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Effectiveness of Teacher Lesson Observation Planning On Students' Academic Achievements in Public Secondary Schools in Elgeyo Marakwet County, Kenya

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Abstract
The quality of education has been declining in Kenya national examinations which made the Teachers Service Commission to come up with an accountability tool for the teachers which led to introduction of teacher performance appraisal and development (TPAD). The study was intended to analyze the effectiveness of teacher lesson observation planning on student academic achievements. The study was informed by goal-setting theory by Okumbe, (2000). The study adopted mixed methods research design and used a mixed method approach in collecting and analyzing data. The study utilized a sample of 40 principals, 153 teachers, and 384 students drawn from four constituencies in Elgeyo Marakwet County. Stratified sampling was used to categorize schools into National, Extra County, County and Sub-County schools. Simple random sampling was used to select teachers and students from sampled schools while purposive sampling was used to select the national schools and principals from the selected schools. A structured questionnaire was used on teachers and students on a likert scale and an unstructured interview guide was administered to the principals. The two instruments were validated by expert researchers in the department of educational management and policy studies at the University of Eldoret. Descriptive statistics were made up of frequencies, percentages; means and standard deviation which were calculated and presented in tables and figures, and inferential statistics involving Pearson Correlation and Regression coefficients were calculated to test the research hypotheses. The study findings on lesson observation and students' academic achievements indicated that there is a positive weak correlation between lesson observation and student academic achievements. A coefficient of 0.243 indicates that when lesson observation increases, there is a tendency for student academic achievement to improve, albeit not very strongly. The research findings will benefit the TSC in ensuring that lesson observation is carried out more frequently so as to boast learners' academic performance.
Keywords: *Effectiveness, Teacher performance appraisal and development, Secondary education, Lesson observation*

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Introduction

According to (Van de Grift, 2007) Lesson observation is a process of checking what the teachers are teaching and what the learners are learning in order to obtain conventional goals of education which are knowledge, skills, attitudes and values. Likewise paying attention to what is being conducted in the classroom that is whether teachers are teaching properly, and giving imminent monitoring and positive reinforcement in an institution to enhance teaching and learning process.

Lesson observation planning is the practice in which a lesson is observed to assess the quality of teaching to ensure students are receiving the most effective learning experience. Lesson observation is used for measuring behavior from direct observation. Any teacher can be subjected to a lesson observation and it can be conducted by fellow teachers, deputy principals, principals or external parties. These are implemented in majority of the schools and enforced by external parties. Lesson observation planning is treated as a desired tool which gives the desired result of professional development which is used throughout a teacher's career.

Lesson study is an entire set of processes which are planned solely on the basis of student learning and in which participant teachers are cognitively, socially, effectively and kinetically developed by doing lesson in a collective manner, the teachers are engaged in planning the lesson, conducting and assessing them in a classroom setting in form of lesson observation (Fernandez & Yoshida 2004). According to Yoshida and Jackson (2011) there are designed stages in which a lesson observation is to be conducted as follows: preparing a more detailed lesson, participant observation of the practice of the lesson and following the observation, discussing the learning and instruction aspects of the lesson. Though the modes of exercise in the study of the lesson may be different on account of differences in culture, the essential stages and elements of the process remain unchanged (Murata, 2011).

The teachers before lesson study have to prepare by planning and preparing (Weeks, 2001) then seek ideas from the lesson after going through previous observations of learners, teacher manuals, course books and other books related to the lesson (Fernandez & Yoshida, 2004). During this stage the challenges learners experience are identified in advance. Students' learning styles and behaviors,' collecting facts on students learning, thinking and class participation.

In the implementation stage, the teacher who has prepared the lesson goes to class to teach while other teachers observe (Lewis, Gillis, & Lange 2004). Observer teacher writes detailed notes about the lesson by using the lesson plan and other documents like the observation form and worksheet which had been prepared in advance. The observer teacher has the opportunity to see situations which would not be observed when they teach the lesson themselves and give ideas on how learners think, react, what they speak with one another and under what situation do learners are confronted with setbacks (Lewis et al 2004).

The last stage is the evaluation of the lesson which was observed. This stage is called reflection and development by certain researchers (Weeks, 2001). The teachers share their observations, criticisms and recommendations in relation to the lesson (Fernandez & Yoshida, 2004; Doig & Groves, 2011). The feedback is done immediately so as to enable the participants to remember and express their observations regarding the lesson easily. The first person to make the evaluation is the teacher who was carrying out the lesson, he/she points out areas where the plan succeeded and where it failed and identifying the problem, then the observer teacher gives their views (Takalashi and Yoshida, 2004, Doig & Groves, 2011). Whatever is discussed is not the teacher but to develop the lesson (Saito, 2012). Teachers make adjustments in the plan by considering the problem encountered in the practice of the plan. The changes are made by focusing on the learners misunderstanding which are noted down during observation (Weeks, 2001). Murata (2011) described the stage as reflecting thoughts on the lesson by means of utilizing the collected data. It also gives experience and knowledge on the next lesson observation.

Lesson observation is meant to identify ways in which a teacher can enhance teaching and classroom management skills, reducing those things which prevent student learning so that they can achieve their best. Lesson observations planning are intended to give teachers feedback on how they can improve their ideas and techniques of teaching and provide further direction for continuous professional development. The academic performance is measured by the examination score of the student. Effective teaching and learning can only take place when a teacher and a student attend lessons on a regular basis where the teacher can be assessed. This attendance helps students to prepare well for examinations through class discussions, question and answer, individualized learning and teaching which lead to enhanced academic performance. According to Pascopella (2007) students who attend school on a continuous basis are more likely to succeed in their academic achievements.

Principals' use class attendance to track teachers if they are attending their lessons or not. The class secretaries are the ones in charge of class attendance registers and they mark as attended if the teacher attends the lesson and not attended if the teacher fails to do so indicating the time in and time out. Literature shows that if teachers attend their lessons without missing the students will have a close interaction with the teacher which improves their cognitive aspect of life. Lesson study is an approach which aspires to raise the achievements of learners through improvement of teaching practice (Meral Kandemir, 2018). Lesson observation process makes sure that teachers take into consideration students' learning process (Yarema, 2010). Furthermore, the exercise which backs up learner-based approaches enables students to be active throughout the lesson.

Observation should provide insight into the strengths and weaknesses of a teachers' practice and help identify training needs to induce complete prospects of both the teacher and the learner. The teacher is observed to make sure that they leverage the best workable learning environment and lessons befitting to the level of the learner. It should also watch over that teaching is centered on each and every study and no one is lagging in matters of the class.

De Garuwe (2012) in his study posits that national authorities depend on school supervision systems in monitoring the quality of schools with respect to academic performance of students in national examinations. He emphasized that observation of teaching and learning has the potential of improving performance of students and open avenues for development and growth of teachers professionally. Principals have the right away obligation of acting upon school goal setting, accomplishment of tasks and supervising curriculum implementation. Thus, they need to acquaint themselves with knowledge of effective instructional strategies for understanding instructional requirements of the learners as well as the teachers so as to effectively deal with rising necessities. According to Blankstein (2010), principals are bound to assist teachers to grasp instructional goals and work with them to enhance content delivery with clear recognition that what is learned by the students is critical.

Peretomode (2004) describes classroom observation as a function by which the educational leader could be of great encouragement in facilitating the teachers to advance their instructional technique, strategies or methods and the learning process of the learners. Usman (2015) in his inquiry found that regular instructional supervision techniques using sound supervision strategies such as checking notebooks of students, visiting classroom/ inspection by administrators of the school, examine lesson plans and notes written by teachers and inspecting record keeping of teachers have correlation with teachers' performance and student academic achievements in secondary schools.

Harris (2015) saw classroom observation has been essential to enhancing effective instructional enhancement programs as well as positive academic performance of learners. Good (2008) states that classroom observation assists beginning teachers with sufficient skills and knowledge to better their teaching consecutively through reflection and analysis, looking at varied interpersonal interactions among the teachers and those based on feedback from individual classroom or school.

According to the recent review by the Institute of Education Science on teacher's observation scores and students test scores shows little correlation which was concluded that teacher knowledge and practice as discussed by existence studies do not present strong and consistent student achievement (https://ies.ed.gov/ncee/pubs/20174010/pdf/20174010.pdf). The measure of effectiveness of teaching study shows that general observation scores had little and majorly insignificant correlations with test scores and correlation with scores on individual observation items also were little. Observations are basically about teacher practice. Supervision of instruction is the process of enhancing professional growth and development of teachers, the curriculum of the school and improving the techniques of teaching in the classroom through democratic interaction between the teacher and the supervisor (Okendu, 2012). In the opinion of Ukeje (2007), supervision of instruction helps to improve learning. Ukeje refers to instruction as interaction between persons, materials, ideas, performance and objects of the contrived curriculum environment. It is where the activities of the school interact between the teacher and the student as part of the school environment.

Research conducted in United States on teacher value added (Johnson, Limpscomb, Gill, Booker & Bruce 2014 & Chetty, Freedman & Rockoff, 2014 and in Latin America (Araujo, Carnairo, Cruz-Aguayo, & Schady, 2016) and (Bruns and Lugue 2014) observed that classroom practice has continually showed wide variation in teacher's practice and classroom level results even amidst teachers who teach the same school and the same grade and subject. Some years ago there was growing evidence that the quality of teachers' classroom practice, as measured through classroom observation, is necessary for student learning and other key results like student's socio-emotional skills. The influential large scale measures of effective teaching study in the United States observed that classroom observation, using three different instruments were foretell distractions i.e. individual teachers ability to bring about classroom-level learning gains (Kane and Staiger, 2012)

Other United States Researchers have also found that learners who interact with teachers have good scores in the class, classroom observation instrument have higher learning gains, better self- regulation and fewer behavioral problems (Grossman, Cohen, Ronfeldt, & Brown, 2014). The only research to date in a developing country

Araujo et al (2016) in Ecuador, gave the same findings. They noticed that one standard deviation increase in teacher's classroom quality measured by use of class observation instruments yielded in 0.11, 0.11 and 0.07 standard deviation (SD) higher student test scores in language, math and executive function.

Research inquiry in Latin America showed positive implication for school-level performance gains through wide distribution of good guidance of studies among institutions. Indeed the transfer of the skill so acquired amidst teachers in a school is a crucial approach in high-performing fast Asian systems like Japanese Lesson Study (Easton, 2008, Lewis et al (2004), Singapore (OECD, 2013) and Liang, (2011), Fullan, Watson, & Anderson, (2013). Fullan et al identified this as the creation of a Professional Learning Community (PLC) within the school. A provisional exploration of activity is that of raising and holding up the school level professional interaction between teachers may lead to better performance through four channels. First, the increment of the amount of transparency about varied teacher performance within a school can bring about personal responsibility or peer pressure to exert more effort towards improving their performance. Second, it can give teachers organized pedagogical or classroom management strategies that are distinctly related to their school context. Third, it can transfer knowledge through imitation exercise, which may be inherently more effective in supporting the adoption of new skills and attitudes than off-site, lecture-based training. Fourth, it can guarantee continuous support and reinforcement for the new behaviors from the school director and peers if the whole school is engaged in and committed to acknowledge differences in classroom effectiveness and weak extrinsic (salary, promotion, managerial oversight) incentives to reward improvements. Finally, if teachers would be able to better their classroom teaching strategies such as giving more of their time to instruction, shortcomings in teachers' mastery of content could reduce the implication in student learning (Bruns, Costa & Cunha, 2016).

A study in Chicago found positive gains due to teacher evaluation and their teachers agree that lesson observation was improving instruction (Jiang & Sporte, 2016). The report added that teachers in schools with a good organized and learning climate tend to have unique value added and observation scores. The value additions in scores aim at capturing student growth in test score, and take charge of measures of student challenges like poverty and previous achievements. Observed scores take hold of teachers' extent of instructional practice (Jiang & Sporte, 2016).

Bruns et al (2016) in their study on "can classroom observation and coaching improve teacher performance in Brazil," showed that the program increased teachers' use of class time for instruction significantly, by reducing time used in management of classroom and time off task. It also increased the use of questions by the teachers during the lesson. It encouraged continuous interaction through coaching programs that led to enhanced average results of the schools and reduced variations in teacher practice. Classroom observation research supported by world bank in Brazil and elsewhere (Bruns and Lugue, 2014) suggest that cessation by teachers to utilize class time well, high reliance on traditional "chalk and talk" teaching methodology, and being unable to maintain students' engagement may be crucial factors leading to repetition, dropout and low learning outcomes.

Many aspects of classroom instruction like conducting daily reviews, presenting new materials, conducting guided practice, giving feedback and corrective measures, coming out with separate practices and carrying out weekly and monthly reviews have been found to be significantly related to students' academic outcome. It is therefore not evident to what extent does this teacher lesson observation is effective in impacting on student academic achievement which is intended to be established by this inquiry.

Classroom observation when planned in a proper way can be a guide for teachers so as to shed light on their teaching practices and the observers can gain knowledge from others apparently from their teaching techniques. Classroom observations planning permit administrators and educators to make better schools as a whole and the classroom. Allowing your class to be observed and observing another teacher's class assists a teacher to describe instructional practice, evaluate inequalities existing for a group of students and improve one's own classroom instruction. The observers require training to be able to record information without bias and give constructive feedback to avoid misinterpretation of information. Also teachers need training to use the feedback to improve their own teaching. After being observed, the teacher should be able to construct what took place in the class, think about goals for the class and the specific class session that was observed and ask for particular descriptions and constructive suggestions.

Lesson observation planning permits the observer teacher the opportunity to observe situations which they are unable to observe when they teach the lessons themselves and which provides ideas of how students think, how they react, what they talk about to each other and under what circumstances students are confronted with setbacks (Lewis et al, 2004). According to MeralKandemir, (2018) lesson observation is a method that strives at raising the student achievements by enhancing instructional practices. Though it emerged from the notion that teachers learn through the instruction process, its purpose is to ease the student learning rather than teachers' professional development (Isoda, 2010). The lesson observation process ensures that teachers focus specifically on students' learning process (Yarema, 2010). Further, the custom that upholds learner-centered approach permits students to be attentive throughout the lesson. Lesson observation planning is a professional development activity which puts the learner at the center and incorporates the activity-based instruction (Fernandez, 2002).

In Kenya lesson observation is one of the TPAD practices used to monitor teacher's professional performance and it includes the introduction and lesson development, content delivery, methods and techniques of teaching, involvement of learners and communication as well as management of the classroom (TSC 2020). After lesson observation the appraiser and appraise meet to discuss and get feedback from the lesson observed. The person who is appraising the other needs to create a conducive environment which is crucial for the appraisee to get the feedback from the process of appraisal; which would impact on performance in a positive way (Wango, 2010). Nevertheless, Donaldson and Peske (2010) said that classroom observation is linked to certain problems such as lack of evaluation tools, short appraisal time, inadequate or lack of positive feedback and no or inadequate consequences aligned to evaluation.

According to the study carried out by Mulatya, Okoth and Mugambi (2022) on the influence of teachers' lesson observation appraisal practice on pupils' KCPE performance in public primary schools in Lower Yatta Sub-County in Kenya revealed that teachers' lesson observation appraisal practice promoted pupils KCPE performance. A gap exists as this study intended to include lesson presentation and participation of learner's which will enhance a broad body of knowledge on teachers' lesson observation and students' academic achievements. Also some school in Kerio Valley, teachers may plan for a lesson observation and cattle rustlers invade the schools which make learners vacate the school to seek for safety and may not return soon then the teacher may not carry out lesson observation or conduct it with a few students in class. This situation may not give the real picture of the effectiveness of lesson observation in the area. The study specifically tried to answer the following questions:

1. What is the status of lesson observation in public secondary schools in Elgeyo Marakwet County?
2. What is the effectiveness of teacher lesson observation planning on students' academic achievements in public secondary schools in Elgeyo Marakwet County?

I. Research Methodology

Research Design

This study is a mixed methods research design which employed both qualitative and quantitative approaches. Research design provides precise guidance for constructing the research, addressing essential research questions and producing answers to research problems (Creswell, 2014, Kombo and Tromp, 2011).

Target Population

This study targeted 127 principals of public secondary schools, 1527 teachers and approximately 9358 form three and four students from public secondary schools in Elgeyo Marakwet County whose students had sat for national examinations for the last five years (2017-2021) (Basic education statistics, 2019). The choice of this population to participate in the study was based on the fact that the principals provide leadership on monitoring TPAD while the teachers are the ones implementing the TPAD and the students assess teachers when implementing TPAD in classrooms. The principals, teachers and students were therefore the most preferred to provide an assessment of the practices used in implementation of TPAD which promote education and eventually giving expected outcomes.

The students are the key beneficiaries of education programs being conducted in schools and ought to be directed in guiding the instruction and studying activities (ROK, 2014). The target population is intended to give the information required to fill the questions of research pertaining to the effectiveness of teacher performance appraisal and development on students' academic achievements. Private secondary schools were not included in the research because they are not assisted by the government under any circumstances. The target population is presented in Table 1

Table1 Target population

Sub-County	Principals	Teachers	Students
Keiyo North	30	392	2514
Keiyo South	41	438	2350
Marakwet East	20	286	2189
Marakwet West	36	411	2305
Total	**127**	**1527**	**9358**

Source: Elgeyo Marakwet County Education Office (2023)

Sample size and Sampling procedure

Sample size refers to the item count selected from the universe that constitute the sample and sampling procedure is the technique the researcher adopted in selecting items from the sample. Samples are necessary for establishing the representativeness of the sample for generalizability. Sample size and sampling design are instrumental in making decisions on sampling relating to cost (Sekaran, 2010).

Elgeyo Marakwet County comprises four constituencies namely; Keiyo South, Keiyo North, Marakwet East and Marakwet West. This county has 127 public secondary schools of which 90 are Sub-County, 19 are County, 16 are Extra-County, and 2 National schools. For the study to be manageable and representative, a formula was adopted to decide the sample size which was 30 percent as proposed by Kombo & Tromp (2011). The formula was applied to obtain 40 out of 127 schools which are 27 Sub-County, 6 County, 5 Extra County schools and the two national schools thus giving a total sample of 40 public secondary schools in the county. To get the 40 schools from the four sub-counties the researcher used stratified sampling method of selection where the schools were grouped in line with the categories of schools, purposive sample for the national schools since they are only two, also stratified sampling was used to get Extra County, County and Sub-County schools then simple random sampling to obtain individual schools for this inquiry. The selected schools had approximately 1527 teachers who were randomly selected. Ten percent of 1527 gave a figure of 153 teachers. Since principals form part of the respondents in this study, 40 principals were selected purposively from the 40 schools sampled. The students were selected from a population of approximately 9358 form three and four students to form part of the respondents. The students' random sample was calculated using a random sample formula

Table2 Sample Size

Sub County	Principals	Teachers	Students
Keiyo North	10	38	94
Keiyo South	12	40	110
Marakwet East	6	35	82
Marakwet West	12	40	98
Total Sample Size	**40**	**153**	**384**

Instrumentation

The study utilized three instruments namely: teachers response questionnaire, students response questionnaire and interview guide for principals' to collect data from teachers, students and principals respectively from the selected schools on the effectiveness of TPAD that is intended to improve instruction and learning leading to enhancement in student academic achievement in public secondary schools in Elgeyo Marakwet County. The tools were designed purposely for this inquiry pertaining to the TPAD practices selected for this research which involves: teacher lesson observation, teachers' adherence to deadlines, comprehensive learning environment and teacher professional development. Both questionnaires and interviews were used to get the insight to the above practices because one tool would not give sufficient information.

Teachers and Students Response Questionnaire

To collect quantitative data, the researcher used a structured questionnaire, the researcher chose the questionnaire because it is economical to use, easy to administer and analyze data (Orodho, 2009). The questionnaire comprises descriptions of TPAD practices used in public secondary schools to enhance education and eventually result in improvement in students' academic achievements. Two questionnaires were constructed and utilized to gather information from the sampled teachers and students from the forty public (40) secondary schools. The purpose for using teachers is that they are implementers of TPAD while students are the consumers of the TPAD for enhanced academic performance and also they countercheck the response of teachers. Questionnaire is advantageous because it saves time and enable collection of data from a large population and also less costly.

Principals' Interview Guide

Interviews were carried out to gather information from the sampled principals in the selected public secondary schools in the area of study. Seidman (2019) posits that the interview schedule assists in capturing verbal and non-verbal information which could be obtained through paying attention to participants being consistent in the interview process. This gives a wide understanding and discoveries on the inquiry. Mwangi (2009), postulates that interviews are aimed at giving an account from the participants on their involvement as commanders of a school. The interview guide assisted in complementing the questionnaire in gathering data in order to realize the goals of the study. The interview guide gives a chance for gathering data which is comprehensive and thorough, ascertains broad feedback rate and stimulates the naturalist of the circumstance because the researcher interacts one on one with the participants. The interview guide does not limit the inquirer to a particular question therefore enabling quick revision of the tool to get the emerging information and the inquiry carried out with an analytic mind.

Interview schedule has a disadvantage in that only few cases of individuals provide information meaning that data of an individual study may not be generalizable to the numerous inhabitants while in quantitative research, data is gathered from a bigger universe hence enabling generalizations to be made. The quality of research work of an individual researcher depends on the skill applied on collecting data. Severity is very hard to assert, judge and determine the volume of data making exploration and explanations which consumes time. In this study the head teachers were able to give their opinions and thoughts on TPAD as an innovation used in their institutions to enhance education leading to improvement in student results in national examinations. The inquirer had the opportunity of probing more on current issues regarding TPAD.

Validity of research instruments

According to Cohen et al (2018) validity refers to the degree to which a research tool gauges what it asserts to quantify. To ascertain the content relevance of the questionnaire and interview guide, the researcher gave the instruments to the supervisors and the researchers in the department of educational management at the University of Eldoret. The research items were examined and substantiated by making sure that they were coherent and sufficient to gather the required information and if they included complete parts of inquiry. The questions and assertions were verified for their applicability with the exercises of TPAD which promote academic excellence and their consistency with the objectives of the study. The content validity depended on discretion of specialists in the study area. The study looked at the content validity and face validity.

Content validity is vital in research and includes effective measurement of various elements, behaviors and skills (Zohrabi, 2013). Content validity ensures that there is adequate representation of the set of items taken in the concept (Serakan, 2010). Taherdoost, (2016) narrates that content validity seeks to establish if the information collection instrument represents the content which is measurable and the instrument should be subjected to knowledgeable reviewers. Content validity considers getting contributions from experts and comments from the reviewers. Information from their report helped rewrite any unclear question and omitted those which were irrelevant. Varied research instruments were used to triangulate the findings and made them more valid.

Face validity refers to the assessment of the presentation and relevance of the instrument. It includes identification of research items relating to the appearance, relevance, and clarification. Specifically it assesses the style consistency, readability, formatting and the clarification of use of language in the tools (Taherdoost, 2016). Face validity was checked by the research experts in the school of education, department of management and policy studies. Construct validity was established by carrying out pilot study.

Reliability of the research instruments

Rezaee et al (2011) defined reliability as the extent to which a research instrument gives consistent results, that is if it gives steady measurements for a population, if executed separately at repeated times. Also, Creswell (2014) defines reliability as the degree to which a test measures consistently whatever it is measuring. An assessment tool is trustworthy if it yields dependable outcomes over a multiple trials (Orodho, 2009). To examine if the elements in the questionnaire were identical in meaning to the participants, give uniform information and assess time taken to execute the tools, pilot testing was implemented in two schools in Uasin Gishu County selected purposely which were not in the actual area of study but have the same characteristics as the ones in the main study area. The pilot study was intended at finding construct validity of the instruments. Then instruments were then revised. Re-testing was essential since it formed an assurance against the confusion in the tools and tested the truthfulness and genuinity of the study tools.

UNESCO (2005), allude that the aim of piloting is to establish if a questionnaire has been formulated in a way that will extract information needed from the respondents, allowing shortcomings in the questionnaire such as obscurities in expression of questions to be corrected, streamline language used, correct inappropriate responses categories for similar questions, it also involves examining whether items can be comprehended by

the participants, are in the level of respondents and give a consistent gauge of respondents ability. The interview guide was also pretested on the principals and the items were revised accordingly after being validated.

Data collection methods and procedure

The researcher before embarking on data gathering acquired a clearance from the university, then applied for permit from National Commission for Science Technology and Innovation (NACOSTI) which was taken to the County Director of Education of Elgeyo Marakwet County so as to be given permission to carry out the study in the area and an introductory letter was then obtained to be given to the sampled principals of public secondary schools within Elgeyo Marakwet County. The permission allowed the investigator to collect data. Questionnaires were issued to the respondent teachers and the students as a way of getting their responses; an interview schedule was used when the researcher was collecting data from the head teachers to get their views on TPAD practices as an innovation by TSC. The researcher distributed the questionnaires to the respondents and collected them immediately after the exercise to ensure efficiency in collection of the data. The researcher was conducting interviews with the principals' concurrently and filled the interview guide. The information gathered was scrutinized exhaustively, coherently, and dependably (Mugenda, 2008).

Data analysis procedures

According to Kombo & Tromp (2011), Data analysis is a translation of gathered unprocessed data into important information. In this study data was analyzed both qualitatively and quantitatively. Mugenda (2008), states that after unprocessed data is gathered in the ground, it must be unmarked, encoded, fitted into a computer and examined. The researcher was able to make sense of the information from results gathered during analysis. The quantitative data was collected using teachers' and students' response questionnaires to give descriptive statistics, which were analyzed using statistical package for social sciences (SPSS) version 28 program which yielded percentages and frequencies that were represented in statistical tables and figures. The data was used to run inferential statistics and test the research hypotheses. The inferential statistics techniques included correlation and regression analysis. Correlation and regression analysis is highly appropriate and beneficial because it enables the study to explore relationships, understand the strength and direction of relationships and building predictive models besides testing hypotheses. Correlation analysis allowed an examination of whether there is a statistical relationship between each element and specific educational outcomes. By calculating correlation coefficients, one comprehends not only if two variables are related but also the strength of the relationship and whether the relationship is positive (both increase and decrease together) or negative (one increase as the other decreases). Regression analysis is ideal for modeling the impact of multiple independent variables (teacher lesson observation, teacher deadline adherence, comprehensive learning environment, and teacher professional development) on a dependent variable (student academic achievement scores). Regression models allow for hypothesis testing regarding the significance of each factor. It can be determined whether changes in educational outcomes are statistically significant as a result of varying levels of teacher observation, meeting deadlines, learning environment and professional development thus supporting causal inferences under the right conditions.

The descriptive data in format of notes was acquired after questioning principals'. Descriptive data was scrutinized categorically whereby; responses were gathered into themes and the most prominent and frequent occurring response was assembled into the same themes as determined by the objectives. The first step of analyzing the quantitative data was to generate frequencies and percentages representing responses regarding the variables being tested. Second step was to reduce and organize the data where the researcher discarded all irrelevant results and used the valid result to populate the tables and generate the figures. Thirdly, the researcher used the frequencies and percentages to draw relevant tables that were used to summarize and present the study findings.

The researcher then drew conclusions from the voluminous information. The analysis mainly was on respondents' opinions pertaining to practices of TPAD and their influence on students' academic achievements. According to Mwangi (2009) through central coding procedure, the evolving classifications were assessed in comparison to established information and existing TPAD practices to recognize associations among groups and sub-groups. The main groups were determined and logically associated to the different groups from which evolving topics were orderly structured to match the objectives of the study. Likert scale was applied to measure the degree of agreement on some TPAD practices on students' academic achievements.

II. Findings

The analysis of effectiveness of teacher lesson observation planning on students' academic achievements in public secondary schools in Elgeyo Marakwet County, Kenya was analyzed in Table 3.

The study sought to find out if teachers are observed regularly. The findings indicate that 169(44.0%) of teachers at the sampled school are currently being observed while teaching. However, it is essential to admit

that 215(56.0%) of teachers are yet to be observed. Majority of the students agreed that teachers' lesson observation improves teacher-learner contact, close interaction with content as well as checking of student notes. However, they acknowledged that teachers are rarely observed in majority of the schools. It is admitted that teacher lesson observation, increases teacher-student contact hours which in turn result in high academic achievements of learners. The teachers who are not observed reduce their interaction with learners leading to low academic achievements.

Table 3 Effectiveness of Teacher Lesson Observation on Students Academic Achievements Students were asked if the following activities were carried out in their schools and the responses were presented in the Table 3

	Items Observed	Carried out		Not carried out	
		N	%	N	%
5	Teachers are observed regularly while teaching which promote our learning achievements	169	44.0	215	56
6	Teachers' lesson attendance enhances our academic achievements.	376	97.9	8	2.1
7	During lesson observation teachers check our notes making us interact well with the content	331	86.2	53	13.8
8	Teachers give regular assignments during lesson observation that help us improve our academic achievements	369	96.1	15	3.9
9	While being observed the teachers attend to individual students leading to improvement in their academic achievements	141	36.8	242	63.2
10	During lesson observation teachers identify and nurture learners abilities resulting in high academic achievements	212	55.2	172	44.8

On whether lesson attendance enhances learners' academic achievements, the data gathered from the students indicates that teachers at school exhibit a high level of commitment to their profession since their attendance rate to lessons is impressive at 376(97.9%). This demonstrates their dedication and consistency in setting a positive example to the students and increasing student interaction with content being taught resulting in high academic achievements. Harris (2015) in his study acknowledged that classroom observation is essential to enhancing effective instructional enhancement programs as well as positive academic achievements of learners. It is evident that classroom observations improve content delivery by the teachers and make improvements in weak areas which boost students' academic achievements.

The students were asked if teachers check their notes while being observed making them interact with the content. The analysis reveals that 331(86.2%) of teachers actively check student notes while being observed. This indicates a commendable effort in monitoring student progress and understanding. However, it is crucial to acknowledge the 53(13.8%) of teachers who do not engage in this practice, meaning that in some schools teachers teach without checking student notes and therefore they are unaware of what the students are doing and without notes students would not internalize the concepts taught resulting in failure in internal and external examinations. Through lesson observation students write notes which assist them to refer to and read during free time making them understand the concepts well. Encouraging all teachers to consistently review student notes can enhance the learning experience and help identify areas of improvement. The study also sought to establish whether teachers give regular assignments to students during lesson observation. The data demonstrate that 369(96.1%) of students at school are given regular assignments during lesson observation which help them improve their academic achievements. This shows a positive effort to stimulate active learning. Nevertheless, the small percentage 15(3.9%) of students who do not receive assignments should be addressed to ensure equal opportunities for all. Assignments serve as an effective tool for reinforcing concepts and promoting student engagement making teachers accountable to the teaching process thus resulting in high academic achievements of learners. This result concur with the findings by Yarema (2010) while studying mathematics teachers opinions of liability testing disclosed by means of lesson observation revealed that lesson observation makes teachers take into consideration students learning process, an area that requires significant attention.

Students were asked if teachers attend to individual learners during lesson observation and the findings showed that only 141(36.8%) of teachers while being observed actively attend to individual students leading to improvement in their academic achievements while the majority 242(63.2%), do not provide personalized attention. It is imperative to address this gap, as individual attention can greatly enhance students' understanding, motivation, and overall academic achievements. Recognizing and catering to the unique abilities of each learner is crucial for their holistic development. On whether teachers identify learnersabilities while being observed. The analysis indicates that 212(55.2%) of teachers actively identified learners abilities. However, there is opportunity for improvement, as 172(44.8%) of teachers do not follow up on their learners to identify and nurture their potential in academic achievements. Encouraging all teachers to adopt ways of identifying and nurturing learner abilities can foster a more inclusive and supportive learning environment and student engagement, it is evident that schools have several strengths to build upon.

The high attendance rate of teachers, regular checking of student notes, and the provision of assignments showcase the commitment of educators in their profession. However, areas such as teacher observations, individual student attention, and identification of learner abilities required further attention and improvement. This results are in line with the finding by Usman (2015), while studying past, present and future of educational system noted that regular instructional supervision techniques using sound supervision strategies such as checking notebooks of students, visiting classroom/ inspection by administrators of the school, examine lesson plans and notes written by teachers and inspecting record keeping of teachers have correlation with teachers' performance and student academic achievements in secondary schools. Observation of teaching practices plays a vital role in ensuring quality education. De Garuwe (2012) noted that national authorities depend on school supervision systems in monitoring the quality of schools with respect to academic performance of learners in national examinations. Increasing the frequency of observing teachers can offer significant feedback and opportunities for professional growth.

Correlation of Teacher Lesson Observation planning and Student Academic Achievements

One of the focal points of the research was the relationship between lesson observation and student academic achievements. The study sought to test the null hypothesis, H_{01}: There is no statistically significant relationship between teacher lesson observation and students' academic achievements in public secondary schools in Elgeyo Marakwet County. To find out whether the relationship was significant, the Pearson's correlation coefficient was done and the analysis revealed that there is a weak positive correlation of 0.242 between these two variables. Though the correlation is weak it is statistically significant at P-0.003. This suggests that effective lesson observation practices are linked to enhanced learners academic achievements, emphasizing the importance of this aspect within TPAD. The reported correlation results indicate a relationship between the variable "lesson observation" and "student academic achievements." Here is a breakdown of what the results imply:

Pearson Correlation Coefficient (r = 0.242): This value suggests a positive but weak correlation between lesson observation frequency/intensity and student academic achievements. A coefficient of 0.242 indicates that as lesson observation increases, there is a tendency for student academic achievement to improve slightly. The p-value is a statistical measure that helps to determine the significance of the results obtained from a hypothesis test. In this case, a p-value of 0.003 indicates that the results are statistically significant. This means that the probability of observing this correlation by chance (if there were no actual correlation) is very low (0.3%). Generally, a p-value less than 0.05 (5%) is considered statistically significant.

Table 5 Correlation between Teacher Lesson Observation and Student Academic Achievements

		Lesson Observation	Student Academic Achievements
Lesson Observation	Pearson Correlation	1	.242**
	Sig. (2-tailed)		0.003
	N	151	151
Student academic achievements	Pearson Correlation	.242**	1
	Sig. (2-tailed)	0.003	
	N	151	153

From these results, it can be concluded that there is a weak positive relationship between the frequency or quality of lesson observations and improvements in student academic achievement. Additionally, A p-value=0.003 implies that the relationship is statistically significant. This implies that schools that implement regular and thorough lesson observations may see a positive impact on student academic achievements supporting the value of this practice in educational settings.

III. Conclusion

The findings on teacher lesson observation and students academic achievement revealed a statistically significant weak positive correlation between these two variables. This suggests that effective lesson observation practices are associated with improved student academic achievements, emphasizing the importance of this aspect within TPAD. This model supports the conclusion that more frequent or thorough lesson observations are associated with slightly better academic achievements highlighting the relevance of this practice in educational system.

IV. Recommendation

The Teachers Service Commission should ensure that proper lesson observation is carried out in schools more frequently as opposed to once in a term to ensure that teachers get feedback in time and improve on areas which require attention thus promoting learners engagement and enhanced academic achievements.

References

1. Araujo, M., Carnairo, P., Cruz-Aguayo, Y., Schady, N. (2016). A helping hand Teacher quality and Learning outcomes in Kindergarten. BancoInteramericodeDsarrollo, Washington, DC Inedito.
2. Blackstein, M. (2010). *Failure is not an option:* six principles for making student success the only option.(2nd ed.). Thousand Oaks: Sage
3. Bruns, B., Costa, L., & Cunha, N (2016). Through the Looking Glass: can classroom observation and coaching improve teacher performance in Brazil.
4. Bruns, B & Lugue, J (2014). Great teacher: how to raise student learning in Latin America and the Caribbean, World Bank, 2014/10/28
5. Chetty, R., Freedman, N., & Rockoff, E. (2014). "Measuring the Impact of Teachers': Evaluating Bias in Teacher Value-Added Estimates." *American Economic Review, Vol.2014 No. 9. Pp .2593-2632.*
6. Cohen, L., Manion, L. & Marrison, K. (2018). Research Methods In Education. New York: Routledge.
7. Creswell, J. (2014). Educational Research: Planning, Coordinating and Evaluating Quantitative and Qualitative Research (4thed). Boston. Ma.
8. De Garuwe, K. (2012). Influence of Instructional Supervision on Students' Performance in Delta State: Lagos.
9. Donaldson, M, & Peske, G (2010). Supporting effective teaching through teacher evaluation: A study of teacher evaluation in five charter schools. Washington, DC: Center for American Progress.
10. Easton, B (2008). From professional development to professional learning. Phi Delta Kappan, 89 (10), 755.
11. Fernandez, C. & Yoshida, M. (2004).Lesson Study: A Japanese approach to improving mathematics teaching and learning. Mahwah: Lawrance Erllbaum Associates.
12. Fullan, M., Watson, N., & Anderson, S. (2013). Ceibal; Next step. Toronto: Michael Fullan Enterprise, http://www.Ceibal.org.ur/docs/FULLAN-Ceibal-Englishpdf.
13. Good,T. (2008). The definition of supervision and relationship with monitoring quality. London Oxford University.
14. Grossman, P., Cohen, J., Ronfeldt, M. & Brown, L. (2014). The Test Matters: The relationship Between Classroom Observation Scores and Teacher Value Added on Multiple Types of Assessment. http://er.aera.netat Pennsylvania State University.
15. Harris, B. (2015). Supervisory behavior in education. Englewood Cliffs, New Jersey: prentice-Hall, Inc, Ianna. *Journal of interdisciplinary studies, Vol.3, No.2,202*
16. Isoda, M. (2010). Lesson study: problem solving approaches in mathematics education as a Japanese experience. International conference on Mathematics Education Research, 8, 17-27.
17. Jackson, C., Kirabo, J., Rockoff and Staiger. (2014). "Teacher Effects and Teacher Related Policies" Annual Review of Economics. 6:34. 1-34.
18. Jiang, J., & Sporte, E. (2016). Teacher Evaluation in Chicago. Difference in observation and value added scores by teachers', students, and school characteristics.
19. Kane, T & Staiger, O. (2012). "Estimating Teacher Impacts on Student Achievement: An Experimental Evaluation," working paper 14607, National Bureau of Economics Research, Cambridge, MA.
20. Lewis, K., Gillis, L. & Lange, D. (2004). *Who says you can't take it with you?* Transferring transitive memory systems across tasks. Academic management Best Paper Proc. Settle. WA, *A1-A6*
21. Meral Kandemir, E. (2018). Impact of lesson study on student academic achievements. DersImecesi. Pamukkale University, Denizli.
22. Mulatya, E., Okoth, U., & Mugambi, M. (2022). Influence of Teachers Lesson observation appraisal practices on pupils' KCPE performance in public primary schools, Lower Yatta Sub-County, Kitui, Kenya. IOSR Journal for Innovation Education and Research, 10(7), 235-241.
23. Murata, A. (2011). Introduction: conceptual overview of lesson study. In C. Hart, A. Alston, S. & Murata A, (Ed). *Lesson Study Research and Practice in Mathematics Education, 1-12 Dordorecht: Sringer*.
24. Kombo, D., & Tromp, A. (2011). Proposal And Thesis Writing: An Introduction, Nairobi: Paulines Publication Africa Reprinted. New Delhi. New Age International (P). Ltd.
25. Mugenda, A. (2008). Social Science Research: Theory and Principles. Nairobi: Applied Research and Training Services.

26. Mwangi, M. (2009). The Role of School Leadership in Student Achievement In Kenya. Unpublished PhD Degree Thesis. Case of Western Reserve University.
27. OECD (2013). Vol.1 Of Pisa 2012 Result: What Students Know And Can Do- Student Performance In Reading, Mathematics And Science. Paris:OECD Publishing.
28. Okendu, N. (2012). Introduction to educational planning. Port Harcourt; Prelyn Fortune Ltd.
29. Okumbe, A (2000). Educational Management. Theory and Practice. Nairobi: Nairobi University Press.
30. Orodho, J. (2009). Elements of Education and Social Science Research. Nairobi. Kanesja.
31. Pascopella, (2007). The effect of attendance on student academic performance. An empirical study in Bangladesh University of Dhaka.
32. Peretomode, E. (2004). Introduction to educational administration planning and supervision. Lagos. Joja Educational Research and Publishers Ltd.
33. Rezaee, A., Abidin, Z., Abdullah, N. & Singh, K (2011). Learning Styles and Overall Academic Achievements In A Specific Educational System. International Journal Of Human And Social Science, Vol.1 No.1.
34. Republic Of Kenya (2014). National Education Sector Plan (NESP) Nairobi: Ministry Of Education, Science and Technology.
35. Saito, E. (2011). Key issues of lesson study in Japan and the United States: a literature review of professional development in education, 38 (5) 777-789. Doi.10.1080/19415257.2012.668857.
36. Seidman, I. (2019). Interviewing As Qualitative Research: A Guide for Researchers In Education And Social Science. New York: Teachers College Press.
37. Serakan, U. (2010). Research Methods for Business. A Skill Building Approach. 4th Edition Carbondale: John Wiley and Sons.
38. Taherdoost, H. (2016). Validity and Reliability of the Research Instruments: How to Test the Validation Of Questionnaires/ Surveys In A Research. International Journal of Academic Research in Management, 5(3), 28-36.
39. Takahashi, A. and Yoshida, M (2004). Idea for establishing lesson study communities. Teaching Children Mathematics, 10(9), 436-446.
40. TSC (2020). Teacher performance appraisal tool: Teachers Service Commission, Nairobi.
41. Ukeje, K. (2007). Educational Administration: Theory and practice. Owern: Totan publishers Ltd.
42. UNESCO, (2005). Quantitative Research Methods in Educational Planning. Http://Www.Sacmeq.Org.
43. Usman, O. (2015). The Nigerian educational systems, past, present and future. Lagos. Thomas Nelson Ltd.
44. Van de Grift, W. (2007). Quality of teaching in four European countries: A review of the literature and application of an assessment instrument. Education research, 49(2), 127-152.
45. Wango, G. (2010). School Administration and Management Quality Assurance and Standards in Schools, Jomo Kenyatta Foundation, Nairobi, Kenya.
46. Wanyama, M. (2013). School Based Factors Influencing Student's Performance at Kenya Certificate of Secondary Education in Narok North District, Kenya.
47. Weeks, D. (2001). Creating happy memories. North West Teacher, 2(2), 6-11
48. Yarema, C. (2010). Mathematics Teachers' Views Of Accountability Testing Revealed Through Lesson Study Mathematics Teacher Education And Development, 12 (10, 3-18.
49. Yoshida, M. & Jackson, W. (2011). Ideas for Developing Mathematics Pedagogical Content Knowledge through Lesson Study. In Hart, L, Alston, A. & Murata, A (ed), Lesson Study Research and Practice.
50. Zohrabi, M. (2013). Mixed Method Research: Instruments, Validity And Reporting Findings. Theory and Practice In Language Studies. 3(2), 254-262. Academic Publisher.