Effects of Quality of Supervision on Postgraduate Students Completion Rate in University Campuses in Uasin Gishu County, Kenya

By

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Abstract
Despite immense importance of postgraduate education, students take too long to complete their studies and sometimes drop out. The study investigated whether the low and late rate of completion was due to quality of supervision. The following research question guided the study: Is there a relationship between the quality of supervision and completion rate of postgraduate students in university campuses in Uasin Gishu County, Kenya? The study used contingency theory proposed by Gatfield, (2005). Probability sampling technique, mainly simple random sampling, cluster sampling and systematic sampling was used. The sample size consisted of 5 university campuses, 5 Directors of university campuses, 20 supervisors of postgraduate students, 50 postgraduate students who had completed course work and 50 graduates. The instruments for collecting data were questionnaires and document analysis schedule. The data was analyzed using descriptive statistics then presented using tables and graphs. Hypothesis was tested through simple linear regression. The study findings indicated that the level of significance was 0.000, therefore, there was relationship between the quality of supervision and the completion rates of postgraduate students. The study recommended that postgraduate students need to do highlighted corrections accordingly using written reports given by the supervisors to enhance quality of supervision. Postgraduate students also need to respond to feedback within a period of four weeks to avoid prolonged completion rates. Based on the findings policy makers will identify strategies and re-define the policy framework on provision of quality supervision to ensure timely completion of postgraduate studies in universities and identify the gaps that need further research.

Key words: quality of supervision, completion rates, postgraduate students
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Introduction

The quality of supervision referred to the provision of prompt and effectively communicated feedback from the supervisor in terms of meeting the students’ expectations. It included the number of meetings that took place between the supervisors and the student. Alam (2013) in Australia defined supervision in terms of product service specifications conducted within the guidelines of research policies, maintaining certain standards to be achieved in order to meet customer legal requirements. Prompt and effective policy framework ensures appropriate quality of supervision.

Completion rate referred to the proportion of students who entered a postgraduate school program and those who completed it successfully as per number of years taken within the stipulated time. According to Cargo and Berkowitz (2003) in Canada, completion rate referred to the attainment of intended objective as per requirements set by given guidelines within a timeframe. The author revealed that among Canadian universities, 54% masters’ students that were admitted in 1992 in the school of humanities had graduated after 10 years. The finding was contrary to other universities who had 81% in the field of sciences. The author also established that 34% of PhD in humanities completed after 10 years.

The students who pursued masters and doctoral level left after 8 and 18 semesters respectively. The study revealed that there existed 2 patterns of exits without degrees. The patterns created alarming scenario to higher education systems. Despite postgraduate immense importance, the quality of supervision and completion rate was still not fully understood as is evident from several studies globally. For example, a study by Abdelhafez (2007) established that the quality of supervision was the main factor that determined the successful and timely completion of a PhD program. Regular supervision was strongly correlated with successful completion. The researcher was of the opinion that the nature of postgraduate students’ claims asserting that they complete course work timely and instead research work delayed their completion rate was investigated.

A study by Ngozi and Kayode (2013) in Nigeria, revealed that factors like supervision schedules, students interest and predisposition towards research work, delayed thesis. Too much commitment by both supervisor and supervisee also affected quality of supervision thus prolonging postgraduate completion rates. It was noteworthy that the colleagues who encouraged the researcher start the masters’ degree in 2012 since they were already master’s students in various university campuses in Uasin Gishu County, have yet to graduate 9 years down the line. Through peer group discussions, they claimed to associate their delay to supervisory processes. Delayed graduation processes result to waste of resources used during study period, as the economic growth at a personal level and at the society level not realized.
Many students who enrolled for graduate studies dropped out due to lack of funding because of the cuts in higher education budget. The completion rate was worrying, has undermined the country’s economy leading to frustrations and increased poverty in the entire nation. In Kenya Ronguno, Okoth and Akala (2016) found that public universities lacked qualified lecturers to supervise students in research work making students fail to complete their studies. The study revealed that in 2001 to 2015, 25.61% PhD students had managed to earn a degree by 2015 out of 984 enrolled. This was attributed to workload in supervisory process, job dissatisfaction among other related factors. The qualification and supervisory process was detrimental to quality of supervision prolonging completion rates of postgraduate studies.

Another study in Uasin Gishu county Kenya by Rugut (2017) revealed that sometimes the students could be busy with many responsibilities. This resulted in poor student-supervisor relationship. As a result, supervision took a long time for part-time students to complete their studies. Other students also withdrew from the university during the process of supervision. From the background, there was clear indication that quality of supervision was being compromised in university campuses. Postgraduate students were not graduating on time or dropping without completing their studies and if the trend continued there will be no trained and qualified supervisors in future to offer quality of supervision in universities and university campuses in Uasin Gishu County, Kenya.

1.2: Statement of the Problem
Despite postgraduates being so important and doctoral study being the apex of students’ academic careers, there are potential problems that affect completion rate. High attrition rates and inability for postgraduate students to complete their studies within a reasonable period of time in universities has led to questionable supervisory practices (Letseka & Pitsoe, 2014). The prolonged completion rates have led to students and parents disappointments, anger and frustrations of students who view themselves as failures when they take long to complete their studies. When the institutions fail to graduate enrolled postgraduate students it creates negative image of the university. Failure to graduate students in time leads to wastage of resources and underdevelopment in any society.

An audit report in Kenya by Oduor (2017) on universities unearthed shocking details of how some postgraduate students took years to complete their courses while others dropped out before completing the program. The report revealed that 50 out 76 audited universities had supervision frameworks while five had no quality tool. Despite the provision of policy framework, completion rates had not been well addressed. In cases where the supervision framework existed, their implementation was inhibited by lack of access to requisite documents by students and supervisors. Supervisors supervised theses outside their field thus misallocation of supervisors. From the reviewed studies, there was no study that had been conducted to examine the effects of quality of supervision on postgraduate students’ completion rate. Therefore, this study investigated and provided information on the effects of quality of supervision on postgraduate students’ completion rate in university campuses in Uasin Gishu County, Kenya.
Related Literature
Grant, Hackney and Edgar, (2014) found out three metaphors related; organization, coach and journey, which were critical perspectives towards professional student engagement. Advising, coaching, and monitoring were all part of the varied and complex process of completing a successful doctoral thesis. Not just being a scholar in the field, but also having an excellent professional relationship with the student was the most critical factor in successful postgraduate supervision. In many cases, it involved modeling good research practices, which also required encouraging all students regardless of the supervisor's personal opinions of their work and learning the craft of project supervision via trial and error. The researcher was of the opinion that the findings of the reviewed study were really vital for quality of supervision to ensure postgraduate students completion rates.

A study by Shariff1, Izzuwan, and Ahmad (2015) at Malaysia revealed that PhD candidates perceived that the most contributing factor was research skills, followed by supervision arrangements factor, followed by motivational factor, de-motivational factor and institutional factor. However, the PhD research work factor did not highly contribute to the timely completion of their PhD. From the findings in the reviewed study, it was clear that research work does not have any effect on completion rate of postgraduate students’ completion rates but research skills were paramount.

According to Rwejuna (2013) students failed to complete their studies on time as a result of inadequate examination feedback and lack of student dedication to their studies. The other factors stated included financial constraints, shortage of study materials, library materials, and problems. According to the researcher the outlined factors majorly need to be well addressed by supervisees through individual aggressive to be effective in ensuring assurance of timely completion of postgraduate studies.

One of the significant elements impacting time-to-degree and throughput rates was the quality of postgraduate supervision throughout the process and production of research work (Mukwada, 2014). Postgraduate supervision had many different forms and approaches, which were strongly influenced by the supervisors' research experience and how they were supervised. According to the researcher, experienced supervisor, regular trainings and induction courses on new pertinent issues were appropriate for quality of supervision. Where the supervisor experienced a kind of supervisory procedure and transferred the same process to supervise, the whole process of supervision could be distressing. It was vital to oversee the rightful process of research to get more sustainable completion rates. Ndayambaje (2018) in Rwanda highlighted three supervisory flaws that hampered PhD international students' timely completion. These included a lack of supervisor-supervisee interaction, insufficient technical guidance, and poor or delayed supervisor feedback. According to the researcher the supervision defects revealed in the reviewed study were really detrimental to quality of supervision. The factors definitely prolonged postgraduate students’ completion rates.

In Kenya, Rugut, (2017) revealed that sometimes the relationship between the supervisor and supervisee was fair in that there were times when they cooperated and times they conflicted. The author also noted that there were moments of supremacy or suggestion even though negotiation was at the center of the relationship. The negotiations strengthened the association between the student and the supervisor which created a harmonious working relationship. Lack
of proper negotiation created dissatisfaction and disagreement between the student and the supervisor. In cases where dissatisfaction and disagreement were experienced the completion of educational doctoral studies was extended. The researcher concurred with the study findings in the reviewed study in that where there was no harmony between the supervisee and the supervisor end result product was devastating.

According to Wambui, Ngari and Waititu (2016) in Kenya there was a positive relationship among supervision and completion rates. The authors pointed out that the quality of education had gone down in public universities in Kenya. Many lecturers had many years of teaching experience. Mbogo, Ndiao, Wambua, Ireri, and Ngala (2020) indicated that majority of the lecturers, were already enrolled in PhD programs with some having spent up to eight years, which is more than the expected period of three to four years. Students’ psychological, social, and financial well-being were impacted by the length of time it took to complete their PhD studies. It also harmed the universities where they teach in terms of human resource capacity. One of the key reasons for the delay was the difficulty of supervision faced by PhD candidates as they worked on their theses and dissertations with their supervisors.

Based on the findings, the study recommended that universities in Kenya should create and strictly enforce policies and address the issue of capacity regarding the number of supervisors’ vis-à-vis the students enrolled for PhD programs. This could be done by only admitting students where they have adequate number and competent faculty supervisors to supervise the dissertations. Supervisors should only accept manageable supervision workload considering the other responsibilities they have in the university so that they have time to effectively guide and mentor the students they are supervising. On the other hand, supervisees also need to be proactive by regularly consulting their supervisors and where feedback from supervisor has delayed beyond agreed or acceptable time frame, seek compensation from university authorities.

The Commission of University Education to review the regulation on student-staff ratios by universities and strongly enforce the guidelines on the number of students a supervisor can supervise at any one time. Based on the reviewed findings the factors attributed to delayed completion postgraduate studies were detrimental and frustrating to both students, supervisors hence lower down the social and economic status of the society. Therefore, it was against the background from the reviewed studies that the researcher established the relationship of quality of supervision, and completion rates of postgraduate students in university campuses in Uasin Gishu County, Kenya.

Methodology
The study used Ex post facto research design and targeted university campuses in Uasin Gishu County, Kenya. Probability sampling technique, mainly simple random sampling, cluster sampling and systematic sampling was used. The sample size consisted of 5 university campuses, 5 Directors of university campuses, 20 supervisors of postgraduate students, 50 postgraduate students who had completed course work, 50 graduates giving a sample size of 130. The instruments for collecting data were questionnaires and document analysis schedule. The researcher sorted assistance from her colleagues and supervisors who are experts in research who helped improve the content validity of the instrument results. The pilot study was administered at
an interval of two weeks using test-retest technique by use of the same research instruments to the same respondents from two university campuses who were not included in the study. To test reliability, Pearson product moment was used and the correlation co-efficient was 0.7. The data was organized, interpreted, analyzed using descriptive statistics including frequencies, percentages and means then presented using tables. Hypothesis was tested through simple linear regression.

**The findings of the study**

**The following were the findings of the study**

Majority of the respondents 61.05% said there was a relationship between the quality of supervision and completion rate always, 27.7% said sometimes and 10.8% said not at all. The researcher was of the opinion that the more the quality of supervision postgraduate students received determined their completion rates. The study findings were in agreement with the study by Mukwada (2014), whose findings revealed that the quality of postgraduate supervision through the process and production of research work was one of the important factors influencing the time-to-degree and throughput rates.

The study findings were also in agreement with the study by Ndayambaje (2018 whose overall findings revealed that there were three supervision defects that hindered the timely completion of PhD international students. These were limited level of supervisor-supervisee interaction, inadequate technical guidance from supervisors and poor or delayed feedback from supervisors. The study findings were in agreement with the attribution theory of achievement, motivation, and emotion by (Weiner, 1985). The theory stated that individuals were affected by causal ascriptions influenced by intrinsic and extrinsic motivation.

As a main tenet, behavior was attributed to internal or external causes on how individuals interpret events and how it related to their thinking and behavior. Consequently, if an individual believed that outside stimuli were responsible for events that occurred, it indicated external ascriptions to the cause of the event and vice versa. In relation to this study, how the supervisees attributed to internal or external factors for example supportive supervision, communication skills and managerial skills among other factors affected the quality of supervision which determined their postgraduate completion rates.
Table 1: Mean scores of quality of supervision and completion rate of postgraduate students and graduates as per the gender, level of qualification and type of university.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Mean scores of quality of supervision</th>
<th>Completion rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>38.48</td>
<td>27.2</td>
</tr>
<tr>
<td>Female</td>
<td>48.96</td>
<td>27.9</td>
</tr>
<tr>
<td>Level of qualification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters</td>
<td>50.37</td>
<td>28.9</td>
</tr>
<tr>
<td>PhD</td>
<td>31.92</td>
<td>18.6</td>
</tr>
<tr>
<td>Type of university</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>39.43</td>
<td>26.1</td>
</tr>
<tr>
<td>Private</td>
<td>51.89</td>
<td>29.6</td>
</tr>
</tbody>
</table>

Source: Field data (2021)

From Table 1 it was evident that the results revealed that male postgraduate students mean on quality of supervision was 38.48 and the completion rate was 27.2%. Female postgraduate students mean on quality of supervision was 48.96 and the completion rate was 27.9%. From the study findings, female postgraduate students had higher mean and completion rate than male, however there was minimal gender disparity on completion rates. From the study findings female students were more vibrant and determined in their work than male students. The study findings were in agreement with the study by Reeves and Smith (2021) who established that fewer men graduate with an associate or master’s degree, relative to women. The authors noted that doctoral degree bestowal was the most gender-balanced, though 54% of degrees are conferred to women.

Masters postgraduate students mean on quality of supervision was 50.37 and the completion rate was 28.9%. PhD postgraduate students mean on quality of supervision was 31.92 and the completion rate was 18.6%. Masters postgraduate students had higher mean and completion rate than PhD. Masters’ students seemed to be more motivated towards achievement considering their time frame was only 2 years than PhD which was 3 years. The study findings were in agreement with the study by Grant et al (2014) who observed that the factors that impacted on timely completion and quality of supervision included gender, level of study, discipline, supportive relationship, financial situation and enrolment status. The study findings were not in agreement with the study by Shariff et al (2015) who observed that the PhD research work factor did not highly contribute to the timely completion of their PhD.

Postgraduate students in public university campuses had a mean score of 39.43 on quality of supervision and the completion rate was 26.1%. Postgraduate students in private university campuses had a mean of 51.89 on quality of supervision and the completion rate was 29.6%. Private university campuses had higher mean and completion rate than public. Private university campuses could be having more incentives and consolidated policy framework concerning quality of supervision than public university campuses. The study findings were in agreement with the study by Wambui, et al (2016) whose study findings revealed that there was a positive relationship among the variables. The authors pointed out that the quality of education had gone
down in public universities in Kenya. It was because many lecturers had many years of teaching experience.

The study findings indicated that the higher quality of supervision the greater completion rates realized. For example, the quality of supervision from private university campuses was 51.89 and completion rate was 29.6% higher as compared to other scores while PhD students had lowest mean score of 31.92 and completion rate of 18.6%. From findings there was relationship between the quality of supervision and completion rate in Uasin Gishu county Kenya. The results could indicate that quality of supervision with stimulating and good management supervisory skills and attributes determined higher completion rate.

The study findings were in agreement with the study by Abdelhafez (2007) who established that the quality of supervision was the main factor that determined the successful and timely completion of a PhD program. Regular supervision was strongly correlated with successful completion. The study findings were in agreement with the study by Rwejuna (2013) whose study findings indicated that students failed to complete studies because of poor examination feedback, low students’ commitment to studies and supervision problems. The researcher was of the opinion that the low graduation rates could be minimized with proper supervision management of postgraduate programs.

The study findings were also in agreement with the study by Mbogo, et al (2020) who indicated that there were challenges of supervision experienced by PhD students as they worked with their supervisors on their theses and dissertations hence low completion rates. The authors recommended that universities in Kenya should create where they are non-existent, and strictly enforce policies for successful dissertation supervision. The study findings were in agreement with the study by Shariff1, et al (2015) who revealed that PhD candidates perceived that the most contributing factor was research skills. Supervision arrangements, motivational, de-motivational and institutional factors contributed to the timely completion of their PhD.

According to the researcher, valuable research skills could determine sustainable completion rates. The study findings were in agreement with the contingency theory by (Gatfield, 2005) that conceptualized between two levels of research: process and product. Research process involved the structure governing research stages. The product dimension involved the attainment of the performance through supportive approaches. Well-articulated research process led to attainable goals as good end products. In relation to this study, how the supervisees attributed to the structure of supervision process for example communication skills, managerial skills and supportive factors at various stages affected the quality of supervision which determined their postgraduate completion rates. Therefore, quality of supervision had relationship with postgraduate students’ completion rates.
Hypothesis testing
To test hypothesis that there is no significant relationship between the quality of supervision and completion rates of postgraduate students, simple linear regression was used.

Table 2: Summary of the relationship between the quality of supervision and completion rates of postgraduate students.

<table>
<thead>
<tr>
<th></th>
<th>R square</th>
<th>Adjusted r</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>0.53</td>
<td>0.277</td>
<td>1096.95</td>
<td>1</td>
<td>1096.95</td>
<td>27.18</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td></td>
<td></td>
<td>2865.86</td>
<td>80</td>
<td>40.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>3962.80</td>
<td>81</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Timely completion rate
b. Predictors: (Constant): Quality of supervision
Source: Field data (2021)

From table 2 the model summary indicated the r was 0.53 and the r squared was 0.277. The r Square 0.277 multiplied by 100 gives 27.7%. This meant that there was 27.7% change improvement on quality of supervision and only 27.7% change on completion rates of postgraduate students. The degree of freedom was 81 and the F-value is 27.18. The significance was 0.000 in coefficients of simple linear regression which was less than the significance level of 0.05. We therefore reject the null hypothesis. There was a significant positive correlation between the quality of supervision and the completion rates of postgraduate students. Therefore, there was relationship between the quality of supervision and the completion rates of postgraduate students in university campuses in Uasin Gishu County Kenya.

The study findings were in agreement with the study by Mukwada (2014), who revealed that the quality of postgraduate supervision through the process and production of research work was important factor influencing the time-to-degree and throughput rates. The author further said that postgraduate supervision took a variety of forms and approaches. It was largely determined by the research experience of the supervisors on how they were supervised. According to the researcher experienced supervisor, regular trainings and induction courses on new pertinent issues were appropriate for quality of supervision. However, the factors need to be blended with the previous knowledge to meet global requirements of quality of supervision.

Where the supervisor experienced a kind of supervisory procedure and transferred the same process to supervise, the whole process of supervision could be distressing. It was vital to oversee the rightful process of research to get more sustainable completion rates of postgraduate students. The study findings were also in agreement with the study by Rugut (2017) who revealed that sometimes the relationship between the supervisor and supervisee was fair in that there were times when they cooperated and times they conflicted due to supremacy or suggestion. The author also noted that lack of proper negotiation created dissatisfaction and disagreement between the student and the supervisor. In cases where dissatisfaction and disagreement were experienced between the student-supervisor the completion of educational doctoral studies was extended.
The researcher concurred with the author in that where there was no harmony between the supervisee and the supervisor end result product was devastating. The findings of the study were also in agreement with the study by Ndayambaje (2018) who found three supervision defects that hindered the timely completion of PhD international students. These were limited level of supervisor-supervisee interaction, inadequate technical guidance from supervisors, and poor or delayed feedback from supervisors. According to the researcher the supervision defects revealed in the reviewed study were really detrimental to quality of supervision. The factors definitely prolonged postgraduate students’ completion rates.

The findings of the study were also in agreement with the study by Mbogo, et al (2020) who noted that majority of the lecturers were already enrolled in PhD programs with some having spent up to eight years, more than the expected period of three to four years. The long time it took to complete PhD studies had psychological, social, and financial implications on the students. It also undermined human resource capacities of the universities in which they teach. One of the main issues often cited for the delay was the challenge of supervision experienced by PhD students as they work with their supervisors on their theses and dissertations. Based on the study findings the factors attributed to delayed completion postgraduate studies were detrimental and frustrating to both students, supervisors hence lower down the social and economic status of the society.

The study findings were in agreement with the theory by Gatfield (2005) who observed that equivalent to an organization was a research team, consisting of one or more supervisors and one or more supervised research students. The research team bears individualized characteristics as gender and age triggered towards achieving quality of supervision to realize effective process and sustainable product. The variables of the environmental system referred to contingency factors influenced the underlying dimensions of the supervisory styles matrix. The theory stated that structural, support and exogenous variables, effective supervisory practices equivalent to quality of supervision as a process determined how to attain the set goals and objectives for timely completion rates as a product. The research team collaborated to ensure beneficial process for quality of supervision to achieve intended goals and objectives which was completion rates.

The study findings were not in agreement with the study by Shariff, et al (2015) who observed that the PhD candidates perceived that the most contributing factor was research skills, followed by supervision arrangements factor, followed by motivational factor, de-motivational factor and institutional factor. However, the PhD research work factor did not highly contribute to the timely completion of their PhD. From the findings in the reviewed study, it was clear that research work does not have any effect on completion rate of postgraduate students’ completion rates. In contrary the research findings in the current study noted that there was a relationship between the quality of supervision and completion of postgraduate studies.

Conclusions
There was a significant correlation between the quality of supervision and the completion rates of postgraduate students. There was 27.7% change improvement of quality of supervision on completion rates of postgraduate students’ university campuses. The level of significance was 0.000 less than p-value of 0.05, then we reject the null hypothesis. Therefore, there was
relationship between the quality of supervision and the completion rates of postgraduate students in university campuses in Uasin Gishu County Kenya.

**Recommendations**

Postgraduate students need to do highlighted corrections accordingly using written reports given by the supervisors to enhance quality of supervision. Postgraduate students also need to respond to feedback within a period of four weeks to avoid prolonged completion rates.
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