert-type inquiries determined that the investigation's objectives were appropriate.

3.6.2 Interview Guide for Principals

Morse (2010) states that there are four types of interviews: directed, non-directional, organized, and unstructured. In order to collect qualitative data from principals for this study, the researcher employed structured interview guidelines containing unrestricted test items (Appendix IV). Just like questionnaires, the interview guide also had six sections. Section A collected demographic information about respondents' gender and level of education whereas sections B to F captured information on the study variables, but unlike questionnaires, interview test items were open-ended.

In other words, section B captured data on teacher productivity; section C captured data on appraisal of teachers' differentiated instruments; section D contained information on appraisal of teachers' adherence to national professional standards; Section E gathered information of appraisal of teachers' portfolios whereas section F captured information of appraisal of educators' involvement in co-curricular pursuits.

Structured interviews played a crucial role in this investigation as they allowed the investigator to provide insightful follow-up questions that aligned with the investigation's goals.

3.7 Piloting of Research Instruments

The pilot study was undertaken among 36 respondents from a sample of 12 secondary schools in the neighboring Machakos County. As per Kothari (2005), 10% of the study sample should be included in the pilot sample. In this instance, the 36 responders came from 10.0% of 362. This is because Machakos County possesses the same arid and semi-arid (ASAL) geographical features as Makueni County and has more or less similar instances of low teacher productivity. Piloting was done to ensure that the language used, the relevancy of the information sought, and the suitability and lucidity of the queries on the instruments were all suitable.

The study instruments were pre-tested using the piloting data to confirm and validate their dependability. It also foresaw issues or difficulties that the respondents would run into, such time management for gathering data and interpreting the surveys. In addition, the interview schedules were given trial runs to ensure that questions are worded and draw an appropriate range of responses which assisted the researcher to identify areas of revision. To ensure that the questions were worded correctly and produced a variety of responses that would aid the researcher in identifying areas that required revision, trial runs of the guides for interviewing were also carried out.

3.7.1 Validity

Multiple techniques of gathering data was triangulated in order to verify the validity of the study instruments. The instruments' internal validity was increased

by using this technique. This entailed an evaluation of the tools by specialists in the field of inquiry. The specialists examined and questioned the approaches and interpretations. The researcher included specialists in school administration in this investigation. The instruments were revised in light of their feedback, opinions, and ideas. The investigator created statements according to the objectives of the investigation to ensure the numerical validity of the investigation's instruments. This was achieved by ensuring that the inquiries made sense in relation to the objectives while enhancing elements of the study.

3.7.2 Reliability

This was established using the split-half approach. In this instance, the test items were given to participants once during the pilot research, and the outcomes were split into two equal halves, or "halves." Utilizing the Cronbach Alpha Method, the dependability index amongst the two "halves" was determined. The scale's test items' internal consistency increased with the Cronbach Alpha Coefficient's proximity to 1. The investigation yielded a reliability index of $r = 0.728$, which was deemed satisfactory and suggested strong internal dependability. This supports the assertions of Creswell (2014) who opines that a reliability index of 0.7 and above is acceptable.

3.8 Data Collection Procedures

Once the necessary research permits were obtained, the researcher scheduled appointments with the respondents to administer questionnaires and conduct interviews. Two research assistants, who had undergone a five-day training, assisted in administering the questionnaires and collecting the data. The completed questionnaires were securely stored for data analysis, while the interviews were conducted simultaneously to gather information from the

respondents. The acquired raw data was organized for convenient access. Computer printouts were recorded once the data was evaluated, and electronic copies were kept on CDs and flash drives. Computer credentials were created to restrict utilization of data in order to protect it.

3.9 Data Analysis

In data analysis, identifying recurrent themes was the first step. The pertinent data was distilled into words or sentences, each of which stood for a unique concept. The responses supplied for the closed-ended inquiries have labels and codes on them. To create a profile of the respondents, frequency counts of the replies were acquired. In order to achieve the study's goals, qualitative data was subjected to theme analysis and narrative presentation. The Statistical Packages for Social Science (SPSS Version 27) were utilized to analyze quantitative data inferentially using Pearson's Product Moment Correlation and Multiple Linear Regression Analysis, as well as descriptively using frequencies and percentages. The purpose of this analysis was to test hypotheses about the relationship between teacher productivity and various performance appraisal practices at a 95.0% confidence interval ($\alpha = 0.05$). Additionally, the data was presented using tables.

3.10 Logistical and Ethical Considerations

In this section, the study outlines the logistical and ethical considerations that were followed and adhered to.

3.10.1 Logistical Considerations

The researcher requested an introductory letter from the Graduate School of Machakos University, as well as an Authorization Letter and Research Permit from the National Commission for Science, Technology and Innovation

(NACOSTI). Additionally, the researcher sought an authorization letter from the County Commissioner and County Director of Education in Makueni.

3.10.2 Ethical Considerations

Ethics in research involves describing the goals of the research and the conditions for participants, as well as how informed permission was acquired and anonymity was maintained. For instance, the investigator guaranteed the confidentiality of whatever data provided by the participants regarding their individual or private lives. The respondents received guarantees that no written or spoken communication would reveal any personally identifying information about them. The responders received assurances that the data they submitted would be utilized exclusively for the intended purpose. The responders were given the investigator's word that their identity would not be disclosed in any way. Moreover, no written or other correspondence would reveal any information that may be used to identify the individual or the business.

The purpose and scope of the investigation were explained to the respondents. In order for the respondents to voluntarily participate, the investigator had to explain to them the process that would be undertaken during the data collecting. The researcher asked those who participated, who had to sign consent forms. The researcher maintained a professional appearance and demonstrated appropriate behaviour both before and after engaging with the participants in the participating schools in the study. The researcher upheld utmost decorum, which was an appropriate code of conduct expected during the research. To assure the investigation's originality and distinctiveness, it made sure that no material was taken verbatim from additional sources. In order to do this, the degree of resemblance between the thesis and the program Turnitin was tested.

CHAPTER FOUR
PRESENTATION OF FINDINGS, INTERPRETATIONS AND
DISCUSSION

4.0 Introduction

The study's findings are presented in this chapter, organized according to the four research questions that were addressed. However, the first section includes demographic information about the respondents, as it may be relevant for interpreting the provided data. Within this chapter, the study's findings are presented in a manner that aligns with the four research questions it aimed to address. However, the initial section focuses on presenting demographic information about the respondents, as it holds potential significance in interpreting the data they provided.

4.1 Response Rate

In this research, a total of 323 questionnaires were distributed to teachers, with 296 questionnaires being completed and returned. Additionally, the researcher conducted interviews with 31 principals. The response rates for both the questionnaires and interviews are presented in Table 4.1.

Table 4.1: Response Rates

Respondents	Sampled Respondents	Those Who Participated	Achieved Return Rate (%)
Principals	39	31	79.5
Teachers	323	296	91.6
Total	362	327	90.3

According to Table 4.1, the proportion of response rate for principals was 79.5%, while the response rate for teachers was 91.6%. This resulted in an average response rate of 90.3%, supporting Creswell's (2014) claims that a rate of

response more than 75.0% is sufficient and at an appropriate level to enable the results to be generalized to the intended population.

4.2 Respondents' Demographic Information

The study tools collected respondents' demographics. Gender and educational attainment were among them.

4.2.1 Gender of the Respondents

Data on the respondents' distribution according to gender was gathered, and Table 4.2 presents the findings:

Table 4.2: Distribution of Principals and Teachers by Gender

Gender	Principals		Teachers	
	f	%	f	%
Male	18	58.1	162	54.7
Female	13	41.9	134	45.3
Total	31	100.0	296	100.0

Table 4.2 shows that 13 (41.9%) of the principals were female, while just over half or 18(58.1%), were male. In a similar vein, 162 teachers or 54.7% of the total, were men, while 134 educators, or 45.3%, were women. These findings show that gender parity was maintained throughout the study at all relevant levels and that both male and female stakeholders are concerned about the impact of performance assessment procedures on the productivity of educators in public secondary schools.

4.2.2 Respondents' Level of Education

The instruments used for the study also collected data on principals' as well as teachers' levels of education because this factor may have an impact on their capacity to provide accurate details on the study's goals. Findings are displayed in Table 4.3;

Table 4.3: Level of Education of Principals and Teachers

Levels of Education	Principals		Teachers	
	f	%	f	%
Diploma	3	9.7	21	7.1
Bachelors' Degree	22	70.9	255	86.1
Postgraduate	6	19.4	20	6.8
Total	31	100.0	296	100.0

Table 4.3 demonstrates that the majority of principals, 22(70.9%), held Bachelor's degrees, 6(19.4%) had postgraduate qualifications, and only 3(9.7%) had Diplomas. Likewise, most teachers, 255(86.1%), possessed Bachelor's degrees, 21(7.1%) had diplomas, and 20(6.8%) had postgraduate qualifications. This data indicates that the respondents had the necessary qualifications to address the research questions concerning the influence of performance appraisal practices on teacher productivity in public secondary schools.

4.3 Teacher Productivity in Public Secondary Schools

The study sought to assess the productivity of teachers in Makueni County's public secondary schools. This was evaluated by looking at how frequently teachers completed the syllabus on time and how well students performed in KCSE between 2018 and 2022 (mean points). Results are shown in Table 4.4.

Table 4.4: Frequency of Syllabus Coverage by Teachers

Frequency of Timely Syllabus Coverage by Teachers	Number of Teachers	
	f	%
Often	25	29.4
Rarely	47	55.3
Never	13	15.3

Table 4.4 demonstrates that while 11.3% of teachers never cover the course on time, 45.9% of teachers do so seldom.

Principals who participated in the interviews also mentioned that most teachers don't finish the course on time. Noted Principal, P1;

I have witnessed instances at my school where teachers fail to provide students enough time for review by not covering the entire curriculum.

These results support the claims made by Fullan and Langworthy (2014) that recognition that successful strategies for timely syllabus coverage for enhancing teacher quality are not limited to specific regions but can be identified and adapted globally. According to Fullan and Langworthy (2014), this perspective aligns with the understanding that education is a collaborative endeavor with shared challenges and aspirations that transcend geographical boundaries. These findings are also consistent with the assertions of Babalola (2018) that teacher productivity entails syllabus coverage. This suggests that there are two ways to quantify productivity: in monetary terms or in terms of tangible outputs per unit of labor time.

Babalola (2018) goes on to say that assessing the outcomes a school system achieves for a particular amount of input is helpful when discussing increased productivity. These results provide additional support for Hofman and ve Hofman's (2015) claims that a performing or proficient educator in the Netherlands is one who can efficiently cover the school's syllabus and impart excellent instruction in a given topic; in other words, a teacher who believes they can positively impact students' academic performance and who perceives their own competency in teaching. After gathering and examining data on syllabus covering, the investigator went on to evaluate KCSE performance over the previous five years (2018–2022) as a measure of educator productivity. Findings are displayed in Table 4.5;

Table 4.5: KCSE Performance in Public Secondary Schools in Makueni County (Mean scores) between 2018 and 2022

KCSE Results in Mean Score (Points)	Years of Examination				
	2018 %	2019 %	2020 %	2021 %	2022 %
1-2.9 points (Poor)	40.2	43.5	44.2	47.3	48.9
3-4.9 points (Below Average)	36.9	35.1	34.9	33.5	32.5
5-6.9 points (Fair)	15.4	15.1	14.8	13.7	13.4
7-8.9 points (Good)	5.3	4.4	4.3	3.8	3.6
9-11.9 points (Excellent)	2.2	1.9	1.8	1.7	1.6

Table 4.5 indicates that 40.2% of public secondary schools in 2018 had mean KCSE scores between 1-2.9, 36.9% between 3-4.9, 15.4% between 5-6.9, and 5.3% between 7-9 points, while an abominable 2.2% of secondary institutions received scores between 9-11.9. In the years that have thereafter followed, the results continued to be declining. For instance, Table 4.5 shows that in 2019, 43.5% of secondary educational institutions obtained a rating in the range of 1-2.9 points, 35.1% obtained a rating in the range of 3-5 points, 15.1% received a score between 5-7 points, 4.4% received a score between 7-8.9 points, and 1.9% received a score between 9-11.9 points in the KCSE. In 2020, the KCSE results for secondary schools showed that 44.2% of them received between 1-3 points, 34.9% received between 3-5 points, 14.8% received between 5-7 points, 4.3% received between 7-8.9 scores, and 1.8% received between 9-11.9 points.

Table 4.5 further shows that 47.3% score on the KCSE was obtained by secondary educational institutions between 1-2.9 mean points in 2021, 33.5% received a score between 3-4.9 mean points, 13.7% received a score between 5-6.9 mean points, 3.8% received a score between 7-8.9 mean points, and 1.7% received a score between 9-11.9 mean points.

According to a similar pattern, in the KCSE in 2022, 48.9% of secondary schools received a score between 1-3 mean points, 32.5% received a score between 3-4.9 mean points, 13.4% received a score between 5-6.9 mean points, 3.6% received a score between 7-8.9 mean points, and 1.6% received a score between 9-11.9 mean points. These results support the claims made by Babalola (2018) that generating students with high scores on internal and external exams is a necessary component of teacher productivity. Conversely, these results support the opinions of Onuma (2016), who said that low productivity among educators in Nigeria has a negative impact on students' educational achievements, including repeat, learning abilities, and dropout rates.

This is also consistent with a study conducted by Ndlovu (2019) that found that 64.9% of prospective employees failed the English Language portion of the Senior School Certificate Examination (SSCE) in 2015 in South Africa, and only 9.71% passed with grades ranging from A1 to C6. With a startling 50.35% of applicants failing, the situation in mathematics was even more concerning. The percentage of students failing English language in the following years showed a cyclical pattern: 64%, 42.6%, and 33.8% of students failed in 2016, 2017, and 2018, consecutively (Ndlovu, 2019). These findings corroborate those of Kimayu (2018), who studied in Makueni County and discovered that 59.3% of students enrolled in state-funded secondary educational institutions do poorly on national examinations.

This is also in line with the results of a MoE (2023) study, which showed that Makueni County students' KCSE performance has been declining. In conclusion, these results indicate that low teacher productivity in secondary schools that were publicly funded is becoming an issue.

According to the investigation's findings, many teachers rarely cover syllabus in time, which has led to students performing poorly in national exams.

4.4 Appraisal of Teachers' Differentiated Instruments and Teacher Productivity

The study sought to determine how teacher productivity in public secondary schools is impacted by the appraisal of their differentiated instruments. This focused on appraisal of teaching methods, mastery of curriculum content and real-life skills. Results are presented in Table 4.6;

Table 4.6: Teachers' Views on Influence of Appraisal of Teaching Methods on Teacher Productivity

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
Teachers apply experiments or hands-on teaching approach that is often appraised as a way of improving their productivity	41.6	37.2	7.8	4.4	5.7
Appraising teachers' ability to adopt cooperative learning method has improved their productivity	47.3	34.5	4.1	3	39
In public secondary schools, teachers are appraised on the ability to create conducive learning environment as a way of improving their productivity	54.4	44.3	1.3	0.0	0.0
Teachers utilize teaching and learning resources during instruction though is rarely appraised to improve their productivity	8.4	4.1	7.8	34.1	45.3
To improve their productivity, teachers organize and plan for successful fieldwork activities which is often appraised	39.5	18.6	15.9	17.2	8.8
In public secondary schools, teachers improvise and innovate teaching approaches though is rarely appraised to improve their productivity	41.9	43.9	10.8	1.4	2.0

Source: Field Data (2023)

Table 4.6 shows that 123 teachers (41.6%) pronounced that using trials or hands-on learning methods, which are frequently evaluated as a means of increasing efficiency, is a good idea. Of the teachers, 110 concurred (37.2%), 23 were uncertain (7.8%), 13 disagreed (4.4%), and 17 were adamantly opposed (5.7%). A fair majority, 140(47.3%), of the teachers were in strong agreement that appraising teachers' ability to adopt cooperative learning method has improved their productivity while 102(34.5%) agreed, 12(4.1%) were undecided, 3(1.0%) disagreed while 39(13.2%) strongly disagreed.

The results of a study by Nolan and Hoover (2019) in South Africa, which showed that administrators ought to view one another as teachers and coaches by collaborating with teachers to plan lessons, instruct, and try to comprehend what is happening in the classrooms, are supported by these results. These results demonstrate that there is widespread agreement on the crucial role played by cooperative learning approach to teaching. This further indicates that, though not practised by many school heads, appraising the extent to which teachers adopt hands-on and cooperative learning methods, helps improve teachers' classroom pedagogy whose consequence is improved productivity among teachers reflected in the academic performance of their students.

The study found that 161 teachers, or 54.4%, firmly said that, in publicly funded high schools, teachers are appraised on the ability to create conducive learning environment as a way of improving their productivity whereas 131(44.3%) agreed, 4(1.3%) were undecided. However, none disagreed as well as those who sturdily distressed. The investigation found that 25(8.4%) of the educators completely concurred with the perspective that educators utilize teaching and learning resources during instruction though is rarely appraised to improve their

productivity, 12(4.1%) agreed, 23(7.8%) unresolved, 101(34.1%) differed whereas 134(45.3%) highly disapproved. These findings support the assertions of Gregory and Chapman (2019) who offered a comprehensive guide to differentiated instructional strategies, emphasizing the need for a tailored approach to teaching. According to Gregory and Chapman (2019), exploring the range of differentiated instructional strategies critical to teacher productivity by aligning teaching methods with individual learning profiles. The outcomes suggest that there definitely is a need to adopt instructional paradigm that recognizes and accommodates the individual differences among students. These strategies encompass various dimensions, including content and learning styles and abilities. In other words, exploration of various strategies and tools, coupled with its emphasis on aligning teaching methods with individual learning profiles, provides educators with practical insights to enhance their instructional practices.

The idea that teachers should arrange and plan effective fieldwork tasks that are frequently evaluated to increase their productivity was strongly agreed upon by 117 (39.5%) of the educators, compared to 55 (18.6%) who concurred 47 (15.9%) who were unsure, 51 (17.2%) who disapproved, and 26 (8.8%) who were adamantly opposed. According to the survey, 124 teachers (41.9%) firmly believed that teachers improvise and innovate their teaching methods, even if this is seldom evaluated as a way to increase productivity; 130 teachers (43.9%) concurred 32 (10.8%) were unsure, 4 (1.4%) disapproved, and 6 (2.0%) severely disapproved.

The findings presented here support the conclusions of a research conducted by Timperley et al. (2019), which revealed that principals who appraise the teaching approaches adopted by teachers and how well they utilize the available curriculum

support materials register improved classroom delivery and their learners tend to perform in examinations. In a nutshell these results indicate that frequent assessment or appraisal of deafferented instruments or tools used by teachers is important in that it leads to improved teacher productivity manifested in learner performance in examinations. This is explained by the notion that evaluating educators distinguished teaching tools gives them a theoretical basis for successful instruction and gives students opportunities to learn about absorbing information, manufacturing, constructing, or making connections between concepts. As a result, learners do better on exams. Data was further collected on appraisal of teachers' mastery of curriculum content. Results are presented in Table 4.7:

Table 4.7: Teachers' Views on the Influence of Appraisal of Mastery of Curriculum Content on their Productivity

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
Teachers implement different aspects of the curriculum that is often appraised to ensure that teachers improve their productivity	74.3	24.0	0.0	1.0	0.7
In public secondary schools, teachers often appraised on mastery of content in line with the syllabus to improve their productivity	65.9	26.4	3.7	2.4	1.7
In public secondary schools, teachers adopt a variety of curriculum implementation approaches that is always appraised to improve their productivity	51.4	36.1	1.7	3.7	5.4
To improve their productivity, teachers link the previous curriculum content to the current lesson which is often appraised	75.7	23.0	0.0	0.7	0.7

Table 4.7 demonstrates that whilst 71(24.0%) concurred none were unsure, 3(1.0%) disapproved and 2(0.7%) severely disapproved, 220(74.3%) of the teachers firmly believed that educators integrate many curricular components that are often evaluated to guarantee that teachers increase their productivity.

These results support Kamau's (2019) claims on the flexibility of educational tasks and its basis in the material, procedure, product, and educational setting evaluation. In this instance, the information from students' assessment scores and the findings of additional screening instruments informs the method of instruction and topic selection. Preliminary assessments can discover a student's areas of comfort, strength, and weakness, claims Kamau (2019). This results in suitable diversification that meets the learning requirements and preferences of every secondary school student. Every secondary-level student should be guided toward demanding but manageable tasks by means of clear, relevant education, which may be created with the use of these assessments.

The majority of teachers, 95(65.9%), strongly agreed that, in publicly funded secondary schools, teachers are frequently evaluated on their ability to master the material in accordance with the syllabus in order to increase their productivity. However, 78 teachers (26.4%), agreed, 11 teachers—3.7%), disapproved, and 5 teachers—1.7%) were highly opposed. The majority of teachers—152, or 51.4%—vehemently concurred with the statement that educators in secondary schools owned by the government use a range of teaching techniques that are continuously evaluated to increase productivity. In contrast, 107, or 36.1%, concurred 5 (or 1.7%), disapproved and 16 (or 5.4%) vehemently concurred.

These results are consistent with the claims made by Danielson (2013) that effective performance appraisal provides teachers with constructive feedback, recognizes their achievements, and identifies areas for improvement. These results are also consistent with the claims made by Hattie and Timperley (2007) that feedback and recognition positively influence teacher motivation and job satisfaction.

These results indicate that a supportive appraisal system contributes to a culture of continuous improvement and professional growth among teachers. Compensation and rewards emerge as significant factors influencing teachers' job performance in the study by Uzoka and Osabuohien (2019). Adequate and fair compensation, coupled with recognition for outstanding performance, is identified as cultivating an optimistic workplace and contributing to heightened teachers' contentment with their jobs. These accomplishments confirm that mastery of content among teachers is key to enhancing their productivity in public secondary schools and thus, appraisal of the same is crucial.

According to the research, 224 teachers, or 75.7%, firmly believed that linking previously taught curriculum knowledge to the present lesson—which is often assessed—will increase productivity. Of the educators surveyed, 68 concurred, none disapproved, and two severely opposed. These results corroborate Kamau's (2019) claims that conducting evaluations of teachers' material competence, adopt a multiplicity of curriculum implementation approaches as well as their ability to seamlessly introduce lessons plays an important role in improving teaching and learning process. These results support the idea that evaluating teachers' proficiency with the curriculum results in differentiation that is suitable and meets the requirements and preferences of each secondary educational institution learner.

By appraising teachers' mastery of curriculum content, they are able to change their approach to teaching aimed at improving academic performance of students. In other words, through appraisal of teachers' mastery of curriculum content, it is simple to ascertain what knowledge learners already possess, allowing teachers to avoid covering content they have learned or employing inefficient teaching

strategies. This suggests additionally that teachers can create assignments for pupils based on an accurate assessment of school content, particularly in situations when a student needs more help or enrichment or has a distinct style of learning, IQ, or set of interests. Additional information was gathered about the evaluation of teachers' practical skills, and the outcomes are shown in Table 4.8:

Table 4.8: Teachers' Views on the Influence of Appraisal of Real-Life Skills on Teacher Productivity

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
Teachers guide students on career choices and is often appraised as a way of improving their productivity	72.0	21.6	0.3	3.4	2.7
Appraising teachers' capacity to manage students' conduct and behaviour has improved their productivity	60.5	71	1.0	7.4	7.1
Teachers always create a child-friendly school environment and has often been appraised as a way of enhancing their productivity	38.5	34.8	10.8	4.4	11.5
Teachers always identify and nurture learners' talents though is rarely appraised which has lowered their productivity	10.5	5.1	1.5	43.6	39.2
In public secondary schools, teachers handle behavioural and disciplinary challenges affecting learners though is not often appraised as a way of enhancing their productivity	5.4	8.1	1.0	47.3	38.2
To enhance teacher productivity, they practise inclusion, equity and respect for learners' diverse needs which is often appraised	39.5	44.3	14.2	1.4	0.7

Source: Field Data (2023)

Table 4.8 shows that 64(21.6%) teachers concurred 1(0.3%) were unsure, 10(3.4%) disapproved, and 8(2.7%) were deeply dissatisfied with the statement

that teachers advise students on career choices and are often evaluated as a tool to improve their productivity. Of the teachers, 213(72.0%) highly agreed with this statement. This validates the results of a research conducted in Mexico, where Weisberg et al. (2021) found that differentiated assessment gives teachers knowledge on how to support students in creating and pursuing personal growth objectives. Weisberg et al. (2021) state that independent development is typified by individual teachers creating their own development objectives, following through on those goals, getting input from high-school learners, and finishing the final evaluation of success. This implies that, with appraisal of how effective teachers guide students on how to set career goals, their productivity improves reflected in the academic performance of their students.

The majority of teachers—179, or 60.5%—very agreed that evaluating their ability to control students' behaviour and conduct had increased their productivity, while 71, or 24.0%, concurred 3 (1.0%) were unsure, 22 (7.4%) disapproved, and 21 (7.1%) severely objected. This indicates that the ability of teachers to control and shape students' behaviour patterns forms a basis of any viable appraisal process. These findings support the assertions of Mokuku and Ndaruhutse (2018) that teachers' ability to understand how they perceive the appraisal process and how it impacts their professional lives in shaping the behaviour of students is crucial for assessing the acceptability and effectiveness of the system on the ground.

According to the research, 114 teachers, or 38.5%, completely concurred that teachers should always create a child-friendly school environment and has often been appraised as a way of enhancing their productivity whereas 103(34.8%) in agreement, 32(10.8%) were undecided, 13(4.4%) disagreed whereas 34(11.5%)

strongly disagreed. This implies that, though not usually undertaken, appraisal of the ability of teachers to ensure that students are safe is regarded by all as crucial activity for improving teacher productivity as well as students' academic performance. While 15(5.1%) concurred and 5(1.7%) were unsure, a tiny percentage of the teachers—31(10.5%)—strongly concurred that teachers constantly recognize and encourage students' skills even if they are seldom evaluated, which has decreased their productivity. But the majority of them—129, or 43.6%—disapproved, while 116, or 39.2%, were firmly opposed.

Similarly, a small percentage of the teachers—16, or 5.4%—said that at publicly funded secondary schools, teachers deal with behavioural and disciplinary issues that impact students, but this isn't usually evaluated as a means of increasing their productivity, while 24 (8.1%) approved and 3 (1.0%) were unsure. 140 people, or 47.3%, disapproved, while 113 people, or 38.2%, severely disapproved. These results show that teachers emphasize the fact that, in order to increase productivity, school administrators frequently evaluate their capacity to assist learners in identifying and developing their skills as well as managing their behavioural tendencies.

According to the survey, 117 teachers (or 39.5%) were in agreement and 131 teachers (or 44.3%) concurred that practicing inclusion, equity, and respect for the various needs of students can increase teacher productivity. On the other hand, 2 (0.7%) were strongly opposed, 4 (1.4%) disapproved, and 42 (14.2%) were unsure. These results support the notion that administrators have implemented several forms of differentiated assessment, giving teachers a choice among various monitoring and assessment procedures. In summary, these findings point to the fact that, though not effectively undertaken by school heads, appraisal of

teachers' teaching methods, and mastery of curriculum content and manifestation of real-life skills is paramount in improving teacher productivity. Put another way, a successful evaluation of teachers' differentiated instruments encourages them to actively choose the alternatives for their assessment that best suit their needs and take ownership of ensuring that those choices are implemented.

4.4.1 Inferential Analysis

Information was collected from a total of 31 public secondary schools to explore the correlation between teachers' differentiated instruments appraisal and their productivity. Principals assessed how often they evaluated teaching methods, curriculum content, integration of real-life skills, and KCSE performance using a scale ranging from 1 to 5 (Never = 1, Rarely = 2, Sometimes = 3, Often = 4, Very Often = 5) for the period of the last five years (2018-2022). The results are shown in Table 4.9.

Table 4.9: Frequency of Principals’ Appraisal of Teachers’ Differentiated Instruments and KCSE Performance in Public Secondary Schools (2018-2022)

Frequency of Appraisal of Teachers’ Differentiated Instruments	KCSE Performance (meanscores)				
	2018	2019	2020	2021	2022
1	4.723	4.724	4.643	4.17	4.52
1	2.5	2.68	2.805	2.24	2.34
1	2.003	2.245	2.179	2.27	2.30
1	3.1	3.15	3.118	2.77	2.29
2	3.140	4.320	3.710	4.010	4.020
2	4.660	4.750	6.090	5.286	6.030
5	8.320	7.700	7.670	8.409	7.913
3	4.706	5.700	5.316	5.534	5.500
4	5.162	5.928	6.757	5.150	5.566
5	3.720	3.485	3.420	3.615	3.424
5	3.877	4.64	4.464	4.10	5.200
4	3.95	4.066	4.0984	3.09	3.09
5	7.789	8.031	8.7588	8.26	8.36
4	7.497	7.519	7.4704	6.74	7.10
2	5.481	4.814	4.819	4.84	4.18
3	6.413	7.231	7.0604	6.19	6.16
5	7.753	7.601	6.928	6.113	6.5
2	7.376	8.109	8.738	8.2777	8.9206
1	2.135	2	2.0984	2.35	2.333
5	6.02	7.46	7.59	7.6	7.8
2	2.22	1.97	2.37	2.42	2.235
1	3.767	4.235	4.925	4.2	4.824
1	3.767	3.539	4.743	3.772	3.872
1	4.100	4.058	4.342	3.45	3.589
2	3.34	3.64	3.93	3.3	3.180
5	5.658	5.733	6.159	4.822	5.532
3	4.280	5.698	5.843	4.1	4.369
1	2.851	2.855	3.963	2.906	2.816
2	4.216	4.681	5.584	4.82	5.560
3	4.706	5.242	5.228	5.141	4.984
1	6.448	6.889	6.705	6.285	6.630

Table 4.9 demonstrates that, in government-owned secondary schools, where principals regularly appraise instructional strategies used by teachers, curriculum content as well as integration of real-life skills, KCSE performance is often high compared to their counterparts who rarely appraise teachers’ differentiated instruments. Data in Table 4.9 were further run through Pearson’s Product Moment Correlation Test Analysis and outcomes are recorded in Table 4.10:

Table 4.10: Relationship between Frequency of Principals' Appraisal of Teachers' Differentiated Instruments and KCSE Performance in Public Secondary Schools (2018-2022)

		X1	B	C	D	E	F
X1	Pearson Correlation	1	.574**	.583**	.523**	.536**	.534**
	Sig. (2-tailed)		.001	.001	.003	.002	.002
	N	31	31	31	31	31	31
B	Pearson Correlation	.574**	1	.959**	.932**	.937**	.912**
	Sig. (2-tailed)	.001		.000	.000	.000	.000
	N	31	31	31	31	31	31
C	Pearson Correlation	.583**	.959**	1	.964**	.953**	.948**
	Sig. (2-tailed)	.001	.000		.000	.000	.000
	N	31	31	31	31	31	31
D	Pearson Correlation	.523**	.932**	.964**	1	.951**	.962**
	Sig. (2-tailed)	.003	.000	.000		.000	.000
	N	31	31	31	31	31	31
E	Pearson Correlation	.536**	.937**	.953**	.951**	1	.979**
	Sig. (2-tailed)	.002	.000	.000	.000		.000
	N	31	31	31	31	31	31
F	Pearson Correlation	.534**	.912**	.948**	.962**	.979**	1
	Sig. (2-tailed)	.002	.000	.000	.000	.000	
	N	31	31	31	31	31	31

** . Correlation is significant at the 0.01 level (2-tailed).

Key: X1- Frequency of Principals' Appraisal of Teachers' Differentiated Instruments; B, C, D, E and F-Students' Performance in KCSE (mean scores) for the Years 2018 to 2022 respectively.

Table 4.10 presents the results of the Pearson Product Moment Correlation Test Analysis, which revealed significant positive correlations between appraisal of teachers' differentiated instruments in terms of appraisal of teaching methods used by teachers, curriculum content as well as integration of real-life skills and teacher productivity in secondary government-run educational institutions. The correlation coefficients were $r_1 = 0.574$, $r_2 = 0.583$, $r_3 = 0.523$, $r_4 = 0.536$ and $r_5 = 0.584$ with corresponding p-values of 0.001, 0.001, 0.003, 0.002 and 0.002 respectively. Hence, the null hypothesis, H_{01} , is rejected. In other words, appraisal of teaching methods and approaches adopted by teachers, their mastery of

curriculum content and manifest real-life skills is crucial in improving classroom pedagogy whose consequence is improved academic performance.

4.4.2 Thematic Analysis

On the other hand, the principals stated during the interviews that they frequently evaluate the instructional strategies employed by teachers. Principal P1 said

In my secondary school, I frequently assess how teaching methods which adopt while in class such as application of experiments, hands-on strategies to ensure that students are fully involved in the teaching and learning activities. I also appraise teachers on whether they organize discussion groups for students.

Despite these contradictions among the teachers and principals, these findings underscore the vitality of appraising teaching methods which are employed by teachers as a way of improving classroom pedagogy and eventual academic performance. The principals further stated that teachers are expected to create a conducive learning environment for learners. Principal, P2, noted;

In my school, I always appraise teachers on their ability to create a classroom environment conducive for learning activities to take place unhindered. This includes how they utilize the available teaching and learning resources.

On the question of fieldwork, the principals also noted that, to improve their productivity, the ability of teachers to organize and plan effective fieldwork activities to complement regular classroom activities is often appraised. This further involves appraising their ability to innovate or improvise teaching approaches aimed at helping full master of concepts by learners. Similar to numerical results, these views also affirm the fact that appraisal of teaching methods adopted by teachers leads to improved teacher productivity manifested in learner performance in examinations. On the question of teachers' mastery of curriculum content, in an effort to increase teachers' productivity, the administrators also expressed support for the idea that they should constantly

evaluate their teaching staff based on how well they apply various curriculum components. Principal P3 said;

In my school, I often appraise teachers on their mastery of content in line with the syllabus as a way of improving their timely syllabus coverage and performance of their students. I also assess the approaches they adopt to ensure that curriculum is effectively implemented.

Similar to quantitative data, these perspectives support Kamau's (2019) assertions that undertaking assessments of teachers' mastery of content, adopting a multiplicity of curriculum implementation approaches as well as their ability to seamlessly introduce lessons has a significant impact in improving teaching and learning process. This confirms even more that principals' appraisal of teachers' mastery of curriculum content enable them to change their pedagogical approaches with an aim of improving academic performance of students. In other words, through appraisal of teachers' mastery of curriculum content, it is possible to ascertain what knowledge pupils already possess, allowing teachers to avoid covering content they have learned or employing inefficient teaching strategies.

On the question of real-life skills, the principals also indicated that they always appraise teachers' ability to guide students on career choices and is often appraised as a way of improving their productivity. Principal, P4, noted;

In my secondary school, I assess how my teachers help their students set career goals and strategies developed to achieve the same goals. I also appraise and assess the ability of my teachers to discipline students. I also assess how they manage their classrooms and ensure that learning environment is safe and conducive for all learners.

Just as noted earlier, these results demonstrate the reality that appraisal of the ability of teachers to ensure that students set career goals, manage students' discipline and create a learner-friendly learning environment is central to the

productivity of teachers. The school administrators disagreed with the viewpoint throughout the examinations that they rarely appraise teachers' ability to identify and nurture learners' talents. Principal, P5, stated;

In my school, I assess and appraise the capacity of teachers to identify talents of learners and how to harness or nurture such talents for future academic endeavours. This has enabled them integrate the learners with others and develop teaching approaches which focus on diverse needs of the students.

These verbatims affirm the fact that, despite the contradicting views from respondents, identification and nurturing of students' talents are key academic activities, which, when effectively appraised by school heads leads to improved productivity among teachers. From these mixed findings, appraisal of teachers' teaching methods, mastery of curriculum content and manifestation of real-life skills is a crucial undertaking which play a key role in determining teacher productivity in public secondary schools.

4.4.3 Triangulation of Quantitative and Qualitative Findings

Principals in public secondary schools evaluate teachers' differentiated instruments to enhance their effectiveness, considering factors such as instructional approaches, curriculum mastery, and life skills. However, there is a discrepancy between the perspectives of principals and teachers, with only a fair proportion of teachers supporting this evaluation. Nonetheless, these mixed research findings highlight the importance of assessing teaching methods to improve classroom pedagogy and academic performance. The study also reveals that the evaluation of teachers' ability to create a conducive learning environment and utilize curriculum support materials is rarely conducted. Additionally, the assessment of teachers' capacity to plan effective fieldwork activities alongside regular classroom instruction is occasionally undertaken.

Similarly, although it is a requirement under TPAD rules, school administrators do not regularly evaluate teachers' mastery of curriculum content. In terms of real-life skills, the study finds that the appraisal of teachers' ability to assist students in setting career goals, developing strategies to achieve those goals, and managing the classroom is sometimes conducted. Furthermore, the identification and nurturing of students' talents are not consistently appraised by principals. Despite these findings, the study acknowledges the significance of evaluating teachers' instructional methods, curriculum mastery, and demonstration of real-life skills, as these evaluations are crucial in determining teacher productivity in public secondary schools.

4.5 Appraisal of Teachers' Adherence to National Professional Standards and Teacher Productivity

The research sought to examine how teacher productivity in public secondary school is influenced by appraisal of their adherence to national professional standards. This concentrated on appraising teachers' comprehension of professional development programs, legal obligations in education, and instructional and educational needs. Results are presented in Table 4.11:

Table 4.11: Teachers’ Views on the Influence of Appraisal of Teachers’ Knowledge of Legal Requirements in Education on their Productivity

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
Appraisal of teachers’ understanding of the Basic Education Act has improved their productivity	46.3	31.1	8.1	1.7	12.8
Teachers’ understanding of the TSC Code of Ethics is often appraised as a way of improving their productivity	48.3	35.8	2.7	7.1	6.1
Teachers’ mastery of the Bill of Rights and Children’s Act is often appraised to improve their productivity	32.4	56.8	1.0	6.1	3.7
Teachers’ understanding of the Employment Act is rarely appraised to improve their productivity	0.0	12.8	8.4	28.0	50.7
Teachers’ capacity to promote school-community partnership is often appraised which has improved their productivity	38.9	46.3	4.7	7.4	2.7

Table 4.11 shows that 137 teachers (46.3%) completely concurred that assessing teachers' knowledge of the Basic Education Act has increased their production, as did 92 teachers (31.1%). Of the teachers, 24 were unsure, 5 disapproved, and 38 severely disapproved. According to the study, 143 teachers (or 48.3%) firmly believed that evaluating teachers' knowledge of the TSC Code of Ethics is a common way to increase their productivity. Of the remaining teachers, 106 (or 35.8%) concurred 8 (or 2.7%), disapproved, and 18 (or 6.1%) were highly opposed.

Table 4.11 reveals that more than half of the teachers, 168 (56.8%), agreed, 3 (1.0%) were unsure, 18 (6.1%) disapproved, and 11 (3.7%) were strongly against the idea that teachers' knowledge of the Children's Act and the Bill of Rights is frequently evaluated to improve their productivity whereas 96(32.4%) completely

concluded with this statement. Of the teachers, none (0.0%) entirely concluded and 38 (12.8%) agreed that teachers' comprehension of the Employment Act is rarely evaluated to increase their productivity. Nonetheless, 83(28.0%) disapproved, 150(50.7%) were firmly opposed, and 25(8.4%) were unsure. These outcomes demonstrate that teachers' knowledge of legal requirements in education is rarely appraised and they are not aware of its implications on their productivity. This runs counter to claims made by CEPPE (2017) that teaching standards aid in the certification of new teachers and those who have attained a particular status in the teaching profession, support the improvement of teacher performance, aid in the assessment of teacher performance, and aid in the evaluation and accreditation of teacher training programs.

The results of this study refute the claims made by Revai (2018), who contends that the primary benefit of standards as policy instruments is their ability to foster mutual communication between various artifacts, including curriculum, course descriptions, standards for accreditation, and standards requirements, as well as among stakeholders. These results also contradict the claims made by the National Board for Professional Teaching Standards (2018) that professional standards for experienced teachers aim to resolve the conflict between standards defining the degree of proficiency needed to enter the field and using those same standards to define proficiency for serving teachers with significant experience.

This implies that, though it is not always undertaken by school heads, appraisal of the ability of teachers to understand the legal requirements in education forms a key pillar in improving their productivity. According to the survey, 115 teachers (38.9%) completely concluded and 137 teachers (46.3%) concluded that teachers' ability to foster school-community partnerships is often evaluated, which has

increased their productivity. On the other hand, 8(2.7%) were firmly opposed, 22(7.4%) disapproved and 14(4.7%) were unsure. These results support the claims made by Forde et al. (2016) that teachers have a professional duty that is demonstrated by the way they interact with their students and other members of the teaching community. These results corroborate those of research conducted by Krantz and Fritzen (2017), which found that a crucial component of the creation and application of professional standards is interaction with the teaching profession. Stated differently, a broad spectrum of stakeholders, such as academics and teacher education institutes, are involved in this kind of engagement.

The kind and scope of consultation processes, in the opinion of Krantz and Fritzen (2017), indicate whether standards are seen as an enforced regulation that limits instructional activities or as a banner and expression of professional identity. Stated differently, the inclusion of educators in the process of creating professional standards enhances their legitimacy and authority. These results corroborate the claims made by Murad (2017) that productive teachers work in tandem with their peers to develop their pedagogical expertise and ultimately increase output. These findings point to the fact that the ability of teachers to promote school-community partnership is considered as a major undertaking, though not always appraised as crucial aspect for assessing teacher productivity.

In the same token, data was collected on how appraisal of teachers' professional development training influences their productivity. Results are shown in Table 4.12:

Table 4.12: Teachers' Views on the Influence of Appraisal of Teachers' Professional Development Training on their Productivity

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
Teachers identify professional gaps which is often appraised to improve their productivity	42.9	45.3	5.4	2.4	4.1
To enhance their productivity, teachers prepare for self-professional development that is rarely appraised	51.4	32.1	1.0	13.9	1.7
Teachers' continuous engagement in career growth and development activities are often appraised and has improved their productivity	35.1	41.6	2.4	14.5	6.4
In public secondary schools, the number of trainings teachers have undergone is often appraised and has enhanced their productivity	40.2	14.2	8.4	3.7	33.4
Teachers participate in a professional learning community that is often appraised as a way of improving their productivity	29.4	34.5	14.5	12.8	8.8

Table 4.12 illustrates that 134 teachers (45.3%) and 127 teachers (42.9%) highly agreed that teachers should identify professional gaps and evaluate them in order to increase their productivity. Nonetheless, 12(4.1%) were firmly opposed, 7(2.4%) disapproved and 16(5.4%) were unsure. These results support Sachs's (2016) claims that a "one size fits all" set of standards might not be the best for teachers working in challenging classroom environments, remote locations, or multi-age classrooms, where their effectiveness will be evaluated according to a distorted conception of what good or competent instruction might entail. Sachs (2016) asserts that standard setting in all professions needs to be on the lookout for potential threats to practice, such as the possibility that access to practice will be unduly restricted for reasons unrelated to competence, the possibility that practice is going to be restricted by the formalization of information that does not

substantially recognize trustworthy variety of strategies or advances in the field, or the possibility that candidates will not have equitable access to adequate learning opportunities to meet standards. This implies that, with appraisal, professional gaps which exist in teaching approaches may be identified and mitigations suggested. The study found that 152 teachers (51.4%) firmly stated they should prepare for self-professional development, which is rarely evaluated, in order to increase productivity. Of the teachers surveyed, 95 concurred (32.1%), 3 disapproved (1.0%), 41 rejected (13.9%), and 5 were highly opposed (1.7%). Table 4.12 reveals that 104 teachers, or 35.1%, completely concurred that their ongoing participation in professional development activities is frequently evaluated and has increased their productivity while 123(41.6%) concurred 7 were unsure, 43 disapproved, and 19 were firmly opposed.

These results support those of Malaysian research by McAdamis (2019), who discovered that professional development for educators is crucial in providing them with the information and skills they need to be more productive in the modern classroom. This suggests that it is impossible to overlook the evaluation of teachers' upgraded training. Teaching professionalism is demonstrated by respecting moral principles and allowing colleagues to freely discuss pedagogies.

A sizable fraction of the teachers—119, or 40.2%—strongly agreed that the amount of training teachers have received in publicly funded secondary schools is frequently evaluated and has increased their productivity. In contrast, 42, or 14.2%, concurred 25 (or 8.4%), disapproved, and 99, or 33.4%, were highly dissatisfied. According to the research, 102 teachers (34.5%) concurred with the statement that teachers may increase their productivity by participating in a professional learning community, which is often evaluated, while 87 teachers

(29.4%) highly concurred. On the other hand, 26(8.8%) were firmly opposed, 38(12.8%) disapproved and 43(14.5%) were unsure. The present study corroborates the results of a research conducted by CEPPE (2017), which demonstrated that standards delineate the knowledge and abilities necessary for an individual to be deemed competent in a specific (professional or educational) field. Standards serve as a means of characterizing and conveying what is most worthy or ideal to attain, what constitutes quality education or best practices, and they can also function as benchmarks or measures, thereby serving as a tool for decision-making processes, indicating the gap between actual accomplishments and the minimal performance necessary to be classified as competent. CEPPE (2017) states that generic standards only provide a basic description of effective teaching practices; they do not specify how these practices are to be used in specific teaching disciplines, student grade levels, or professional development stages.

These conclusions support the idea that evaluating the professional growth of educators is crucial because it establishes the degree to which they possess the information and abilities necessary to increase productivity in the modern classroom. Data was also collected on appraisal of teachers' requirements in teaching and learning and it influences their productivity. Results are shown in Table 4.13:

Table 4.13: Teachers' Views on the Influence of Appraisal of Requirements in Teaching and Learning on their Productivity

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
Appraisal of teachers' class attendance has improved their productivity	73.3	21.3	5.4	0.0	0.0
Teachers' lesson delivery is often appraised as a way of improving their productivity	32.8	40.2	3.0	8.4	12.2
How often teachers mark and check students' assignments and lesson notes is not always appraised as a way of improving their productivity	20.9	57	1.4	18.2	40.2
Teachers utilize instructional materials and is often appraised to improve their productivity	29.4	44.9	1.0	13.2	11.5
Teachers undertake class control and management and is frequently appraised which has improved their productivity	35.8	40.9	2.4	12.5	8.4
Appraising teachers' ability to carry out learner assessments, provide feedback and report on learners' learning has improved their productivity	39.9	44.6	0.7	9.5	5.4
Teachers access, retrieve and integrate ICT in teaching though is rarely appraised as a way of improving their productivity	39.9	31.4	8.1	9.8	10.8

According to Table 4.13, majority of teachers, 217 or 73.3%, strongly agreed that evaluating teachers' attendance in class had increased their productivity. Of those who concurred 63, or 21.3%, were unsure, 0 (0.0%) disapproved, and 0 (0.0%) severely objected. These results are in line with those of an investigation conducted in the United States by Wilson, Hallam, Pecheone, and Moss (2020), which found that standards take into account evidence from secondary-level students' learning in the classroom and that they can predict secondary school teachers' value-added effectiveness based on extensive research.

In other words, Wilson *et al.* (2020) further established that national professional standards have helped ground appraisal in secondary school students learning in more stable ways. Performance evaluations typically require teachers to record lesson plans and instruction for a unit of study connected to state standards, modify them for English language learners and special education students from secondary schools, record and analyze videos of classes, and gather and analyze data demonstrating secondary school students' learning. These findings affirm the fact that professional standards are crucial as determinants of teacher productivity.

According to the study, 97 teachers, or 32.8%, strongly agreed that evaluating teachers' class delivery is frequently done in order to increase their productivity. Of the teachers surveyed, 40.2% concurred, 19 disagreed, and 12.2% severely disapproved. These results corroborate those of a Nigerian study by Goldrick (2018), who concluded that professional standards ought to expand on the body of knowledge regarding successful teaching strategies, define what constitutes exemplary performance, and act as a roadmap for creating the associated elements. These results confirm that standards for secondary school students' learning and standards for teachers should be aligned.

According to Table 4.13, 62 teachers (20.9%) completely concurred that marking and checking students' assignments and lesson notes is not always evaluated as a means of increasing productivity. In contrast, 57 teachers (19.3%) concurred 4 teachers (1.4%) were unsure, 54 teachers (18.2%) disapproved, and 119 teachers (40.2%) were firmly opposed. These results corroborate those of research done in Nigeria, where Goldrick (2018) discovered that, to improve teacher performance in their classroom activities, there is need to assess how frequently they attend their classes, deliver their lessons and ensure that students undertake their daily

assignments. This implies that, though refuted by many teachers, principals' appraisal of their lesson delivery and whether students carry out academic tasks and assignments is important it helps promote standards and quality of teaching. According to the survey, 87 teachers (or 29.4%) completely concurred that using instructional materials and getting evaluated frequently helps teachers become more productive, compared to 133 teachers (or 44.9%) who concurred 3 uncertain teachers (or 1.0%), 39 disagrees (or 13.2%) and 34 highly disagrees (or 11.5%).

This supports the findings of Wilson et al (2020) that assessing how teachers utilize instructional materials improve delivery of concepts to learners. This implies that use of instructional materials is paramount in improving students' mastery of concepts and thus, appraisal of teachers' use of the same is key to improving their productivity. In other words, teachers underscored the fact that principals appraise their ability to utilize the available instructional materials since their usage is key in making concepts firmly glued in students' memory. According to the study, 106 teachers, or 35.8%, firmly believed that having regular evaluations and taking charge of the classroom has increased teachers' productivity. In contrast, 121 teachers, or 40.9%, concurred 7 were unsure, 37 disapproved, and 25 strongly disapproved.

This suggests that although it is essential to their effectiveness, school administrators seldom evaluate teachers' capacity to maintain order and control in the classroom. A little over a third, or 118 teachers (39.9%), firmly believed that evaluating teachers' abilities to administer assessments to students, offer feedback, and report on their learning has increased their productivity. In contrast, 132 teachers (44.6%) concurred 2 (0.7%) disapproved and 16 (5.4%) were very much against.

This corroborates the assertions of Taylor and Tyler (2021) that appraising teachers' assessment activities designed for learners determines their performance. This implies that principals, despite their busy schedule, must ensure that how teachers assess and grade learners is constantly appraised. This improves timely syllabus coverage and ultimately leads to learners performing better academically. Put differently, this kind of input helps educators and worried parents choose the optimal strategy to improve learners' academic performance.

According to the survey, 93 teachers (31.4%) and 118 teachers (39.9%) completely concurred that teachers access, retrieve, and integrate ICT in the classroom, even if this is seldom evaluated as a means of increasing productivity. On the other hand, 32(10.8%) completely disapproved, 29(9.8%) disapproved, and 24(8.1%) were undecided. These results are in line with those of Austrian research conducted in 2017 by Krantz and Fritzén, which concluded that professional standards like ICT integration must be developed and implemented with input from the teaching profession. This implies that integration of ICT in teaching activities is highly regarded by many teachers as crucial for effective instruction and thus, appraisal of their ability to undertake the same is key to their performance in terms of timely syllabus coverage and academic performance.

In summary, these results demonstrate the fact that appraisal of teachers' understanding of the requirements in teaching and learning forms a basis for improving teacher productivity. That is, appraisal of teachers' classroom attendance, lesson delivery, checking students' assignments, utilization of instructional materials classroom management as well as their ability to integrate ICT in teaching activities is important in enhancing their productivity.

4.5.1 Inferential Analysis

Data was gathered from 31 public secondary schools to investigate the connection between teachers' adherence to national professional standards. This included how often principals appraise teachers' knowledge of legal requirements in education, undergo professional development training, their understanding of teaching and learning requirements and KCSE performance as shown in Table 4.14.

Table 4.14: Frequency of Principals' Appraisal of Teachers' Adherence to National Professional Standards and KCSE Performance

Frequency of Appraisal of Teachers' Adherence to National Professional Standards	KCSE Performance (meanscores)				
	2018	2019	2020	2021	2022
3	4.723	4.724	4.643	4.17	4.52
2	2.5	2.68	2.805	2.24	2.34
2	2.003	2.245	2.179	2.27	2.30
1	3.1	3.15	3.118	2.77	2.29
2	3.140	4.320	3.710	4.010	4.020
2	4.660	4.750	6.090	5.286	6.030
5	8.320	7.700	7.670	8.409	7.913
3	4.706	5.700	5.316	5.534	5.500
4	5.162	5.928	6.757	5.150	5.566
5	3.720	3.485	3.420	3.615	3.424
5	3.877	4.64	4.464	4.10	5.200
4	3.95	4.066	4.0984	3.09	3.09
5	7.789	8.031	8.7588	8.26	8.36
4	7.497	7.519	7.4704	6.74	7.10
2	5.481	4.814	4.819	4.84	4.18
3	6.413	7.231	7.0604	6.19	6.16
5	7.753	7.601	6.928	6.113	6.5
2	7.376	8.109	8.738	8.2777	8.9206
2	2.135	2	2.0984	2.35	2.333
5	6.02	7.46	7.59	7.6	7.8
2	2.22	1.97	2.37	2.42	2.235
1	3.767	4.235	4.925	4.2	4.824
2	3.767	3.539	4.743	3.772	3.872
1	4.100	4.058	4.342	3.45	3.589
2	3.34	3.64	3.93	3.3	3.180
5	5.658	5.733	6.159	4.822	5.532
3	4.280	5.698	5.843	4.1	4.369
3	2.851	2.855	3.963	2.906	2.816
2	4.216	4.681	5.584	4.82	5.560
3	4.706	5.242	5.228	5.141	4.984
5	6.448	6.889	6.705	6.285	6.630

Table 4.14 demonstrates that, in secondary public secondary schools where principals regularly appraise teachers' adherence to national professional standards, performance in KCSE tend to be higher than in those where there is irregular appraisal. This indicates that frequent appraisal teachers' knowledge of legal requirements of education, whether they have undertaken professional development training as well as their ability to understand the requirements of teaching and learning leads to improved academic performance in public secondary schools. The above data was run through Pearson's Product Moment Correlation Test Analysis and outcomes are recorded in Table 4.15:

Table 4.15: Relationship between Frequency of Principals' Appraisal of Teachers' Adherence to National Professional Standards and KCSE Performance (2018-2022)

		X2	B	C	D	E	F
X2	Pearson Correlation	1	.584**	.577**	.508**	.521**	.527**
	Sig. (2-tailed)		.001	.001	.004	.003	.002
	N	31	31	31	31	31	31
B	Pearson Correlation	.584**	1	.959**	.932**	.937**	.912**
	Sig. (2-tailed)	.001		.000	.000	.000	.000
	N	31	31	31	31	31	31
C	Pearson Correlation	.577**	.959**	1	.964**	.953**	.948**
	Sig. (2-tailed)	.001	.000		.000	.000	.000
	N	31	31	31	31	31	31
D	Pearson Correlation	.508**	.932**	.964**	1	.951**	.962**
	Sig. (2-tailed)	.004	.000	.000		.000	.000
	N	31	31	31	31	31	31
E	Pearson Correlation	.521**	.937**	.953**	.951**	1	.979**
	Sig. (2-tailed)	.003	.000	.000	.000		.000
	N	31	31	31	31	31	31
F	Pearson Correlation	.527**	.912**	.948**	.962**	.979**	1
	Sig. (2-tailed)	.002	.000	.000	.000	.000	
	N	31	31	31	31	31	31

** . Correlation is significant at the 0.01 level (2-tailed).

Key: X2- Frequency of Principals' Appraisal of Teachers' Adherence to National Professional Standards; B, C, D, E and F-Students' Performance in KCSE (mean scores) for the Years 2018 to 2022 respectively.

The Pearson Product Moment Correlation Test Analysis findings are displayed in Table 4.15. The correlation coefficients and accompanying p-values for the test are $r_1 = 0.584$, $r_2 = 0.577$, $r_3 = 0.508$, $r_4 = 0.521$, and $r_5 = 0.527$, respectively.

As a result, H_{02} , the null hypothesis, is rejected. This suggests that the evaluation of teachers' compliance with national professional standards has a statistically significant impact on their performance as teachers in secondary schools owned by the government

4.5.2 Thematic Analysis

During the interviews, the principals, however, differed by the majority of the teachers who stated that they rarely appraise teachers' understanding of the legal requirements in education as a way of improving their productivity. Principal, P6, noted;

In my secondary school, I always appraise teachers' understanding of the Basic Education Act, TSC Code of Ethics, Bill of Rights and Children's Act as well as the Employment Act. This has made them understand their roles and basic requirements as teachers and thus improved their productivity.

From these verbatims, it is evident that teachers' knowledge of legal requirements in education is a key determinant of their productivity and thus their appraisal is important. On the question of professional development training, the principals stated that they appraise teachers' professional development skills. Principal, P7, stated;

In my secondary school, I often assess the capacity of teachers to identify professional gaps in the curriculum and how it can be improved, their preparation for self-professional development, their continuous engagement in career growth and development activities, the number of trainings teachers have undergone as well as their participation in a professional learning community. This has improved their productivity in terms of timely syllabus coverage and academic performance of their students.

Similar to numerical results, these opinions confirm that appraising teachers' professional training plays an important role since it determines the extent to which they are equipped with contemporary skills and knowledge to improve their productivity.

On the question of requirements in teaching and learning, the school administrators also gave their support to the idea that they usually appraise teachers' class attendance as a way of improving their productivity. Principal, P8, stated;

In my secondary school, I ensure that teachers attend classes regularly and I have developed a register marked by class prefects showing when teachers clock in and out. This has ensured that teachers attend their lessons regularly, cover syllabus in time and has led to improved academic performance.

The principals however, disagreed with the majority of the teachers who stated that they rarely appraise how often teachers mark and check students' assignments and lesson notes, their utilization of instructional materials as well as class control and management as a way of improving their productivity. These views further point to the fact that appraisal of teachers' professional development activities is important it helps promote standards and quality of teaching. Principal, P9, further noted;

I always assess the ability of teachers in my secondary school to carry out learner assessments, provide feedback and report on learners' learning which has improved their productivity. I also appraise their ability to access, retrieve and integrate ICT in teaching.

From these verbatims, appraisal of teachers' ability to assess and grade learners and use ICT in teaching and learning activities is key to their performance in terms of timely syllabus coverage and students' academic performance.

4.5.3 Triangulation of Quantitative and Qualitative Findings

This study showcased that principals in public secondary schools also assess teachers' adherence to national professional standards in order to improve their effectiveness. This assessment encompasses evaluating teachers' understanding of legal obligations in education, their involvement in professional development training, and their grasp of teaching and learning requirements.

However, the research uncovered that this evaluation is not consistently implemented, despite its crucial role in enhancing teacher productivity. Furthermore, it is apparent that many teachers fail to recognize the importance of their knowledge and proficiency in the Basic Education Act, TSC Code of Ethics, Bill of Rights and Children's Act, as well as the Employment Act, in relation to their productivity. Nevertheless, the study discovered that teachers' professional development training is frequently assessed. In other words, their ability to identify gaps in the curriculum and propose improvements, their willingness to engage in self-professional development, their continuous involvement in career growth and development activities, the number of trainings they have undergone, and their participation in a professional learning community are often evaluated.

According to the study's findings, school principals regularly evaluate the teaching requirements in teaching and learning. This includes assessing teachers' attendance in class, their consistency in grading and reviewing students' assignments and lesson notes, their utilization of instructional materials, as well as their classroom management and control, all with the aim of enhancing their productivity. Principals additionally assess teachers' capacity to administer learner assessments, offer feedback, and document students' learning progress, along with their competence in utilizing, retrieving, and incorporating ICT in their instructional practices. This suggests that although the evaluation of teachers' adherence to national professional standards may not always take place, it plays a crucial role in enhancing teacher effectiveness.

4.6 Appraisal of Teachers' Portfolios and Teacher Productivity

The research aimed to determine how evaluating teachers' portfolios affects their performance in public high schools. Results are displayed in Table 4.16:

Table 4.16: Teachers' Views on the Influence of Appraisal of Teachers' Portfolios on their Productivity

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
Evaluating whether teachers keep parents' and students' contact enhances their productivity	4.4	5.4	9.1	36.5	44.6
Evaluating the kinds of tests which teachers prepare improves their productivity	40.2	42.6	6.8	5.7	4.7
Evaluating students' grades is often appraised and improves teacher productivity	39.9	43.6	10.5	1.4	4.7
Evaluating teachers' schemes of work and lesson plans improves their productivity	43.2	37.8	8.4	4.1	8.1

Table 4.16 indicates that 13 (4.4%) of the teachers strongly agreed, as did 16 (5.4%), 27 (9.1%) were unsure, 108 (36.5%) disapproved, and 132 (44.6%) were adamantly opposed that measuring whether teachers maintain touch with parents and learners boosts their productivity. These results conflict with those of research conducted in Makueni County by Kinyua (2021), which found that teachers' portfolios are seen as a tool for evaluating their capacity to communicate with parents and other education stakeholders. This suggests that maintaining relationships with parents along with additional stakeholders in education has not always been seen as a crucial first step in helping teachers become more productive in government-run secondary educational institutions.

According to the survey, 119 teachers (or 40.2%) completely concurred that assessing the exams that teachers prepare for increases their productivity, while 126 teachers (or 42.6%) concurred 20 disapproved, and 14 teachers (or 4.7%) severely opposed. Table 4.16 reveals that 118 teachers (or 39.9%) were highly convinced that assessing students' grades is a common practice that increases teacher productivity.

In contrast, close to half of the teachers —129 or 43.6% —were in agreement, 31 or 10.5% were unsure, 4 or 1.4% disapproved, and 14 or 4.7% severely disputed. The resulting outcomes support those of research carried out in Makueni County by Kinyua (2021), which showed that school heads are tasked to appraise teachers' ability to prepare question banks, safely store students' grades and whether they prepare professional instruments such as schemes of work, records of work and lesson plans as well as lesson notes. These results also support those of a study conducted in the USA by Range et al. (2018), which discovered that a portfolio designed for evaluating how well students from secondary schools are assessed and learning in a learning environment would include examples of tests, quizzes, and assignments created by the teacher, logs of the grades earned by the pupils, samples of work produced by the learners, and other details regarding the teacher's efficacy.

According to the survey, 123 teachers (or 43.2%) were highly convinced that assessing teachers' lesson plans and schemes of work increases their productivity, whereas 112 teachers (or 37.8%) concurred 25 teachers (or 8.4%) were unsure, 12 teachers (or 4.1%) disapproved, and 24 teachers (or 8.1%) severely objected. These results corroborate those of a study carried out in Latin America by Nor et al. (2020), which defined portfolios as goal-based, made up of samples of work, recording evidence of growth over time, and flexible enough to allow for reflection, feedback, and improvement.

This supports the claims made by Rucinski and Diersling (2020) that teacher portfolios are a compilation of data on an educator's practice. Lesson planning, student work, teacher notes, class videotapes, and even official assessments can all be found in a portfolio.

This suggests that evaluating teachers' portfolios is a simple way to demonstrate what they teach, how they teach it, how their style has changed, how rigorous their educational requirements are, how secondary school students perceive their teachers and their learning, and how their peers evaluate their work. These research results further suggest that well-designed portfolios can foster growth by giving teachers and students attending secondary schools a textured picture of learning and instruction as it develops over time, allowing them to assess, discuss, and reflect on their work.

These results support the notion that evaluating parent-teacher communication has been shown to inspire educators and increase their output. In addition to increasing academic desire, this link has the benefit of improving discipline and lowering the rate of school leavers. Stated differently, the way students interact with professionals and their learning environment consistently influences their level of involvement in the classroom. In other words, in addition to helping students develop cognitively, institutions also make sure they develop psychologically and socially.

4.6.1 Inferential Analysis

Data on how frequently (Very Often = 5, Often = 4, Sometimes = 3, Rarely = 2, and Never = 1) principals appraise teachers' portfolios in relation to KCSE performance for the last five years (2018–2022) were gathered from the sampled 31 public secondary schools in order to further ascertain the relationship between the appraisal of teachers' portfolios and their productivity. Findings are displayed in Table 4.17;

Table 4.17: Frequency of Principals' Appraisal of Teachers' Portfolios and KCSE Performance (2018-2022)

Frequency of Appraisal of Teachers' Portfolios	KCSE Performance (meanscores)				
	2018	2019	2020	2021	2022
1	4.723	4.724	4.643	4.17	4.52
2	2.5	2.68	2.805	2.24	2.34
1	2.003	2.245	2.179	2.27	2.30
2	3.1	3.15	3.118	2.77	2.29
1	3.140	4.320	3.710	4.010	4.020
1	4.660	4.750	6.090	5.286	6.030
5	8.320	7.700	7.670	8.409	7.913
3	4.706	5.700	5.316	5.534	5.500
4	5.162	5.928	6.757	5.150	5.566
1	3.720	3.485	3.420	3.615	3.424
1	3.877	4.64	4.464	4.10	5.200
4	3.95	4.066	4.0984	3.09	3.09
5	7.789	8.031	8.7588	8.26	8.36
4	7.497	7.519	7.4704	6.74	7.10
2	5.481	4.814	4.819	4.84	4.18
3	6.413	7.231	7.0604	6.19	6.16
4	7.753	7.601	6.928	6.113	6.5
2	7.376	8.109	8.738	8.2777	8.9206
1	2.135	2	2.0984	2.35	2.333
5	6.02	7.46	7.59	7.6	7.8
2	2.22	1.97	2.37	2.42	2.235
1	3.767	4.235	4.925	4.2	4.824
5	3.767	3.539	4.743	3.772	3.872
1	4.100	4.058	4.342	3.45	3.589
2	3.34	3.64	3.93	3.3	3.180
5	5.658	5.733	6.159	4.822	5.532
3	4.280	5.698	5.843	4.1	4.369
3	2.851	2.855	3.963	2.906	2.816
2	4.216	4.681	5.584	4.82	5.560
3	4.706	5.242	5.228	5.141	4.984
4	6.448	6.889	6.705	6.285	6.630

Table 4.17 shows that, in public secondary schools where principals regularly appraise teachers' portfolios, KCSE performance is high. This implies that frequent appraisal of whether teachers keep parents' and students' contacts, kinds of tests teachers prepare, how teachers grade students as well as schemes of work and lesson plans has a direct bearing on academic performance in public secondary schools. The above data was run through Pearson's Product Moment Correlation Test Analysis and results are shown in Table 4.18:

Table 4.18: Relationship between Frequency of Principals' Appraisal of Teachers' Portfolios and KCSE Performance (2018-2022)

		X3	B	C	D	E	F
X3	Pearson Correlation	1	.613**	.593**	.618**	.557**	.510**
	Sig. (2-tailed)		.000	.000	.000	.001	.003
	N	31	31	31	31	31	31
B	Pearson Correlation	.613**	1	.959**	.932**	.937**	.912**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	31	31	31	31	31	31
C	Pearson Correlation	.593**	.959**	1	.964**	.953**	.948**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	31	31	31	31	31	31
D	Pearson Correlation	.618**	.932**	.964**	1	.951**	.962**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	31	31	31	31	31	31
E	Pearson Correlation	.557**	.937**	.953**	.951**	1	.979**
	Sig. (2-tailed)	.001	.000	.000	.000		.000
	N	31	31	31	31	31	31
F	Pearson Correlation	.510**	.912**	.948**	.962**	.979**	1
	Sig. (2-tailed)	.003	.000	.000	.000	.000	
	N	31	31	31	31	31	31

** . Correlation is significant at the 0.01 level (2-tailed).

Key: X3- Frequency of Principals' Appraisal of Teachers' Portfolios; B, C, D, E and F-Students' Performance in KCSE (mean scores) for the Years 2018 to 2022 respectively.

Table 4.18 shows the results of the Pearson Product Moment Correlation Test Analysis, which revealed significant positive correlations between principals' appraisal of teachers' portfolios and teacher productivity in terms of KCSE performance. The correlation coefficients were $r_1 = 0.613$, $r_2 = 0.593$, $r_3 = 0.618$, $r_4 = 0.557$ and $r_5 = 0.510$ with corresponding p-values of 0.000, 0.000, 0.000, 0.001 and 0.003 respectively. Hence, the null hypothesis, H_{03} , is rejected. These findings indicate that there is a statistically significant influence of principals' appraisal of teachers' portfolios and teacher productivity manifested through improved students' academic performance in KCSE.

4.6.2 Thematic Analysis

During the interviews, the principals, however, indicated that they always appraise teachers' portfolios as a way of enhancing their productivity. Principal, P10, noted;

In my secondary school I assess whether teachers have and keep contacts with parents and how often they communicate with them to discuss matters affecting their children. I check the kind of tests they prepare for students and students' grades. I also check whether they prepare schemes of work and lesson plans.

In contrast to the quantitative results, these opinions align with those of Range et al. (2018), who said that assessing teachers' portfolios is crucial since it aids in assessing how well students are learning. This is due to the fact that it includes examples of assessments, tests and tasks created by teachers, grade records, samples of high-school work submitted by students, and more data about the efficacy of the teacher. To put it another way, it contains instructional materials from educators, work by learners, comments from educators, class videos, and even official evaluations. In summary, these mixed findings affirm the fact that, by appraising teachers' portfolios, it becomes easy and feasible to note what is being taught, how it is taught, how teachers change their teaching style, the rigor in a teacher's academic standards, students' impressions of the teacher and their learning as well as how their colleagues view their work.

4.6.3 Triangulation of Quantitative and Qualitative Findings

The research findings suggest that teachers' portfolios have a vital role in their day-to-day academic activities, thereby contributing to their effectiveness in public secondary schools. However, it was observed that many teachers lack an understanding of how principals' evaluation of these portfolios impacts their syllabus coverage and students' academic performance.

Specifically, only a small number of teachers recognized the importance of assessing whether they maintain regular communication with parents and students to enhance their productivity. Conversely, a significant proportion of teachers acknowledged the value of evaluating the quality of their tests, students' grades, as well as their preparation of schemes of work and lesson plans to improve their productivity. These findings emphasize that, despite differing opinions among respondents, the assessment of teachers' portfolios offers valuable insights into their teaching methods, changes in their instructional approach, the rigor of their academic standards, students' perceptions of the teacher, and their overall learning experience. Ultimately, these factors determine the teachers' productivity.

4.7 Appraisal of Teachers' Participation in Co-curricular Activities and Teacher Productivity

The research aimed to investigate how appraisal of teachers' involvement in co-curricular activities impacts their effectiveness in public secondary schools. Data was gathered descriptively, with the findings presented in Table 4.19.

Table 4.19: Teachers' Views on the Influence of Appraisal of Teachers' Participation in Co-curricular Activities on their Productivity

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
The capacity of teachers to prepare for CCAs is frequently evaluated in public secondary schools as a means of increasing their output	1.0	3.7	15.9	39.2	40.2
Teachers are frequently evaluated on their abilities to assist students in choosing CCAs to engage in in order to increase productivity	9.1	4.1	9.5	35.8	41.6
As a means of increasing productivity, teachers are evaluated on their ability to set up CCAs for their students	7.1	5.4	6.4	34.1	47.0

Table 4.19 shows that 3 (1.0%) of the teachers and 11 (3.7%) of the teachers who concurred completely that teachers' capacity to plan for CCAs is frequently evaluated as a means of increasing their productivity in public secondary schools. 47 people, or 15.9%, were unsure, 116 people, or 39.2%, disapproved and 119 people, or 40.2%, severely disagreed. According to the study, 27 teachers, or 9.1%, firmly believed that teachers' ability to assist students in choosing CCAs to participate in should be evaluated frequently in order to increase productivity. Twelve teachers, or 4.1%, disapproved, while twenty-eight teachers, or 9.5%, were unsure.

These results support the claims made by Sikkha and Agnihotri (2019), who suggest that different classes are offered in educational institutions according to the guidelines of curriculum creators worldwide. They stated that the majority of educational institutions provide sports, theater, and music as co-curricular activities, but additional options such as field trips, science-related outings, and volunteer work might also be offered. The conclusions of Verma (2020) that there are at least seven classes of complementary curriculum activities—physical, intellectual, social, psychomotor, cultural, picnic, and excursion activities—as well as civic development activities are also supported by these data.

These results support the notion that youngsters gain several advantages from participating in co-curricular sports and physical activity activities outside the requirements of the physical education curriculum. The Centers for Disease Control (2020) observed that physical activity for physical development helps learners develop strong bones, helps them maintain a healthy weight, prevents the occurrence of diseases like high blood pressure while lowering the incidence of depression, and helps participants develop a physically active lifestyle.

Table 4.19 further shows that 21 teachers (7.1%) firmly believed that organizing CCAs for students is a component of their assessment in order to increase productivity, while 16 teachers (5.4%) concurred 19 teachers (6.4%) were unsure, 101 teachers (34.1%) disapproved, and 139 teachers (47.0%) were firmly opposed. These results corroborate Kimeu's (2021) claims that good evaluations of teachers' involvement in co-curricular activities foster students' critical thinking, creative thinking, and problem-solving abilities, which help them move from being dependent to being independent and discover their talents.

These results support the notion that physical development activities help children develop their motor skills, support healthy physical and social growth and maturation, enhance socialization, boost self-esteem, improve self-perception, and improve psychological well-being. They also lay the groundwork for a lifetime commitment to physical activity and a healthy lifestyle. As a result, a major factor influencing teacher productivity is the evaluation of the same. Put another way, teachers' involvement in co-curricular activities is beneficial, and as such, a key factor in determining their productivity is how often they engage in them.

4.7.1 Inferential Analysis

Data was gathered from 31 schools regarding the frequency with which principals appraised teachers' participation in co-curricular activities (CCAs) and KCSE performance over the previous five years (2018–2022) (Very Often = 5, Often = 4, Sometimes = 3, Rarely = 2, and Never = 1). This was done to further confirm the relationship between teacher productivity and CCA appraisal. Findings are displayed in Table 4.20;

Table 4.20: Frequency of Principals' Appraisal of Teachers' Participation in Co-curricular Activities and KCSE Performance (2018-2022)

Frequency of Appraisal of Teachers' Participation in Co-curricular Activities	KCSE Performance (meanscores)				
	2018	2019	2020	2021	2022
1	4.723	4.724	4.643	4.17	4.52
2	2.5	2.68	2.805	2.24	2.34
1	2.003	2.245	2.179	2.27	2.30
2	3.1	3.15	3.118	2.77	2.29
2	3.140	4.320	3.710	4.010	4.020
1	4.660	4.750	6.090	5.286	6.030
3	8.320	7.700	7.670	8.409	7.913
3	4.706	5.700	5.316	5.534	5.500
4	5.162	5.928	6.757	5.150	5.566
1	3.720	3.485	3.420	3.615	3.424
1	3.877	4.64	4.464	4.10	5.200
4	3.95	4.066	4.0984	3.09	3.09
5	7.789	8.031	8.7588	8.26	8.36
5	7.497	7.519	7.4704	6.74	7.10
2	5.481	4.814	4.819	4.84	4.18
3	6.413	7.231	7.0604	6.19	6.16
4	7.753	7.601	6.928	6.113	6.5
2	7.376	8.109	8.738	8.2777	8.9206
1	2.135	2	2.0984	2.35	2.333
5	6.02	7.46	7.59	7.6	7.8
2	2.22	1.97	2.37	2.42	2.235
3	3.767	4.235	4.925	4.2	4.824
5	3.767	3.539	4.743	3.772	3.872
1	4.100	4.058	4.342	3.45	3.589
2	3.34	3.64	3.93	3.3	3.180
5	5.658	5.733	6.159	4.822	5.532
3	4.280	5.698	5.843	4.1	4.369
1	2.851	2.855	3.963	2.906	2.816
2	4.216	4.681	5.584	4.82	5.560
2	4.706	5.242	5.228	5.141	4.984
3	6.448	6.889	6.705	6.285	6.630

Table 4.20 demonstrates that teachers' involvement in co-curricular activities is seldom evaluated, which has the effect of lowering academic achievement. Put another way, teacher productivity is frequently high at secondary schools that are publicly funded, where principals routinely evaluate teachers' involvement in co-curricular activities, and this is reflected in higher KCSE student achievement.

The outcomes recorded in Table 4.21 were obtained by subjecting the results in Table 4.20 to Pearson's Product Moment Correlation Test Analysis.

Table 4.21: Relationship between Frequency of Principals' Appraisal of Teachers' Participation in Co-curricular Activities and KCSE Performance (2018-2022)

		X4	B	C	D	E	F
X4	Pearson Correlation	1	.562**	.582**	.598**	.511**	.502**
	Sig. (2-tailed)		.001	.001	.000	.003	.004
	N	31	31	31	31	31	31
B	Pearson Correlation	.562**	1	.959**	.932**	.937**	.912**
	Sig. (2-tailed)	.001		.000	.000	.000	.000
	N	31	31	31	31	31	31
C	Pearson Correlation	.582**	.959**	1	.964**	.953**	.948**
	Sig. (2-tailed)	.001	.000		.000	.000	.000
	N	31	31	31	31	31	31
D	Pearson Correlation	.598**	.932**	.964**	1	.951**	.962**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	31	31	31	31	31	31
E	Pearson Correlation	.511**	.937**	.953**	.951**	1	.979**
	Sig. (2-tailed)	.003	.000	.000	.000		.000
	N	31	31	31	31	31	31
F	Pearson Correlation	.502**	.912**	.948**	.962**	.979**	1
	Sig. (2-tailed)	.004	.000	.000	.000	.000	
	N	31	31	31	31	31	31

** . Correlation is significant at the 0.01 level (2-tailed).

Key: X4- Frequency of Principals' Appraisal of Teachers' Participation in Co-curricular Activities; B, C, D, E and F-Students' Performance in KCSE (mean scores) for the Years 2018 to 2022 respectively.

Results of the Pearson Product Moment Correlation Test Analysis are displayed in Table 4.21. Correlation coefficients with associated p-values of 0.001, 0.001, 0.000, 0.003, and 0.004 were obtained for $r_1 = 0.562$, $r_2 = 0.582$, $r_3 = 0.598$, $r_4 = 0.511$, and $r_5 = 0.502$. Thus, the null hypothesis, H_0 , is rejected. This suggests even more that one cannot wish away co-curricular activities' significance as a major factor influencing teacher productivity. Put another way, administrators who regularly evaluate the frequency with which teachers engage in co-curricular

activities in addition to teaching in the classroom report that their teachers are more productive, which is reflected in better academic results for their learners on national exams.

4.7.2 Thematic Analysis

The administrators concurred with the teachers' assertion that they hardly ever evaluate the ability of educators to prepare for CCAs in an effort to increase productivity. Principal P11 said as much.

Teachers' involvement in CCAs is one of the main thematic areas that the TPAD tool will be assessing. In my secondary institution, I frequently evaluate their capacity to coordinate and prepare CCAs and assist learners with choosing CCAs to participate in

Like the quantitative results, these opinions validate the viewpoints expressed by Kimeu (2021), supporting the notion that although co-curricular activities benefit students, they are not seen as vital to a student's education and are, therefore, not frequently included in the secondary school curriculum and, consequently, are not frequently evaluated by school administrators. To sum up, these contradictory results underscore the value of teachers' participation in co-curricular activities and stress the necessity of routine review in order to improve their efficacy.

4.7.3 Triangulation of Quantitative and Qualitative Findings

The research has uncovered that the engagement of educators in co-curricular activities (CCAs) is highly valued as an outdoor pursuit that alleviates the monotony of classroom learning for students. Nevertheless, the study has revealed that school principals rarely acknowledge or appreciate such involvement, and even when they do, teachers often fail to grasp its importance in evaluating their effectiveness. The findings indicate that in many public secondary schools, principals seldom assess teachers' ability to plan and organize CCAs or assist students in selecting activities based on their interests.

These findings confirm that despite being a requirement under the Teacher Performance Appraisal and Development (TPAD) framework, the evaluation of teachers' participation in CCAs has not been given sufficient priority. Moreover, in numerous public secondary schools, participation in CCAs is still not considered essential for a student's development and is therefore infrequently evaluated by principals. However, in secondary schools where the evaluation of teachers' involvement in CCAs is effectively conducted, teacher productivity experiences a significant boost.

4.8 Relationship between Performance Appraisal Practices and Teacher Productivity

To examine the correlation between performance appraisal practices and teacher productivity in public secondary schools, the researcher further collected data on various aspects of performance appraisal, including the frequency of appraisal using differentiated instruments, adherence to national professional standards, portfolios, and participation in co-curricular activities (CCAs). This data was then correlated with the average KCSE performance over the last five years (2018-2022) from a sample of 31 public secondary schools. The results of the analysis are presented in Tables 4.9, 4.14, 4.17, and 4.20, indicating the relationship between these variables.

Table 4.22: Performance Appraisal Practices and Teacher Productivity in Public Secondary Schools

Average KCSE Performance (Y)	Frequency of Appraisal of Teachers' Differentiated Instruments (X1)	Frequency of Appraisal of Teachers' Adherence to National Professional Standards (X2)	Frequency of Appraisal of Teachers' Portfolios (X3)	Frequency of Appraisal of Teachers' Participation in CCAs (X4)
4.556	1	3	1	1
2.513	1	2	2	2
2.199	1	2	1	1
2.886	1	1	2	2
3.840	2	2	1	2
5.363	2	2	1	1
8.002	5	5	5	3
5.351	3	3	3	3
5.713	4	4	4	4
3.533	5	5	1	1
4.456	5	5	1	1
3.659	4	4	4	4
8.24	5	5	5	5
7.265	4	4	4	5
4.827	2	2	2	2
6.611	3	3	3	3
6.979	5	5	4	4
8.284	2	2	2	2
2.183	1	2	1	1
7.294	5	5	5	5
2.243	2	2	2	2
4.390	1	1	1	3
3.939	1	2	5	5
3.908	1	1	1	1
3.478	2	2	2	2
5.581	5	5	5	5
4.858	3	3	3	3
3.078	1	3	3	1
4.972	2	2	2	2
5.060	3	3	3	2
6.591	1	5	4	3

Table 4.22 also demonstrates that regular evaluation of teachers across the four main thematic areas (customized tools, compliance with national professional standards, portfolios, and involvement in CCAs) plays a crucial role in determining the levels of productivity among teachers, as reflected in the KCSE results, albeit at varying degrees.

A multiple linear regression analysis was conducted using the data from Table 4.22, resulting in the outcomes presented in Table 4.23.

Table 4.23: Model Summary for the R² Change

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.665 ^a	.442	.356	1.45872	.442	5.142	4	26	.003

a. Predictors: (Constant), Teachers' Differentiated Instruments, Adherence to National Professional Standards, Portfolios and Participation in CCAs

Table 4.23 presents the findings that the "R Square Change", R², is **0.442**. This indicates that the performance appraisal practices being examined have a significant influence of 44.2% on teacher productivity in public secondary schools. It is worth noting that the average p-value for these outcomes is substantial, with 0.003 being less than 0.05. This implies that the appraisal of teachers' differentiated instruments, adherence to national professional standards, portfolios, and participation in CCAs directly relate to their productivity, as reflected in their students' KCSE performance in public secondary schools. These results suggest that there are additional variables, accounting for 55.8%, that impact teacher productivity beyond those considered in the investigation's variables. Results are shown in Table 4.24;

Table 4.24: Multiple Regression Analysis for the Relationship between Performance Appraisal Practices and Teacher Productivity

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1 (Constant)	2.279	.713		3.194	.004		
X ₁	.279	.328	.242	.850	.403	.264	3.782
X ₂	.170	.404	.130	.421	.678	.225	4.435
X ₃	.276	.442	.223	.625	.537	.168	5.942
X ₄	.235	.426	.182	.551	.586	.198	5.054

a. Dependent Variable: Teacher Productivity in Public Secondary Schools
Key: X1-Teachers' Differentiated Instruments; X2-Adherence to National Professional Standards; X3-Portfolios and X4-Participation in CCAs

Table 4.24 presents a multiple linear regression model showcasing the relationship between Teacher Productivity and various factors. The model is represented as **Teacher Productivity = 2.279 + 0.242X1 + 0.130X2 + 0.223X3 + 0.182X4 + 1.45872**. These findings align with Hanushek's theoretical perspectives (2000) that teacher productivity, as an output, is influenced by behaviour change, knowledge, and skills, which are outcomes of human capital, specifically teacher performance appraisal activities conducted by secondary school principals. The results from the regression model suggest that different performance appraisal methods impact teacher productivity in public secondary schools.

The constant value of 2.279 indicates that teacher productivity is not solely dependent on performance appraisal practices by school administrators but is also influenced by other unexplored factors (55.8%). These factors may include the availability of instructional resources, physical facilities, teachers' attitudes, and motivation. Additionally, Table 4.24 reveals that performance appraisal practices affect teacher productivity to varying extents. For instance, the appraisal of teachers using differentiated instruments ($\beta_1 = 0.242$) has a higher impact on teacher productivity compared to teacher portfolios ($\beta_3 = 0.223$), participation in CCAs ($\beta_4 = 0.182$), and adherence to national professional standards ($\beta_2 = 0.130$).

4.8.1 Test for Multicollinearity

From Table 24, Vector Inflation Factors (VIF) are greater than 1 (VIF (3.782, 4.435, 5.942 and 5.054)>1. This means that the variables under investigation that is, appraisal of teachers' differentiated instruments, adherence to national professional standards, portfolios and participation CCAs, are independent and thus not internally correlated.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter provides an overview of the key research outcomes, conclusions, recommendations, and suggestions for future research, which were discussed in relation to the research objectives.

5.1 Summary of Research Findings

In light of the study's objectives, which included assessing teacher productivity in public secondary schools and investigating the impact of principals' evaluations of teachers' differentiated instruments, portfolios, and participation in co-curricular activities on teachers' productivity in public secondary schools, this section offers a thorough summary of the investigation's findings.

5.1.1 Teacher Productivity in Public Secondary Schools

The research revealed that teacher productivity has been low, as evidenced by the slow and delayed completion of the syllabus. Consequently, this has resulted in poor academic performance among students in national examinations. Moreover, the study discovered that numerous public secondary schools have consistently recorded unsatisfactory mean scores in the Kenya Certificate of Secondary Education (KCSE) exams, ranging from 1 to 5, over the past five years (2018-2022). These findings clearly indicate that the issue of low productivity among teachers in public secondary schools has become a pressing concern.

5.1.2 Appraisal of Teachers' Differentiated Instruments and Teacher Productivity

Based on the mixed research findings, principals evaluate teachers' differentiated instruments as a means of enhancing their effectiveness in public secondary

schools. This appraisal encompasses an assessment of their instructional approaches, mastery of curriculum content and life skills. However, only a fair proportion of teachers supported this, though contradicted the perspectives of principals. Nevertheless, these findings emphasize the importance of evaluating teaching methods employed by teachers to enhance classroom pedagogy and ultimately improve academic performance.

The study also revealed that the appraisal of teachers' ability to create a conducive learning environment, including the utilization of curriculum support materials, is rarely conducted. Additionally, the appraisal of teachers' capacity to organize and plan effective fieldwork activities to complement regular classroom instruction is occasionally undertaken. Similarly, the study found that although it is a requirement under TPAD rules, the evaluation of teachers' mastery of curriculum content is not regularly performed by school administrators.

Regarding real-life skills, the study discovered that the appraisal of teachers' ability to assist students in setting career goals, developing strategies to achieve those goals, and managing the classroom is sometimes conducted. Likewise, the identification and nurturing of students' talents are not consistently appraised by principals. Despite these revelations, the study acknowledges the significance of evaluating teachers' instructional methods, curriculum mastery, and demonstration of real-life skills, as these evaluations play a pivotal role in determining teacher productivity in public secondary schools.

To support these findings, Pearson Product Moment Correlation Test Analysis was undertaken, which revealed significant positive correlations between appraisal of teachers' differentiated instruments in terms of appraisal of teaching

methods used by teachers, curriculum content as well as integration of real-life skills and teacher productivity in public secondary schools (0.001, 0.001, 0.003, 0.002 and $0.002 < 0.05$) leading to the rejection of the null hypothesis, H_{01} .

5.1.3 Appraisal of Teachers' Adherence to National Professional Standards and Teacher Productivity

This research demonstrated that principals in public secondary schools also evaluate teachers' adherence to national professional standards in order to enhance their productivity. This evaluation includes assessing teachers' understanding of legal requirements in education, their participation in professional development training, and their comprehension of teaching and learning requirements. However, the study revealed that this evaluation is not consistently carried out, despite the important role it plays in improving teacher productivity.

It is also evident that many teachers do not recognize the significance of their knowledge and mastery of the Basic Education Act, TSC Code of Ethics, Bill of Rights and Children's Act, as well as the Employment Act, in relation to their productivity. Nevertheless, the study found that teachers' professional development training is frequently evaluated. In other words, their ability to identify gaps in the curriculum and suggest improvements, their readiness for self-professional development, their continuous engagement in career growth and development activities, the number of trainings they have undergone, and their participation in a professional learning community are often appraised.

According to the findings of the study, school principals frequently evaluate the teaching requirements in teaching and learning. This includes assessing teachers' class attendance, their consistency in marking and checking students' assignments and lesson notes, their utilization of instructional materials, as well as their

classroom control and management, all with the aim of enhancing their productivity. Principals also evaluate teachers' ability to conduct learner assessments, provide feedback, and report on students' learning progress, as well as their proficiency in accessing, retrieving, and integrating ICT in their teaching. This indicates that while the appraisal of teachers' adherence to national professional standards may not always occur, it significantly contributes to teacher productivity. The null hypothesis, H02, was rejected based on the Pearson Product Moment Correlation Test Analysis, which demonstrated a statistically significant impact of teachers' adherence to national professional standards on their performance as teachers in government-run secondary schools (0.001, 0.001, 0.004, 0.003, and 0.002<0.05).

5.1.4 Appraisal of Teachers' Portfolios and Teacher Productivity

The study findings indicate that teachers' portfolios play a crucial role in their daily academic activities, thereby contributing to their effectiveness in public secondary schools. However, it was observed that many teachers lack an understanding of how principals' evaluation of these portfolios impacts their syllabus coverage and students' academic performance. Specifically, only a small number of teachers acknowledged the importance of assessing whether they maintain regular communication with parents and students in order to enhance their productivity.

On the other hand, a significant proportion of teachers recognized the value of evaluating the quality of their tests, students' grades, as well as their preparation of schemes of work and lesson plans in improving their productivity. These findings highlight the fact that, despite differing opinions among respondents, the appraisal of teachers' portfolios provides valuable insights into their teaching methods,

changes in their instructional approach, the rigor of their academic standards, students' perceptions of the teacher, and their overall learning experience. Ultimately, these factors determine the teachers' productivity. To support these claims, the Pearson Product Moment Correlation Test Analysis revealed significant positive correlations between principals' evaluation of teachers' portfolios and teacher productivity, as measured by KCSE performance (0.000, 0.000, 0.000, 0.001, and 0.003<0.05). Consequently, the null hypothesis, H_{03} , was rejected.

5.1.5 Appraisal of Teachers' Participation in Co-curricular Activities and Teacher Productivity

The research discovered that the involvement of teachers in co-curricular activities (CCAs) is highly regarded as an outdoor activity that helps reduce monotony of classroom learning for students. However, the study revealed that school principals rarely recognize or appreciate such participation, and even when they do, teachers often fail to comprehend its significance in assessing their productivity. The findings indicate that in many public secondary schools, principals seldom evaluate teachers' ability to plan and organize CCAs or assist students in selecting activities of their interest.

These findings confirm that despite being a requirement under the Teacher Performance Appraisal and Development (TPAD) framework, the appraisal of teachers' involvement in CCAs has not been given adequate priority. Furthermore, in numerous public secondary schools, participation in CCAs is still not considered crucial to a student's development and is therefore infrequently appraised by principals. However, in secondary schools where the appraisal of teachers' participation in CCAs is effectively carried out, teacher productivity is

significantly higher. The null hypothesis, H04, is rejected based on the results of the Pearson Product Moment Correlation Test Analysis, which produced p-values of 0.001, 0.001, 0.000, 0.003, and 0.004 < 0.05. Put differently, there is a strong correlation between the evaluation of teachers' involvement in co-curricular activities and their output in secondary public schools. In summary, our findings show that teachers exhibit better productivity, which improves academic achievement, in schools where principals regularly assess how often teachers participate in co-curricular activities.

5.2 Conclusions

It is clear from the aforementioned data that teacher productivity has been poor. This is typified by late covering of the syllabus, which has led to poor academic achievement in secondary public schools. It is also clear that the differentiated tools used by teachers in public secondary schools to increase their output are not fully evaluated in order to do so. The study also found that the levels of appraisal of teachers' adherence to national professional standards is not satisfactory to occasion improved productivity among teachers. The study also found that teachers' portfolio is rarely appraised and even teachers rarely understand how principals' appraisal of their portfolios impacts their syllabus coverage and students' academic performance. Finally, even though the valuable contribution that CCAs provide to students' academic development is acknowledged, teachers' involvement in the process is hardly evaluated.

5.3 Recommendations of the Study

Based on the findings, the study recommends that principals should create more time and strategies to understand different teaching methods which teachers adopt, their mastery of contents and real-life skills.

This will go a long way in making their appraisal activities easy and effective in improving teacher productivity. Principals should encourage teachers to understand different legal requirements in education, pursue further training and have an inkling of all requirements of classroom pedagogy. This will go a long way in enhancing their professional acumen necessary for higher productivity. The Ministry of Education should organize workshops to sensitize teachers on the essence of keeping right portfolios since it is crucial in teaching profession. The Ministry of Education ought to design a curriculum that allows for CCA involvement. Rather than using a one-size-fits-all approach, the Teachers' Service Commission ought to examine the performance rating procedures in order to identify the appraisal methods that are more beneficial to raising academic achievement.

5.4 Suggestions for Further Research

There is need to conduct a comprehensive study to evaluate the impact of principals' attitudes on teacher productivity in public secondary schools. It is crucial to undertake a study to analyze the correlation between principals' experience in performance appraisal and teacher productivity in schools. It is essential to carry out a study to ascertain the effect of principals' management styles on teacher productivity in public secondary schools.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

June 2023

Dear Sir/Madam,

RE: PERMISSION TO CARRY OUT RESEARCH

I'm currently enrolled at Machakos University pursuing a doctorate in philosophy in educational administration. My research topic is: **Performance Appraisal Practices as Determinants of Teacher Productivity in Public Secondary Schools in Makueni County, Kenya**. To achieve this, you were randomly selected to participate in the investigation. I kindly request that you participate fully in the inquiry. The analysis will not reveal your identity, and this information will only be utilized for academic purposes. You will get the outcomes of the investigation upon demand.

Your cooperation and support would be much valued.

Thank you in advance.

Yours faithfully,

Jacob Kyengo Muthoka

0724158187

APPENDIX II

INFORMED CONSENT FORM

Dear interviewee,

The investigator, who is a scholar at Machakos University pursuing a Doctor of Philosophy in Educational Administration degree program, is conducting investigation into **Performance Appraisal Practices as Determinants of Teacher Productivity in Public Secondary Schools in Makueni County, Kenya**. I ask that you please allow me some time to complete the exam elements and questions for this study. I pledge to protect the privacy and confidentiality of your personal data. Your identity won't appear in any content, and the person conducting the study will be the only one with possession of your information. It is completely voluntary for you to decline to participate at any time either prior to or during the investigation. We will not pay you or give you any amenities in return for your participation. If you would want to participate in this study, kindly sign the accompanying form.

Participant:

----- Code of Participant	----- Signature	----- Date
------------------------------	--------------------	---------------

Researcher:

----- Jacob Kyengo Muthoka 0724158187	----- Signature	----- Date
---	--------------------	---------------

Curriculum content []

Real-life skills []

Others (Specify).....

5. Please indicate your level of agreement with the following assertions on the impact of your teaching techniques' evaluation on how effective you are.

Key: **SA**-Strongly Agree **A**-Agree **U**-Undecided **D**-Disagree **SD**-Strongly Disagree

Test Items	SA	A	U	D	SD
	5	4	3	2	1
I apply experiments or hands-on teaching approach that is often appraised as a way of improving my productivity					
Appraising my ability to adopt cooperative learning method has improved my productivity					
In my school, I am appraised on the ability to create conducive learning environment as a way of improving my productivity					
I utilize teaching and learning resources during instruction though is rarely appraised to improve my productivity					
To improve my productivity, I organize and plan for successful fieldwork activities which is often appraised					
In my school, I improvise and innovate teaching approaches though is rarely appraised to improve my productivity					

6. Indicate your level of agreement with the following assertions on the impact of your work efficiency being assessed based on how well you can integrate curricular content.

Test Items	SA	A	U	D	SD
	5	4	3	2	1
I implement different aspects of the curriculum that is often appraised to ensure that I improve my productivity					
In my school, my mastery of content in line with the syllabus is often appraised to improve my productivity					

In my school, I adopt a variety of curriculum implementation approaches that is always appraised to improve productivity					
To improve my productivity, I link the previous curriculum content to the current lesson which is often appraised					

7. Indicate how much you concur with the following claims about how your efficiency is impacted by how well your real-world talents are appraised.

Test Items	SA	A	U	D	SD
	5	4	3	2	1
I guide students on career choices and is often appraised as a way of improving my productivity					
Appraising my capacity to manage students' conduct and behaviour has improved my productivity					
I always create a child-friendly school environment and has often been appraised as a way of enhancing my productivity					
I always identify and nurture learners' talents though is rarely appraised which has lowered my productivity					
In my school, I handle behavioural and disciplinary challenges affecting learners though is not often appraised as a way of enhancing my productivity					
To enhance my productivity, I practice inclusion, equity and respect for learners' diverse needs					

Section D: Appraisal of Teachers' Adherence to National Professional Standards and Teacher Productivity

8. Tick professional standards being considered during your appraisal

Knowledge of legal requirements in education []

Professional development training []

Requirements in teaching and learning []

9. Please indicate your level of agreement with each of the following propositions on the effectiveness of evaluating your knowledge of legal requirements in education on your productivity

Test Items	SA	A	U	D	SD
	5	4	3	2	1
Appraisal of my understanding of the Basic Education Act has improved my productivity					
My understanding of the TSC Code of Ethics is often appraised as a way of improving my productivity					
My mastery of the Bill of Rights and Children’s Act is often appraised to improve productivity					
My understanding of the Employment Act is rarely appraised to improve my productivity					
My capacity to promote school-community partnership is often appraised which has improved my productivity					

10. Rate the extent to which you concur with the assertions that follow on the effectiveness of evaluating your professional development training on your productivity

Test Items	SA	A	U	D	SD
	5	4	3	2	1
I identify professional gaps which is often appraised which to improve my productivity					
To enhance my productivity, I prepare for self-professional development that is rarely appraised					
My continuous engagement in career growth and development activities are often appraised and has improved my productivity					
In my school, the number of trainings I have undergone is often appraised and has enhanced my ability to perform					
I participate in a professional learning community that is often appraised as a way of improving my productivity					

11. Please indicate how much you agree or disagree with the following claims on the effectiveness of evaluating your adherence to the requirements in teaching and learning on your productivity

Test Items	SA	A	U	D	SD
	5	4	3	2	1
Appraisal of my class attendance has improved my productivity					
My lesson delivery is often appraised as a way of improving my productivity					
How often I mark and check students' assignments and lesson notes are not always appraised as a way of improving my productivity					
I utilize instructional materials and is often appraised to improve my productivity					
I undertake class control and management and is frequently appraised which has improved my productivity					
Appraising my ability to carry out learner assessments, provide feedback and report on learners' learning has improved my productivity					
I access, retrieve and integrate ICT in teaching though is rarely appraised as a way of improving my productivity					

Section E: Appraisal of Teachers' Portfolios and Teacher Productivity

12. Mark the contents of your portfolios which are often appraised

Parents' and students' contacts []

Availability of test banks []

Students' grades []

Schemes of work and lesson plans []

Others (Specify).....

13. Indicate how much you concur with each of the following claims on the effectiveness of evaluating your portfolios on your productivity in secondary schools

Test Items	SA	A	U	D	SD
	5	4	3	2	1
Evaluating whether I keep parents' and students' contact enhances my productivity					
Evaluating the kinds of tests which I prepare improves my productivity					
Evaluating my students' grades improves my productivity					
Evaluating my schemes of work and lesson plans improves my productivity					

Section F: Appraisal of Teachers' Participation in Co-curricular Activities and Teacher Productivity

14. Please, tick the aspects of your participation in co-curricular activities in school that are often appraised

- Ability to plan CCAs []
- Ability to select CCAs for students []
- Ability to organize CCAs for students []

15. Please indicate how much you concur or disagree with the following assertions regarding how teacher transfer policies affect teacher productivity in your secondary educational institutions:

Test Items	SA	A	U	D	SD
	5	4	3	2	1
In my school, my ability to plan for CCAs is often appraised as a way of improving my productivity					
To improve my performance, my ability to help students select CCAs to participate in is often appraised					
My ability to organize CCAs for students is part of my appraisal to improve my productivity					

Thank you,

Jacob Kyengo Muthoka, 0724158187

APPENDIX IV
INTERVIEW GUIDE FOR PRINCIPALS

Dear interviewee,

The person conducting the study is a graduate student enrolled in a course in Doctor of Philosophy in Educational Administration at Machakos University researching **Performance Appraisal Practices as Determinants of Teacher Productivity in Public Secondary Schools in Makueni County, Kenya**. Your provided information will be utilized for the purpose of this investigation and handled with the utmost secrecy.

Section A: Demographic Information

1. Gender:.....
2. The Maximum Degree of Academic Achievement.....

Section B: Teacher Productivity

3. How frequent do your teachers complete their syllabus in time?
.....
.....
4. How have your pupils performed academically over the past five years in the KCSE? (2018-2022)?
.....
.....

Section C: Appraisal of Teachers' Differentiated Instruments and Teacher Productivity

5. What are the teachers' differentiated aspects which are always considered during performance appraisal?

.....
.....
.....
6. On a scale of 1-5, how often do you appraise teachers' differentiated instruments in your institute?.....

7. How has an appraisal of your teachers' differentiated instruments improved their productivity in your school?
.....
.....

Section D: Appraisal of Teachers' Adherence to National Professional Standards and Teacher Productivity

8. What are the teachers' professional standards being considered during performance appraisal?
.....
.....

9. On a scale of 1-5, how often do you appraise teachers' adherence to national professional standards in your secondary school?.....

10. What is the effectiveness of appraising your teachers' adherence to professional standards on their productivity?
.....
.....

Section E: Appraisal of Teachers' Portfolios and Teacher Productivity

11. What contents of your teachers' portfolios are often appraised?
.....
.....

12. On a scale of 1-5, how frequent do you appraise teachers' portfolios in your secondary institute?.....

13. To what degree has an appraisal of your teachers' portfolios determined their productivity in syllabus coverage and students' academic performance?

.....
.....
.....

Section F: Appraisal of Teachers' Participation in Co-curricular Activities and Teacher Productivity

14. Which aspects of your teachers' participation in co-curricular activities in school are often appraised?

.....
.....

15. On a scale of 1-5, how often do you appraise teachers' involvement in co-curricular activities at your high school?.....

16. How has an appraisal of your teachers' participation in co-curricular activities determined their productivity?

.....
.....

Thank you,

Jacob Kyengo Muthoka

0724158187

APPENDIX V
**INTRODUCTION LETTER FROM THE SCHOOL OF POSTGRADUATE
STUDIES OF MACHAKOS UNIVERSITY**



MACHAKOS UNIVERSITY
OFFICE OF THE DEAN GRADUATE SCHOOL

Telephone: 254-(0)735247939, (0)723805929
Email: graduateschool@mksu.ac.ke
Website: www.machakosuniversity.ac.ke

P.O Box 136-90100
Machakos
KENYA

REF. MksU/GS/N/036/VOL.1

20th June, 2023

The Director;
National Commission for Science, Technology and Innovation
P.O Box 30623,
NAIROBI

Dear Sir

RE: JACOB KYENGO MUTHOKA (E83/2746/2018)

The above named is a PhD student in the second year of study and has cleared course work. The University has cleared him to conduct a research entitled: **“Performance Appraisal Practices as Determinants of Teacher Productivity in Public Secondary Schools in Makueni County, Kenya.”**

Kindly assist him with a Research Permit in order to undertake the research.

Thank you.








PROF. KIMITI RICHARD PETER, PhD
DEAN GRADUATE SCHOOL

KRP/em



ISO 9001:2015 Certified *Sourcing Heights in Transforming Industry and Economy*

APPENDIX VI
AUTHORIZATION LETTER FROM NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY AND INNOVATION, NACOSTI

 <p style="text-align: center;">REPUBLIC OF KENYA</p> <p>Ref No: 546593</p> <p style="text-align: center;">RESEARCH LICENSE</p> <div style="text-align: center;">  </div> <p>This is to Certify that Mr.. Jacob Kyengo Muthoka of Machakos University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Makeni on the topic: Performance Appraisal Practices as Determinants of Teacher Productivity in Public Secondary Schools in Makeni County, Kenya for the period ending : 02/July2024.</p> <p style="text-align: center;">License No: NACOSTI/P/23/27310</p> <p style="text-align: center;">Applicant Identification Number: 546593</p> <p style="text-align: center;">NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p> <p style="text-align: center;">See overleaf for conditions</p>	 <p style="text-align: center;">NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p> <p style="text-align: right;">Date of Issue: 02/July2023</p> <div style="text-align: center;">  <p>Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p> <p style="text-align: center;">Verification QR Code</p> <div style="text-align: center;">  </div> </div>
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APPENDIX VII
RESEARCH AUTHORIZATION LETTER FROM COUNTY
COMMISSIONER, MAKUENI



OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION

Telegram:
Telephone:
Fax:
Email: makuenicc@yahoo.com

COUNTY COMMISSIONER
MAKUENI COUNTY
P.O. Box 1-90300
MAKUENI

Ref: MKN/CC/ADM.6/1 VOL.V/89

3rd July, 2023



Jacob Kyengo Muthoka
MACHAKOS UNIVERSITY

RE: RESEARCH AUTHORIZATION

Reference is made to Director General National Commission for Science Technology and Innovation Research License Ref. No. NACOSTI/P/23/27310 dated 2nd July, 2023 on the above subject.

You are hereby authorized to undertake research on “Performance appraisal Practices as Determinants of Teacher Productivity in Public Secondary Schools in Makueni County” for the period ending 2nd July, 2024.

By a copy of this letter the all Deputy County Commissioners are requested to give you the necessary assistance.


03 JUL 2023


J. N. KIOK
FOR: COUNTY COMMISSIONER
MAKUENI
c.c.
County Director of Education
MAKUENI

All Deputy County Commissioners
MAKUENI COUNTY

APPENDIX VIII
RESEARCH AUTHORIZATION LETTER FROM COUNTY DIRECTOR
OF EDUCATION, MAKUENI



REPUBLIC OF KENYA
MINISTRY OF EDUCATION
STATE DEPARTMENT FOR BASIC EDUCATION

Email: cdemakueni@gmail.com
When replying please quote

County Director of Education Office
P.O. Box 41-90300
MAKUENI

MKN/C/ED/5/33/ VOLII/164

3rd July, 2023

Jacob Kyengo Muthoka
MACHAKOS UNIVERSITY

RE: RESEARCH AUTHORIZATION

Reference is hereby made to the letter from National Commission for Science Technology and Innovation (**NACOSTI**) dated 2nd July, 2023 authorizing you to carry out research on **“Performance Appraisal Practices as Determinants of Teachers Productivity in Public Secondary Schools in Makueni County”** for the period ending 2nd July, 2024.

Following this authorization, you are allowed to proceed with your research as requested.

Robinson Kiarri
For County Director of Education
MAKUENI



APPENDIX IX
RESEARCH AUTHORIZATION LETTER FROM COUNTY
GOVERNMENT OF MAKUENI

REPUBLIC OF KENYA



GOVERNMENT OF MAKUENI COUNTY



OFFICE OF THE COUNTY SECRETARY

P.O. Box 78-90300 - MAKUENI Tel No.: 020-2034944

Email: county.secretary@makueni.go.ke, contact@makueni.go.ke

web: www.makueni.go.ke

Ref: ADM/12/VI/ (311)

Date: 3rd July, 2023

JACOB KYENGO MUTHOKA
P.O Box 136- 90100,
MACHAKOS UNIVERSITY.

Subject: RESEARCH AUTHORIZATION

We acknowledge receipt of research licence No. NACOSTI/P/23/27310 dated 2nd July, 2023 from Director General National Commission for Science Technology and Innovation licensing you to carry out a research on the Performance Appraisal practices as Determinants of Teaching Productivity in Public Secondary Schools in Makueni County ,Kenya for the period for the period ending 2nd July, 2024.

The purpose of this communication is to inform you that you have been authorized to carry out the research in Makueni County as per your request.

Dr. Justin M. Kyambi
County Secretary,

**HEAD OF THE COUNTY PUBLIC SERVICE &
SECRETARY TO THE COUNTY EXECUTIVE COMMITTEE**

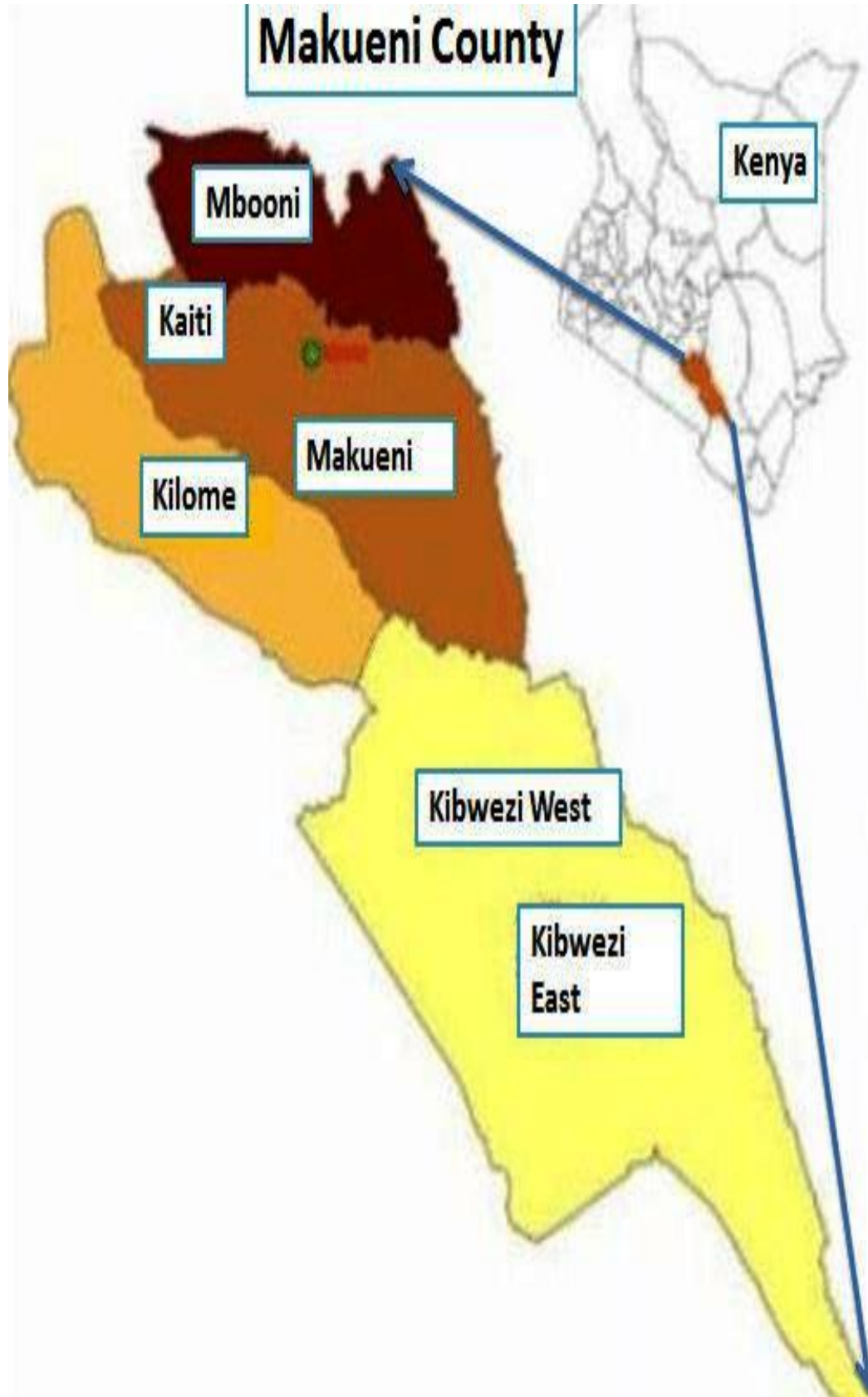


Copy to:

1. CECM; ICT, Education and Internship
2. Chief Officer; Education & Internship

APPENDIX X

THE MAP OF MAKUENI COUNTY



Source: IEBC (2012)