

**INFLUENCE OF PRINCIPALS' INSTRUCTIONAL TIME
MANAGEMENT ON STUDENTS' COMPLETION RATES IN
PUBLIC TECHNICAL TRAINING INSTITUTIONS IN
KIAMBU COUNTY, KENYA**

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ABSTRACT

Purpose of the Study: Principals adopt a variety of instructional time management practices in an effort to ensure that technical training institutions achieve their educational goals. However, in Kiambu County, Kenya, students' completion rates in technical training institutions are low. The purpose of this study was to assess the impact of principals' instructional time management on students' completion rates in public technical training institutions in Kiambu County, Kenya.

Methodology: The study used a mixed methodology and concurrent triangulation research design. Qualitative data were analyzed thematically according to the objectives and presented in narrative form. Quantitative data were analyzed using descriptive statistics such as frequencies and percentages, as well as inferentially using Pearson's product-moment correlation analysis with the help of Statistical Packages for Social Sciences (SPSS) and presented in tables.

Findings: The study found that dropout rates among students in public technical training institutions have been high, leading to fluctuating students' completion rates. This is despite the principals' management of instructional time.

Recommendations: The study recommends that principals should ensure that the time intervals specified in the timetables are used for quality teaching, not just for checking the times of arrival and departure from class. The Ministry of Education should also develop a policy that requires principals to undergo training on how to effectively manage instructional time.

Keywords: *Principals' Instructional, Time Management, Students' Completion Rates, Public Technical Training Institutions, Kiambu County.*

INTRODUCTION

Principals play an important role in the realization of education objectives and quality education in technical training institutions by ensuring that students enroll and complete their training. Goddard and Leask (2012) posit that for higher completion rates among students in technical training institutions to be realized, principals' management of instructional time cannot be overlooked. Joseph and Jo (2014) assert that principals' instructional time management entails organizing and planning the effective use of tutors' time for instruction. Baker, Fabrega, Galindo, and Mishook (2014) compared time and wages and found that all productive effort should be measured by accurate time study and a standard time should be established for all work done in the college. This indicates that instructional time management is a systematic application of strategies and techniques to help tutors, employees, or any executive become more effective in both personal and professional life.

However, the extent to which instructional time management practices influence students' completion rates is yet to be fully explored. Students' completion rate is the ratio between the number of students who graduate from technical training institutions in a particular year and the number of students enrolled. Macgowen (2014) defines completion as the outcome of how many students within a cohort complete and graduate from technical training institutions, typically measured in two, three, or four years. Siti, Kung, and Haniz (2016) assert that technical training institutions where 75% and above of the student's graduate are considered to have attained high completion rates. Siti et al (2016) posit that high students' completion rate in education is crucial in a modern society since education is one of the most effective instruments a nation has at its disposal for promoting sustainable social and economic development. Despite these postulations, in the Netherlands, Germany, and the United Kingdom, students' completion rates are still low with many students dropping out of technical training institutions midway.

In Thailand, for instance, there has been a struggle on how to improve completion rates of students in technical training institutions from 56.7% to 80% (UNESCO, 2013). Zepeda and Mayers (2012) revealed that tutors usually have less time to teach. They reported that lunch, recess, breaks, down-time between lessons and activities, moving from one classroom to another, interruptions, and other periods of non-instructional time account for at least 27 percent of a college day.

Armstrong (2011) asserts that countries which ensure that tertiary institutions adopt effective instructional time management have their institutions register a progressive increase in completion rates;

Table 1: Global Students' Completion Rates

Countries	Students' Completion Rates from 2015 to 2018			
	2015	2016	2017	2018
United States of America	60.2	64.9	74.3	87.4
Germany	57.1	69.2	77.3	84.3
China	62.3	65.4	70.1	78.4
Colombia	53.8	57.7	61.8	69.9
Brazil	50.1	54.0	59.8	67.8
Finland	67.6	70.4	71.9	79.3
Canada	58.5	60.4	66.4	75.9

Effective management of instructional time is key to students' progression in tertiary institutions and colleges. In many countries in Sub-Saharan Africa, students' completion rates are used as a measure of internal efficiency and quality output in education. Moswela (2010) asserts that principals' instructional supervision is the key to successful completion rates among technical training institution students. Canady and Retting (2012) state that economic use of time includes the efficient use of the time of all employees in the college, such as the principal, tutors, and students. Fredrick and Walberg (2010) came up with instructional time management strategies to help principals and tutors control time, such as outlining priorities and goals, delegating, and controlling visitors. Bloom (2010) asserts that tutors who are perpetually racing against time are seldom the most effective and that thinking is one of the most positive uses of time.

In a study conducted in Tanzania, Worthen and Sailor (2011) suggested that for proper time allotment, tutors need to know how to spend their time and not how they think they can spend their time. They also asserted that tutors should make time work for them by analyzing, planning, setting priorities, delegating, concentrating on the problem at hand, and deadlining. Ngando (2011) emphasized that to analyze tutors' time, they must have an activity log and plan their time in such a manner that they have time to plan. In other words, tutors must learn how to set priorities. The National Education Sector Strategic Plan of 2018-2022 outlines the critical steps necessary for provision of quality education in technical institutions, one of which is effective time management strategies. Principals have been tasked with the responsibility of supervising tutors' instructional time management. In Kiambu County, many technical training institutions have low students' completion rates. According to Magondu (2011), many technical training institution principals lack the time for and an understanding of their students' completion rates. However, despite the steady growth in completion rate in both secondary and technical training institutions, there are still a high number of students not completing their tertiary education. A report by KIPPRA (2016) shows that the completion rate from Form I to Form IV is above 85.0 per cent, while those who complete their tertiary education is 42.69 per cent. This is a worrying trend bearing in mind that, by 2015, the country was expected to meet the call for Education for All. Another report by the Ministry of Education (2019) also indicates public technical training institutions in Kiambu County have registered low students' completion rates compared to national statistics;

Table 2: Students' Completion Rates

Year of Completion	Students' Completion Rates	
	Kenya	Kiambu County
2015	43.1	13.7
2016	44.9	12.5
2017	46.8	11.9
2018	42.9	10.8

Data in Table 2 paint a picture of a declining trend in the number of students who complete their tertiary education in Kiambu County. To mitigate this challenge, measures such as time management have been undertaken. Muli (2013) opines that the amount of quality instructional time is one of the most powerful variables in determining student learning. However, adhering

to classroom schedules has not always been easy, as students, administrators, visitors, and other interruptions often compete with the limited time given to tutors for instruction. In a study conducted in Kiambaa Sub-county, Nelson (2012) found that educational timetabling problems involve scheduling a number of meetings among different resources without them overlapping, so that a suitable tutor is available for a particular subject class at a given time. Nelson (2012) indicated that such activities consume instructional time. However, much still needs to be done, since Muli (2013) and Nelson (2012) have not indicated how instructional time management activities adopted by college principals influence students' completion rates.

STATEMENT OF THE PROBLEM

Principals play an important role in providing instructional leadership by adopting effective time management practices aimed at ensuring that technical training institutions realize educational objectives and curriculum goals. However, in Kiambu County, students' completion rates in technical training institutions are low. According to the Kenya Institute for Public Policy Research and Analysis (KIPPRA), the completion rate in technical training institutions in Kiambu County is 10.69% (KIPPRA, 2016). As shown in Table 2, completion rates among students in public technical training institutions in Kiambu County are on a downward trend. Despite these statistics, few empirical studies have examined the extent to which principals' management of instructional time influences students' completion rates in technical training institutions, hence the need for this study.

OBJECTIVE OF THE STUDY

- i. To assess the status of students' completion rates in public training institutions in Kiambu County;
- ii. To establish how principals' instructional time management influences students' completion rates in public technical training institutions in Kiambu County.

THEORETICAL FRAMEWORK

The study was guided by a theory of supervisory practice postulated by Sergiovanni (1982). This theory states that a supervision system that is based on theoretical foundations and conforms to the guidelines for developing a theory of practice contributes to the implementation of curriculum objectives. By identifying standards for quality instruction and specific teaching behaviors that correspond to the theoretical dimensions, it ensures that the

results of art instruction are well within the control of classroom tutors and are consistent with the theory of learning. This theory was designed to improve instruction and the quality of classroom life through the integration of scientific, artistic, and clinical supervision methods. Scientific methods are used to identify facts and descriptions of instruction by focusing on the observed behaviors of tutors and students.

The principal's role as the supervisor in initiating, implementing, and maintaining academic programs in colleges is significant. In many learning institutions, supervision for the purpose of improving or managing accountable instruction is the responsibility of principals and classroom tutors.

In the context of this study, this was relevant in that it provided the three aspects of instructional supervision for principals: directional, collegial, and non-directional approaches. This theory was applicable because the principal is the chief supervisor in colleges and has the responsibility to oversee all the educational processes for the purpose of achieving the academic goals of the colleges. This theory places the principal as the person who teaches truths about the absolute standards and provides direct control to tutors. In other words, supervision is developmental by nature, so principals encourage and involve tutors in planning for instructional supervision in the college.

RESEARCH METHODOLOGY

The study used a mixed methodology and concurrent triangulation research design. The target population was 30 principals, 578 tutors, and 600 student leaders, for a total of 1,208 respondents. The study used Yamane's formula to sample 300 respondents. Stratified sampling was used to create four strata based on different categories of TVETs in Kiambu County. Four principals were selected from each category of TVET using purposive sampling. Fifteen tutors and 56 student leaders were selected from each category of TVET using simple random sampling. The researcher sampled 16 principals, 60 tutors, and 224 student leaders. Questionnaires were used to collect data from tutors and student leaders. Interview guides were used to collect data from principals. A documentary guide was also used. Qualitative data were analyzed thematically along the objectives and presented in narrative forms. Quantitative data were analyzed using descriptive statistics such as frequencies and percentages, as well as inferentially using Pearson's product-moment correlation analysis with the help of Statistical Packages for Social Sciences (SPSS).

RESULTS AND DISCUSSIONS

The response rate for principals was 87.5%, for tutors it was 81.7%, and for student leaders it was 98.2%. The average response rate across all three groups was 94.3%, which is considered to be an acceptable level for generalization of the results to the target population. According to Creswell (2014), an acceptable response rate for generalization of the results to the target population is considered to be 60% or higher. The average response rate of 94.3% in this study is well above this threshold, suggesting that the results of the study are likely to be representative of the target population.

Status of Students' Completion Rates in Public Technical Training Institutions

The study gathered information on students' completion rates (measured in percentages, %) from public technical training institutions. Results are shown in Table 3.

Table 3: Students' Completion Rates in Public Technical Training Institutions in Kiambu County

Students' Completion Rates (%)	Academic Years				
	2016	2017	2018	2019	2020
	%	%	%	%	%
50-60	4.2	4.1	3.8	3.1	2.3
60-70	66.1	59.6	31.8	25.6	20.4
70-80	27.8	32.9	56.3	62.4	67.5
80-90	1.3	3.4	6.7	7.0	7.7
90-100	0.6	0.9	1.4	1.9	2.1

Table 3 shows that in 2016, most public technical training institutions (66.1%) registered students' completion rates between 60% and 70%, 27.8% between 70% and 80%, 1.3% between 80% and 90%, 4.2% between 50% and 60%, and a paltry 0.6% between 90% and 100%. This indicates that students' dropout rates were high, as most public technical training institutions registered completion rates between 60% and 70%. In 2017, students' completion rates showed a slight increase, with 32.9% between 70% and 80%, 3.4% between 80% and 90%, and 0.9% between 90% and 100%. The rates between 50% and 60% decreased to 4.1%, and the rates between 60% and 70% increased to 59.6%. Similar trends have been observed in the following years. In 2018, slightly more than half (56.3%) of public technical training institutions registered students' completion rates between 70% and 80%, 31.8% between 60%

and 70%, 6.7% between 80% and 90%, 1.4% between 90% and 100%, representing an increase in students' completion rates.

However, the number of technical training institutions with low completion rates (between 50% and 60%) decreased to 3.8%. The same trend was observed in 2019 and 2020, with a majority of technical training institutions (62.4% and 67.5%) registering students' completion rates between 70% and 80%, with a slight increase in completion rates between 80% and 90% and between 90% and 100%. Despite this progressive increase in the number of students completing their college education, many public technical training institutions are still not able to achieve students' completion rates of over 90%.

This is despite the efforts made by government agencies to ensure that students who enroll in college complete their education, regardless of their socio-economic status or other factors.

Principals' Instructional Time Management in Technical Training Institutions

The study sought to establish how principals undertake time management activities and how it influences students' completion rates in public technical training institutions. Data were collected from student leaders and results are shown in Table 4;

Table 4: Views of Student Leaders on Principals' Instructional Time Management in Technical Training Institutions

Summary of Test Items	SA %	A %	U %	D %	SD %
Principals of public technical training institutions ensure that tutors adhere to time-table during instruction	58.6	18.6	4.1	10.5	8.2
In public technical training institutions, the principals ensure that adequate time is allocated to different tasks	61.8	17.7	4.5	10.9	5.1
Principals of public technical training institutions ensure that proper planning is done to minimize instructional time wasters	70.0	10.9	3.2	11.4	4.5
In public technical training institutions, tutors rarely utilize instructional time as allocated in the time table	25.5	5.0	3.6	55.0	10.9
In public technical training institutions, the principals have not ensured that time for instruction is adequate	19.1	7.3	5.5	58.2	9.9

Table 4 reveals that 58.6% of student leaders strongly agreed that principals of public technical training institutions ensure that tutors adhere to the timetable during instruction, while 18.6% agreed. Only 4.1% were undecided, 10.5% disagreed, and 8.2% strongly disagreed. Most (61.8%) strongly agreed that principals in public technical training institutions ensure that

adequate time is allocated to different tasks, while 17.7% agreed. However, 4.5% were undecided, 10.9% disagreed, and 5.1% strongly disagreed. Majority (70.0%) strongly agreed that principals of public technical training institutions ensure that proper planning is done to minimize instructional time wasters, while 10.9% agreed. However, 3.2% were undecided, 11.4% disagreed, and 4.5% strongly disagreed. This was affirmed when only slightly more than a quarter (25.5%) of student leaders strongly agreed that tutors in public technical training institutions rarely utilize instructional time as allocated in the timetable, while 5.0% agreed. However, 3.6% were undecided, more than half (55.0%) disagreed, and 10.9% strongly disagreed. During interviews, principals and tutors echoed the views expressed by most of the student leaders.

They stated that a master timetable guides how teaching and learning is undertaken in technical institutions, with the principal ensuring stricter adherence to the allocated time. Principal P1 stated:

In my institution, I ensure that all tutors adhere to instructional time as scheduled in the master time table to allow smooth flow of teaching and learning activities. In my absence, my deputy takes charge and class representatives (student leaders) have been given class attendance sheets to record when tutors arrive for teaching and when they leave.

These views were supported by the tutors who noted that one can rarely miss a lesson as there are enough strategies put in place by the principals. Tutor, T1, noted;

In my institution, it is not very easy to miss a lesson or fail to adhere to the instructional time as set in the master time table. My principal constantly monitors instructional activities including involving student leaders who are provided with attendance lists to take note when a tutor arrives in class to teach and when he or she leaves.

This corroborates the assertions of Barbara (2013) that management of instructional time is crucial since it involves getting the important academic activities done. According to Barbara (2013), time management is the thread running through almost all aspects of teaching, that is, organizing the day, organizing the classroom, deciding how long and how often to teach various subjects, recording student progress or keeping time-consuming behavior problems to a minimum. Barbara (2013) found that, in institutions where instructional time management rules are adhered to, there is efficient classroom organization and management. These findings point to the fact that prudent management of instructional time is considered by different

stakeholders as paramount to the academic success of every learning institution. It reduces too much paperwork, improves planning, helps in establishing routines that eliminate wasted time and confusion.

However, only 19.1% of the student leaders strongly agreed that, in public technical training institutions, the principals have not ensured that time for instruction is adequate whereas 7.3% agreed. On the contrary, majority (58.2%) disagreed whereas 9.9% strongly disagreed. On the contrary, principals noted that they have often planned effectively for the available time with much time allocated for classroom instruction activities. Principal, P2, affirmed;

Out of the eight working hours, instruction activities are often allocated six hours whereas other activities take up the remaining two hours. Even past the time allocated for instruction, my students are either in the library studying, revising or doing assignments.

Tutors also supported the views expressed by the principals that time allocated for instruction is always adequate through planning. Tutor, T2, observed;

In as much as time may not be enough for all activities, amount of time allocated for instruction is much more compared to other activities within the institution

Despite the contradicting viewpoints, these findings are indicative of the value of time for instruction and how prudent planning as well as utilization of the available time is crucial for students' success and eventual completion of their learning programmes. This implies that principals together with tutors ought to make time work for them by analyzing, planning their time, setting priorities and establishing balances, delegating, concentrating on the problem at hand and setting of deadlines.

Inferential Analysis

To further ascertain the relationship between principals' instructional time management and students' completion rates, data were collected from the 14 technical institutions on how often (Very Often = 5, Often = 4, Sometimes = 3, Rarely = 2 and Never = 1) principals monitor whether tutors adhere to time tables or not and students' completion rates from such institutions for the last five years (2017-2021). Results are shown in Table 5.

Table 5: Principals’ Instructional Time Management and Students’ Completion Rates

Frequency of Monitoring of Tutors’ Adherence to Time Tables	Students’ Completion Rates (%)				
	2017	2018	2019	2020	2021
1	48.03	58.82	52.14	49.03	36.15
3	82.11	77.86	61.08	53.89	51.58
3	81.00	71.56	54.91	49.93	63.57
1	79.03	69.73	54.89	46.85	57.66
2	82.09	76.91	48.98	46.00	54.75
2	77.23	68.74	42.89	55.68	61.75
4	81.41	63.03	59.93	49.88	44.05
2	41.21	67.04	51.41	51.00	51.55
4	88.07	93.93	70.85	65.79	60.99
5	74.29	68.12	64.08	74.02	59.12
5	92.59	89.77	68.99	56.69	69.59
4	93.87	75.73	69.91	70.09	67.81
1	57.01	65.84	54.04	58.81	38.92
2	82.97	69.14	50.94	52.78	47.86

Table 5 shows that monitoring how tutors utilize time and adhere to schedules is key for the improvement of students’ completion rates. In other words, principals who frequently monitor whether tutors in their institutions adhere to instructional time plans, have their institutions register higher students’ completion rates. Just as Barbara (2013) noted, constant monitoring of instructional time use by tutors is important it helps in deciding how long and how often to teach various subjects and that no amount of time is wasted. The data above were run in the Pearson’s Product Moment Correlation Test Analysis and results are shown in Table 6:

Table 6: Correlation Analysis

		X3	B	C	D	E	F
X3	Pearson Correlation	1	.587*	.533*	.779**	.622*	.596*
	Sig. (2-tailed)		.027	.050	.001	.018	.025
	N	14	14	14	14	14	14
B	Pearson Correlation	.587*	1	.638*	.504	.267	.669**
	Sig. (2-tailed)	.027		.014	.066	.356	.009
	N	14	14	14	14	14	14
C	Pearson Correlation	.533*	.638*	1	.624*	.310	.663**
	Sig. (2-tailed)	.050	.014		.017	.280	.010
	N	14	14	14	14	14	14
D	Pearson Correlation	.779**	.504	.624*	1	.644*	.435
	Sig. (2-tailed)	.001	.066	.017		.013	.120
	N	14	14	14	14	14	14
E	Pearson Correlation	.622*	.267	.310	.644*	1	.388
	Sig. (2-tailed)	.018	.356	.280	.013		.170
	N	14	14	14	14	14	14
F	Pearson Correlation	.596*	.669**	.663**	.435	.388	1
	Sig. (2-tailed)	.025	.009	.010	.120	.170	
	N	14	14	14	14	14	14

Table 6 shows a Pearson Product Moment Correlation Test Analysis, which generated correlation coefficients of $r_1 = 0.587$, $r_2 = 0.533$, $r_3 = 0.779$, $r_4 = 0.622$, and $r_5 = 0.596$. The corresponding significant levels (p-values) of 0.027, 0.050, 0.001, 0.018, and 0.025 were all less than the predetermined level of significance of 0.05. This means that there is a significant influence of principals' instructional time management on students' completion rates in public technical training institutions. As noted earlier, prudent management of instructional time is considered by different stakeholders to be paramount to the academic success of every learning institution. The results of this study provide empirical evidence to support this claim.

CONCLUSIONS

From the study findings, dropout rates among students in public technical training institutions have been high which has led to fluctuating students' completion rates. Though there has been a progressive increase in the number of students who complete their college education, many public technical training institutions are yet to ensure that they achieve students' completion rates of over 90%. In the meantime, principals undertake instructional time management activities which influence students' completion rates in public technical training institutions. These include: Ensuring that tutors adhere to time-tabling requirements during instruction. Allocating adequate time to different tasks. Properly planning to minimize instructional time wasters. This implies that management of instructional time and planning which goes into it plays an important role in improving students' completion rates in technical training institutions.

RECOMMENDATIONS

As a practice, the study recommends that principals should ensure that the duration set in time tables are utilized for quality teaching and not just checking the times for arrival in class and when one leaves. As a policy, the Ministry of Education should formulate a policy which requires principals to undertake a training on how to undertake instructional time management.

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