CHARACTERISTICS OF STUDENT-SUPERVISOR INTERACTION IN PUBLIC UNIVERSITIES IN KENYA

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ABSTRACT

Student-supervisor interaction is an important aspect in graduate studies supervision. This is because when something goes wrong with the interaction process, many aspects of the graduate student's life affects completion time. The purpose of this study was to look the characteristics of student-supervisor interaction. The study was guided by socialization theory.The target population in this study were 310 participants comprising of 60 supervisors and 250 supervisees from the school of education. The study used stratified sampling to sample universities, simple random sampling to sample graduate students and heads of departments, while purposive sampling was used to sample the supervisors and deans. The study adopted descriptive survey research design which enabled the researcher to explore and describe student-supervisor interaction. The study employed the use of questionnaires and interview schedules to collect data for the study. Data were presented using frequency tables.The study findings indicated that 28(50.9%) of the supervisors and 112(46.7%)of the graduate students agreed that professionalism and respect was exercised. Further, qualitative results deans and heads of departments reported that rules and regulations in graduate studies should be adhered to. Policies guiding graduate student-supervisor interaction should be revised to meet up-to-date challenges facing student-supervisor interaction.The universities should provide seminars, workshops and trainings to both supervisors and graduate students to enhance student-supervisor interaction. The findings of the study will be useful for the university managements in understanding the student-supervisor interaction in graduate studies. The findings will also provide information to interested researchers in related topics in graduate studies..

Key words: Student**,** supervisor, interaction, characteristics, public universities

Background of the Study

Socialization is the way toward internalizing the norms, values, aptitudes, convictions, frames of mind and belief systems of society. Socialization includes both learning and instructing and is in this manner "the methods by which social and social congruity were accomplished (Macionis, 2013). Socialization basically speaks to the entire procedure of learning for the duration of the course and is a focal impact on the standards, values, conduct, convictions, and activities of grown-ups and also of kids (Boden, Borrego & Newswander, 2011). Explicit to post-graduate education, socialization is the procedure through which people gain the learning, abilities, and qualities fundamental for fruitful passage into an expert profession requiring a propelled dimension of particular information and aptitudes (Weidman, Twale and Stein, 2001).

It includes the whole formative procedure of moving from a learner to an undeniable individual and expert in community.Thus, socialization of post-graduate students happens all the while at different dimensions (Golde, 1998), as graduate students were associated to both current (understudy) and future (proficient) jobs (Austin, 2002). As indicated by Lovitts (2001), socialization happens as students connect with educators, supervisors and different students in an assortment of scholarly and expert assignments. These collaborations were critical in that they assemble compatibility among students and teachers and give chances to incorporation and advancement.

Weidman, Twale, and Stein(2001), recognized four phases of postgraduate student socialization. Amid the anticipatory stage (recruitment), the individual structures summed up and stereotypical role expectations, primarily through broad communications and perception of good examples. In the formal stage, postgraduate students get increasingly organized guidance with respect to standards and desires, however these remain idealized. Communication ends by enlightening through adapting course material, regulative through grasping regularizing desires, and integrative through staff and student collaboration" (Weidman et al. 2001).

In the informal stage, postgraduate students take in more subtle and casual desires through drenching in the way of life, taking signs from educators and individual students. Amid the last close to home stage, postgraduate students shape an expert personality that lines up with the picked calling and accommodate past job clashes. This stage is likewise described by more profound commitment with research and expert exercises, for example,

association in distributing, temporary positions and nearby and global gathering participation. All through the stages, association with postgraduate students, educators, and experts were key to taking in the way of life.

Globally, postgraduate studies have been adversely affected with a majority of postgraduate students who enroll to pursue these studies taking too long to complete or discontinuing the course. For example, in the United States, an issue existed in doctoral projects with half of the graduate students who had registered dropping out before finishing their doctoral studies(Burkard, 2014; Cakmak, Isci, Uslu, Oztekin, Danisman, and Karadag, 2015; King and Williams, 2014). In an investigation by King and Williams, (2014) on postgraduate studies, they were under strain to settle their studies,the examination discoveries demonstrated that postgraduate students were aware of different checks to completing their degrees.A study also by Rugut R.C. (2017) on doctoral students showed that attrition rate was high in United States and Australia estimated at 40% to 50% never finished their studies, in the United Kingdom, 72.9% of the graduate students in 2013 took seven years to complete their studies. Canada by 2013 had the lowest attrition rate of 20% compared to other countries.They found out that a portion of these hindrances were fringe to the program such as exhorting issues, learning deficiencies, and individual duties.

Lack of undergraduate arrangement, diminished interest, failure, measure of study time, and far reaching test scores are conceivable obstructions to completing doctoral thesis (Kuo, 2009). Doctoral hopefuls should have been ready to portray their thesis in a sentence. Absence of arrangements, board chair and graduate associations, student-supervisor desires, cooperation, and up to date emotionally supportive networks were hindrances for finishing the thesis not withstanding funds, singular attributes, and campus and office strategies (Burkard, 2014). In this way, guaranteeing open doors for research assistantships and chances for working with supervisors on research ventures positively and graduate student collaborations,postgraduate desires and communications, and backing from companions and friends were significant for fulfillment and completion of graduate studies.

In Africa, students undertaking postgraduate studies at the universities were under expanding strain to finish their candidature inside a specific time period and time lines (Smyth, Houghton, Cooney & Casey, 2012). However, postgraduate students, have a great

deal of difficulties to defeat, for example, family duty, work responsibility and budgetary difficulties, which might frequently influence their accomplishments (Mouton, 2001). These difficulties were a lot more prominent if the postgraduate students were doing low maintenance which truly expends time, cash, exertion, persistence and excitement. They need to deal with their time and exertion for other responsibility, for example, employment and family.

In recent years, research supervision has turned out to be exceptionally basic for alumni students to achieve higher degree confirmation (Crisp and Cruz, 2009). It was out of this affirmation that supervision has transformed into a central method for the fruitful finishing of graduate programs in public universities in Kenya and the rest of Africa. Supervision furthermore could be translated as a two-way interactional procedure that requires both the postgraduate student and the supervisor to purposefully interface each other inside the spirit of self evident aptitude, respect, collegiality and generosity (Carifio and Hess, 1987).

Supervision is a perplexing social experience which includes two parties with both converging and diverging interests. In this manner, adjusting these interests was extremely significant to the productive supervision of graduate research ventures (Grant & Graham, 1999). Departments have also been recognized as being so profitable in this issue and as imperative places of learning and change that exist inside bigger associations: resources/schools inside universities (Boehe, 2016). Foundations consolidate degrees of assorted variety similarly as to graduate populaces and divisions. Curiously, various graduate schools check shorter events to and larger amounts of fruition to completion than other colleges (Elgar, 2003).

Seagram, Gould and Pike (1998) exhibited that a good student-supervisor affiliation was the key factor in the accomplishment of graduate studies exploration work. As a ground-breaking supervisor, there were certain fundamental practices that should be set up in supervisory system in order to enhance research and supervision needs. Non appearance of information and principle in the supervisory system brought this issue out. For postgraduate studies with hypothesis program, there was a basic prerequisite for a fruitful supervisory structure

Statement of the Problem

Currently, post graduate education is largely self-paid and students make significant sacrifices to obtain graduate degrees with the expectation that they would finish on time

and secure good careers. With this expectation, supervisors have an enormous task of ensuring quality mentoring within timelines.

It is a privilege to hold a faculty position and supervise students; nonetheless, this comes with a great responsibility associated with great expectations from the students. The expectations are targeted to supervisors and the institutions of learning. Although there is still an imbalance on power relationships between supervisors and students, especially in developing countries, supervisors still need to understand and know the student expectations. This way, they can build professionally and healthy long lasting relationships than can spread beyond the supervision period.

Objective of the Study

The objective of the study was to identify the characteristics of student-supervisor interaction in public universities in Kenya.

Research Question

What were the characteristics of student-supervisor interactions in public universities in Kenya?

Theoretical Review

This study was guided by socialization theoryby Weidman, Twale & Stein (2001).

Socialization Theory

This study adopted Socialization Theory by Weidman, Twale & Stein (2001). This theory was derived from Van Maanen and Schein (1979) studies on the socialization of people in associations and Stein and Weidman's (1989) graduate socialization outline. Socialization is the procedure through which people procure the qualities, frames of mind, standards, learning, and abilities expected to exist inside society (Merton, 1968). The individual is socialized into a group in a community of network, or association (Austin, 2002). In institutions of higher learning socialization process is the same.

As indicated by Weidman et al. (2001) so as to comprehend socialization procedure of graduate students and professionals in graduate studies that set them up for future expert jobs there are three components to consider. These components are: information obtaining, venture, and inclusion. These components lead to recognizable proof and responsibility to

an expert job. Personality and responsibility change after some time, contingent upon the stage (of socialization) in which an individual is working.

Notwithstanding the center components distinguished by Weidman et al. (2001), the socialization procedure happens in stages: expectant (anticipatory), formal, casual (informal), and individual (personal) stages (Tierney and Rhoads, 1994; Tierney and Bensimon, 2002). Expectant socialization happens before an employee starts their work on campus. Others say that the socialization procedure starts at the undergraduate level when understudies start to see themselves in a workforce job because of connections and discussions with lecturers (Bieber & Worley, 2006). These encounters in undergraduate and graduate instruction impact view of and genuine encounters with graduate life.

Van Maanen and Schein (1979) suggest that there are six dimensions of socialization that occur within organizations: (a) collective versus individual, (b) formal versus informal, (c) random versus sequential, (d) fixed versus variable, (e) serial versus disjunctive, and (g) investiture versus divestiture.

Individuals can experience any one of the dimensions at varying points of their experience in an organization. Collective versus individual socialization involves the extent to which newcomers have common experiences (Van Maanen& Schein, 1979).

Graduate students experience collective socialization when they participate in orientations or core courses with their peers. Graduate students experience individual socialization when they participate in activities individually such as writing their dissertations and working individually with their major professors (Weidman et al., 2001). The next dimension of socialization is formal versus informal socialization. Formal socialization involves specific activities designed to "shape" (Austin &McDaniels, 2006) the junior person in certain ways (Van Maanen& Schein, 1979).

Graduate students experience formal socialization, for example, when they participate in preliminary, qualifying, or comprehensive exams or dissertation defenses (Austin & Mc Daniels; Weidman et al., 2002). Informal socialization involves unstructured activities, some of which occur by trial and error. Graduate students experience informal socialization when they internalize experiences in different ways. Observations of the faculty and peer culture help the student navigate during the formal socialization process (Weidman et al.). Random socialization occurs through activities performed that lead to an

end goal, but are not clearly defined. Such activities for graduate students that may be considered occurring randomly might be research, teaching, or mentoring experiences (Austin & Mc Daniels, 2006).

Random socialization could also occur as the student develops opinions about courses or faculty members (Weidman et al., 2001). Sequential socialization includes clearly defined activities and is a more ordered process.

Sequential socialization occurs when graduate students follow specific steps in their programs, such as following examination or dissertation procedures (Austin &McDaniels; Weidman et al.). Fixed and variable pace describe the fourth dimension of socialization. These two terms denote the specialized and unclear timeline for activities to occur within an organization (Tierney & Rhoads, 1994). Graduate students for the most part experience variable socialization because activities and stages of completion in a graduate program vary from student to student; making the process more individualized (Austin & McDaniels, 2006).

Serial versus disjunctive socialization characterize the fifth dimension. This type of socialization occurs when graduate students are given specific advice by faculty members or are engaged in planned experiences. Graduate students working under the guidance and tutelage of a faculty mentor experience serial socialization. For example, graduate students serving as teaching assistants, research assistants, or otherwise collaborating with faculty mentors is considered serial socialization. Disjunctive socialization, on the other hand, occurs when individuals do not have the specific guidance of faculty members or veteran students. Graduate students who do not have role models such as faculty mentors experience disjunctive socialization (Weidman et al., 2001).

The sixth dimension of socialization involves the experiences of an individual that help shape her or his perceptions, attitudes, and beliefs about the organization or an experience (Tierney & Rhoads, 1994). Investiture socialization occurs when beliefs about an experience or an organization are confirmed. The individual characteristics are also accepted by the organization. For example, if doctoral students trained in research universities assume faculty positions at an institution they will believe that faculty life will include research. Divestiture socialization, on the other hand, occurs when an individual has to change their beliefs to conform to the culture of the organization. Using the same

example, if a graduate student trained at a research institution assumed a faculty position at a different institutional type, the student may still have the expectation to produce research, finding it challenging to conform to the values and traditions of the liberal arts institutions (Tierney & Rhoads, 1994).

Key to the socialization process is the acquisition of knowledge, investment, and involvement of the student; core elements of the graduate and professional student socialization model. These core elements are achieved through involvement with peers, the program, and becoming invested in the knowledge, skills and abilities necessary for effective professional practice. In addition to the stages and core elements of the socialization process, four factors influence the student's socialization process: prospective students, professional communities, personal communities, and novice practitioners (Weidman et al., 2001). The core elements of the model: knowledge acquisition, investment, and involvement, are the most useful elements in this study. Knowledge acquisition involves acquiring cognitive knowledge and affective knowledge. Affective knowledge includes awareness of professional role expectations and an assessment of one's ability to perform successfully in a professional role like supervision (Stein, 1992).

Investment means committing something of personal value (e.g., time, alternative career choices, self-esteem, and social status) to preparing for a professional role (Weidman et al.). Involvement also involves participating in any activity that prepares one for a professional role. Such activities could include involvement with student peers or faculty members in research activities, taking exams, or being involved in professional organizations. These activities help develop the identity of the individual being socialized. Involvement varies by activities and level of intensity (Weidman et al.).
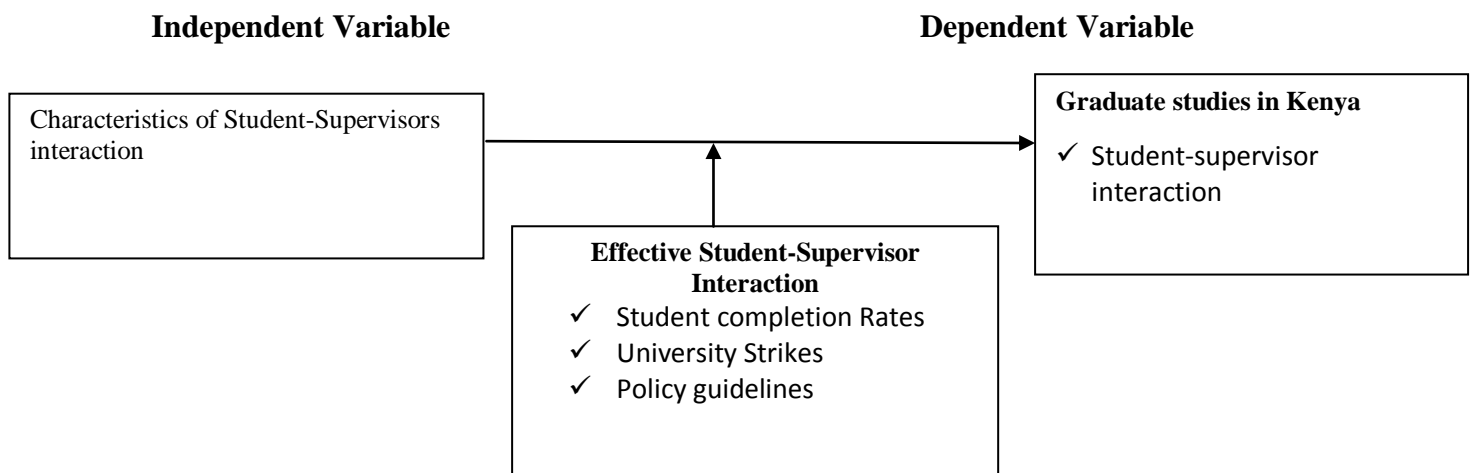
Adapting to the norms and values of graduate school for graduate students typically is an experience of discovery. Many students entering higher education at the graduate level may not be fully aware of the academy's value systems. Developing an understanding of the academic norms and culture is but one aspect of a graduate student's socialization into the process (Lindholm, 2004; Nyguist et al., 1999). Sometimes the values and expectations of the academic culture mesh well, complementing the student's values and expectations, allowing the student to be successful in their graduate programs. In other instances, values and expectations are not internalized and accepted, causing the graduate student to experience disillusionment and further causing the student to struggle in their program.

The complications of accepting the academy's values may cause the struggling student to not finish the program on time or to adapt bitterness and disappointment (Nyguist et al., 1999).

Conceptual Framework

The study employed the following conceptual framework to illustrate how the independent and dependent variable interact in the study on student-supervisor socialization interaction in graduate studies in Kenya

Independent Variable   **Dependent Variable**

| Characteristics of Student-Supervisors interaction |

Effective Student-Supervisor Interaction
- ✓ Student completion Rates
- ✓ University Strikes
- ✓ Policy guidelines

Graduate studies in Kenya
- ✓ Student-supervisor interaction

REVIEW OF RELATED LITERATURE

Concept of student-supervisor interaction

In order for postgraduate students to complete their Masters' and Ph D. theses on time, they need feedback, cues, guidance and supervision. Common problems perceived by postgraduate students were too little instructions as well as infrequent and insufficient supervisor feedback. Interactions were at the heart of educational encounters. When a supervisor stands in front of postgraduate students, they relate. When a postgraduate student meets with a supervisor, they relate. Remembering supervisor-student experiences brings back memories of being inspired, bored or perhaps over-looked.

Curricular, lesson plans and learning outcomes were long forgotten, but the impact of interactions lives on for many years in ones live. How the supervisor-student interaction is conceptualized varies considerably. For some, the essential aspect of this interaction is what happens between the supervisor and postgraduate student, as if the interaction comprises an interpersonal space across which the supervisor and student traverse (Hartrick & Doane, 2002; Metcalfe & Game, 2006).

What lies between those relating is variously described as a space, a gap, or an opening, which allows room for relational happenings. Inter-actions occur as trans-actions exchanged from one person to the other. Buber (1996, 2002) describes interactions that accentuate differences between those relating as "I-it" interactions. These interactions tend to objectify the participants, the interaction, and the transactional nature of the interaction.

Palmer's (1999) concern is that interactions that were reduced to such an objectified forms of relating privilege technique and efficiency over interaction.

For others, interaction speaks about a connectedness that exists, a connectivity that is basic to our humanity (Bennett 1997). Relational connectedness emphasizes holistic interaction rather than the space between those relating. This view of interaction shifts the attention from the functionality of the space between people to an inherent connectedness that is integral to interaction (Hooks 2003; Gibbs 2006). Educational processes that value relational connectedness seek to nurture the wholeness of students through a genuine concern for the supervisor-student interaction (Miller & Nakagawa 2002). Re-framing interactions within the context of a community draws attention to the inter-connectedness of the many shared interactions that co-exist in everyday experiences (Palmer 1997).

The many interactions within a particular context resemble a 'web of communal interactions' (Palmer 1998: 95). While there is value in theorizing from empirical data about interaction, it is equally important that educational research consider students and lecturers' interaction as a means to increase student learning in public universities especially in this era where there is a high demand for university education, increase in satellite campus and the resources were experiencing a strain. This draws us towards essential understandings of the interaction especialy in our postgraduate studies in Kenya.

Characteristics of Student-Supervisor Interactions

Studies have tried to understand graduate students' expectations and their perceptions of thesis supervisors considering students are the active participants in the educational process (Phillips & Pugh, 2010). It has been found out that graduate students prefer professors who throw an intellectual challenge to them, have the experience, and clearly explain not only the subject, but also how to achieve success in learning (Senko, Belmonte, & Yakhkind, 2012).

Some researchers found out that graduate student with a high level of satisfaction with training programs consider the ideal supervisor to be able to adapt the learning content and arouse interest of students (Junquera, Mitre, & Perez, 2012). There are revealed differences in behavior of teachers-facilitators perceived by nursing students: they appreciate preceptors as more supportive while clinical lecturers are perceived as more important for development of critical thinking, reflection and exchange of experience between students (Kristofferzon, Martensson, Mamhidir, &Lofmark, 2013). It is essential that graduate students were satisfied with all facilitators' supervision and their contribution to all learning outcomes.

It means that graduate students need different kinds of support from supervisors. At the same time, the problem of supervisors' perception and evaluation of learning outcomes and capabilities of students is topical. Currently, psychologists agree that students' achievements are the result of systematic interactions between various cognitive and motivational variables (Sedaghat, Abedin, Hejazi, &Hassanabadi, 2011). The learning outcomes of students depend not only on their cognitive abilities and applied learning strategies, but also many motivational and personal factors, such as goals (motives) of students' learning activity (Elliott, 2002), students' perceived abilities (Green & Miller, 1996), individual difference in ego orientation (desire for superiority) and task orientation (desire for understanding) (Nicholls, Cheung, Lauer, & Patashnick, 1989), psychological sense of school membership (Ferreira, Cardoso, & Abrantes, 2011), and other various characteristics.

And in turn, the development of graduate students' skills in the creative and research projects improves their learning motivation and quality of work (Darinskaya, 2012). The analysis of the scientific literature showed that students' expectations and issues of evaluating of students' achievements in traditional learning activity are mainly described. But an important role in modern education belongs to research activity and involvement of students in the joint research projects with supervisors. The research activity differs from the traditional learning activity. It aims to get new scientific knowledge through finding and analysis of scientific information, formulation of research questions and hypotheses, data collection and processing, reflection and representation, etc (Poddyakov, 2000).

At every stage of research project graduate students expect from supervisors certain types of support and incentives: motivation to begin the study, positive, but critical feedback,

algorithms and explanation of research operations, and assistance in analysis and interpretation of the data. The complexity of tasks and requirements for students increases on each subsequent stage of education. Therefore, supervisors` evaluation of students` research capacities, including a whole range of motivational, cognitive, behavioral and self-organizational characteristics becomes very important. As all these characteristics may appear ambiguous or be only potential, a supervisor has to solve a very difficult problem.

Underestimation or overestimation of research capacities of graduate students by a supervisor could reduce the effectiveness of their interaction. For example, it was shown that character of motivation which encourages students to interact with supervisors could be ambiguous. Mottet, Martin, & Myers (1999) identified functional, social motives, motives of participation, "extenuating" and "slavish subservience" motives of students' communicative behavior, among which only a functional motive is directly related to the learning course. It was found out that research activity of students, along with intrinsic motives, leading to high quality of work, can also be encouraged by students' values (Iskra&Moskvicheva, 2014), the motives of social achievements, personal development, and obligation, which stimulate them to look for easier ways of completing tasks (Moskvicheva, 2012).

 Personality features of graduate students could also be predictors of success of their researches. High level of research potential of students is positively correlated with extraversion, self-control, emotional stability, expressiveness, as well as the personality orientation to the future (Bordovskaia & Kostromina, 2013). Maturity of goal-setting processes, forecasting, self-reflection largely determines the promptness of completion of thesis work (Kostromina, 2013), and its incorrect assessment by supervisors could lead to unexpected students` procrastination.

Essential to the successful solving of research tasks are cognitive intellectual and creative abilities, defining the level of analytic-synthetic activity of graduate students: the ability to distinguish common features and properties of objects or concepts, to compare, to think abstractly, to operate the knowledge; preference for an analytical thinking style, flexibility of thinking, (Darinskaya & Rozum, 2014). Successful communication in a research project leads not only to decision of a particular scientific problem, but has the important influence on the personal and professional development of graduate students. According to Ulug, Ozden, & Eryilmaz, (2011), the influence of attitudes and style of teaching is usually

studied in terms of the impact on students' academic achievement, whereas outside the research long-term consequences of the influence on the formation of personality remain.

Blended learning, integrating a variety of media to deliver teaching material tograduate students is increasingly prevalent in university education. Blended learning is often associated with the use of web tools such as email, lecture recordings, blogs, discussion boards, and a dedicated university learning management system (for example *Blackboard*). Institutional based learning management systems were being used by universities all over the world. These systems were often designed to provide a web presence for course instruction and assist with the organization and management of course material (Coates, James & Baldwin, 2005). Typically, they propose to offer an environment that helps to engage students and enrich the quality of the graduate student experience through interactive learning activities. In general, they were designed to support the development, management, and delivery of blended learning.

Social networking sites engage graduate students in online learning communities using technologies familiar to and accepted by their generation (Oradini & Saunders, 2008). Incorporation of this pedagogical strategy could offer new opportunities to enhance academic instruction and student- supervisor socialization (Ouf, Nasr, & Helmy, 2010). For example, *Facebook* has the capacity to support course management activities, enhance the provision of information and resources to graduate students, as well as engage and motivate students through interactivity and collaboration (Naidu, 2005). Using *Facebook* as a host site to incorporate assessment, McCarthy (2010) reported positive student feedback for its integration into the learning environment. Students in this study noted many advantages of the online learning environment and *Facebook* tasks. Reports of improved academic interactions being developed between both domestic and international student groups, the generation of rewarding academic discussions that were beneficial for study, and increased interaction with the peer group were among the main findings.

Makokha and Mutisya (2016) carried out a study on status of E-Learning in Public Universities in Kenya. Data were collected using questionnaires administered to both students and lecturers randomly sampled from seven public universities. Questionnaire responses were triangulated with interviews from key informants and Focus Group Discussions (FGDs). Data was analyzed qualitatively and through use of descriptive statistics. Findings revealed that e-learning is at its infant stage inKenyan universities.

Majority of universities lacked senate approved e-learning policies to guide structured implementation. A few lecturers (32%) and students (35%) used e-learning and few courses (10%) were offered online. Majority of online uploaded modules (87%) were simply lecture notes and not interactive. Again, universities in Kenya lacked requisite Information and Communication Technology (ICT) infrastructure and skills. The study recommends that universities partner with the private sector to improve ICT infrastructure, build capacity, and standardize e-learning programs in the country.

Lei, Finley, Pitts and Guo, (2010) sought to determine which is a better choice for student-faculty interaction: synchronous or asynchronous communication? According to the study, the use of Computer-Mediated Communication (CMC) technology has dramatically changed the ways for students to interact with their professors, especially for communications occurring outside of the classroom. A recent study investigated the impact of offering virtual office hours by using Instant Messaging (IM) softwwere for student-faculty interaction.

The study found that participants in classes that offered virtual office hours reported higher levels of satisfaction with office hours than students in classes that offered only traditional face-to-face office hours. Also revealed, however, was that students' use of virtual office hours is not significantly different from their use of traditional office hours. The study further reported that students prefer asynchronous tools such as email to communicate with the professor. This study extends this line of research by studying the use of email to enhance student-faculty interaction. Participants in the study were drawn from undergraduate students enrolled in on-campus MIS courses at a public university in the U.S. Southeast. The findings suggested that students who were offered an emailturnaroundtime guarantee reported significantly higher level of satisfaction on getting help outside of the classroom than the participants who were not offered such a guarantee. The study also found that, when participants were offered both virtual office hours and an email-turnaroundtime guarantee, they prefered the latter for communication.

Recently, the internet and web-based course management systems have created a convenient alternative to traditional office hours for many students who have substituted email and discussion board postings for face-to-face meetings as a means to ask questions or obtain courserelated information or additional help. These new, and arguably preferable, means of interacting with professors through web-based technologies have some

researchers predicting the demise of traditional face-to-face office hours (Myers et al. 2004). Such management systems also offer an advantage of choice in terms of synchronous or asynchronous communication.

One main challenge for institutions of higher education is to discover how to better engage graduate students in the communication processes that stimulate more substantial and frequent interaction with faculty. CMCs could be and were used to enhance traditional office hours. In a recent CDW study assessing technology usage in higher education, students indicated they wanted more regular and immediate communication with faculty, and rated online chat with professors as the capability they desired the most (CDW Government, 2008). In their study of e-learning environments, Jafari, McGee & Carmean (2006) found that students preferred free and popular communication technologies such as IM and podcasts, and wanted these tools included into the course for communication and collaboration.

CMCs at the university level tend to be considered a principle means of delivery of information and communication. This additionally entails the potential for extending the communication channels most commonly found in traditional learning environments. The most common forms of communication used by faculty to facilitate interaction with graduate students include the use of asynchronous (for example, email and online discussion boards) and synchronous communication (for example, chat or instant messaging). The majority of research related to the use of asynchronous communication in higher education has focused on distance learning courses that utilize web-based communication technologies to deliver course content virtually, and thus, involves extensive student-instructor communications (Dezhi, Bieber, and Hilz, 2008; Oomen-Early et al., 2008).

Synchronous online communications have been used with success in several studies of distance learning environments (Cox, Carr & Hall, 2004; Myers et al., 2004). The most common forms of such communication were via "chat" or instant messaging. In a comparative study of synchronous and asynchronous learning technologies, Schwier and Balbar (2002) found that synchronous chat created a feeling of community among students enrolled in a graduate course.

Spencer and Hiltz (2003) conducted a field study of synchronous chat in an online course and foundgraduate student satisfaction highest in courses where synchronous chat sessions were offered in addition to face-to-face methods. This finding was consistent with Cox, Carr, and Hall's (2004) study which found the "chat" function of commercial course management systems less effective for more in-depth topics. The use of chat or IM to facilitate student-interaction and virtual office hours in online courses and traditional courses has also been explored in recent studies (Myers, et al., 2004; Jeong, 2007). Hooper, Pollanen, & Teismann (2006) found that virtual office hours increased effectiveness and participation of students enrolled in an online introductory mathematics course.

In a study of the impact of offering virtual office hours within a traditional course, Myers (2003) found that students who had participated in virtual class discussions had higher levels of comfort and confidence during traditional classroom discussions. In a recent experiment at Harvard Business School, virtual office hours were offered to students in an introductory computer science class with the intent of addressing the need for flexibility and convenience. Feedback from students was generally positive about the availability of help outside the classroom although professors indicated they did not foresee virtual office hours completely replacing traditional hours anytime soon (Riley, 2007).

Integration of web-based technologies in both online and traditional learning environments, while often successful, does entail possible usage issues. One potential drawback was increased workload and time commitment for faculty as a result of student expectations of "ubiquitous instructor access" (Farmer, 2003). Jeong (2007) noted issues related to miscommunication due to the lack of verbal cues and drawbacks associated with the lack of interoperability between IM clients.

This also addresses the lower level of media richness that might be found in any non face-to-face communication media (Daft, 1987; Dennis, 1999). A recent study (Li & Pitts, 2009) found that, while offering virtual office hours improved students' satisfaction of outside-of-classroom student-faculty interaction, students' usage of virtual office hours was very limited. The study also reported that students prefer asynchronous tools such as email to communicate with professors. This study therefore, aims to look at how these different types of student-faculty interactions influence the student-supervisor socialization process.

Kim and Sax (2009) carried out a study to examine the effects of studentfaculty interaction on a range of student outcomes i.e., college GPA, degree aspiration, integration, critical thinking and communication, cultural appreciation and social awareness, and satisfaction with college experience vary by student gender, race, social class, and first-generation status. The study utilized data on 58,281 students who participated in the 2006 University of California Undergraduate Experience Survey (UCUES). The findings revealed differences in the frequency of student–faculty interaction across student gender, race, social class and first-generation status, and differences in the effects of student–faculty interaction (i.e., conditional effects) that depended on each of these factors except first-generation status.

The findings provided implications for educational practice on how to maximize the educational efficacy of studentfaculty interaction by minimizing the gender, race, social class, and first-generation differences associated with it.Tenacity, support by the supervisor, personal and collegial support and previous experience contribute to psychological survival (Smith and West-Burnham, 1993). Students also need determination and perseverance to complete their research (Phillips and Pugh, 2000; Smith and West-Burnham, 1993). In addition, they need adequate supervision and clear communication with supervisors. They should also be familiar with evaluation criteria (Shannon, 1995).

Research is an interactive process and requires the development of social as well as academic skills (Phillips & Pugh, 2000). A school's administrative function is commonly interpreted as referring to managing, operating or directing an organization (Burton and Bruekner, 1995) in order to support graduate students towards the completion of a Ph.D or masters degree. Some suggestions regarding the supervisory framework for supporting and defining the students' graduate programme include producing a definite plan in writing, probably different for each department, that describes the department's view on good supervisory practice; establishing regular meetings between graduate student and supervisor, setting up adequate methods of assessing coursework, thesis or dissertation supervision record keeping and project advancement (Brown and Atkins, 1988; Council of Graduate Schools, 1990) and submitting a comprehensive annual progress report to the supervisor.

Given the length and complexity of graduate student supervision, it is understandable that various difficulties arise (Brown and Atkins, 1988; Moses, 1992) due to organizational or professional factors. Some of the professional factors influencing the interactions of the student-supervisor were misinformed or inadequately prepared supervisor or a supervisor whose research interests were different from those of thegraduatestudent. Humphrey and McCarthey (1999) explained that many postgraduate students were mature and/or distance learners with needs different to those of residential and undergraduate students.

Salmon (1994) pick up the theme of changing research stages and the need for a supervisor to be flexible in an attempt to meet the needs of individual students. Supervisors who have this flexibility could be more helpful to their research students, Haksever and Manisali, (2000). Supervisors believed that they were contributing by organizing help with skills, developing English, writing, by collecting relevant literature and through networking or putting students in contact with others in the area (Brown and Atkins, 1988). However, support from the institution and supervisor still needed as reported by Malfroy (2005) that graduate students often experience frustration as a result of a perceived lack of support or what is referred to as "a disjunction in expectations" between the graduate student and the supervisor.

Spears (2000) states that supervisors should read the student's written work thoroughly and provide constructive criticism as this is an essential element in the student's intellectual development. It is supported by Lesssing and Schulze (2002) who describe the supervisory role as a balancing act between various factors: expertise in the area of research, support for the student, critique, and creativity. Also, advice on the desirable amount of reading, experimentation and analysis will normally be expected (Holdaway et al., 1995). According to Spear (2000), feedback is normally given in relation to topic selection, methods of inquiry, writing style and layout, the clarity of the student's work and ideas, the completeness and direction of the work, and the student's general progress.

According to Hodza (2007), supervisors must be willing to make adjustments in the interaction process to meet the supervisee's learning needs. This includes the consultation and appointment with the students. Holloway (1995) referred to this as the artistry of supervision. Therefore, faculty and even the university must assist these graduate students by providing enough information for a potential supervisor and supervisors should make themselves accessible for the students. The supervisors should make equal information,

time and energy available to all graduate students (Brown and Krager, 1985). According to them, the supervisor needs to be sensitive to students' time and competence limitations and to assist them to become aware of their own limitations and any constraints on them. Russell (1996) and Moses (1992) found that both supervisors and students agreed that one role of the supervisor was to assist students in general. The amount of assistance that supervisors give to graduate students varies, depending upon the stage that the latter have reached (Moses, 1992). Thus, supervisors should help the students more in research input.

The supervision literature indicates that ethical, technical and methodological problems could be minimized or prevented if all the participants in the interaction strive to enter it with clear expectations for their respective roles and about the rules for their interactions (Goodyear et al., 1992). Therefore, both on a departmental and individual basis, the supervisor must be diligent about explicitly working with students to establish mutual expectations, responsibilities and benefits for working together and with other interested parties (Phillips & Pugh, 2000).

Moses (1992) argues that at each stage of the research progress, students were likely to need different forms of guidance. They need particular guidance on when to stop data collection and analysis, when to start drafting the thesis and how to structure it (Moses 1992). Thus, the supervisors were expected and assumed to be guides (Cryer, 2000) and critical friends (Hockey, 1996; Sheehan, 1994). On the other hand, they should also be able to adopt flexible supervision strategies depending on the individual requirements, which were influenced by the attributes of the particular student (Hockey, 1996; Hill et al., 1994; McQueeney, 1996). This is due to the fact that postgraduate students were not homogenous, but highly diverse in terms of academic ability, personality attributes, motivation and attitude.

Hence, how supervisors respond to students will, in part, be conditioned by these different factors and applying the same rigid strategy for each student might not always work effectively (McQueeney, 1996). Burgess et al. (1994) also pick up the theme of changing research stages and the need for a supervisor to be flexible in an attempt to meet the needs of individual students. Supervisors who have this flexibility could be more helpful to their research students (Haksever & Manisali, 2000). Ismaili et al, 2011) explained that research student supervision as a blend of academic expertise and the skillful management of personal and professional relations. Accessibility of the supervisor should be improved so

that the students could seek advice from them. Students need guideline from the institution to select a potential supervisor.

Javaid and Hussain, (2018) define the supervisory requirements of the student as follows: (1) personal help: support, motivation, socializing, help in organizing accommodation and other things that might be required, but were unrelated to the research; (2) indirect research related help: providing contacts, both industrial and academic, providing equipment and initial help in locating references; and (3) direct research-related help: critical analysis of work, help with methodological problems, precise direction and help with the management of the project. The interaction between the student and supervisor involves selecting a research topic, planning the research, identifying and acquiring the necessary resources, managing the project, actively conducting the research, carrying out the literature review, analysis and interpretation of the data, writing the thesis, defending it and possibly publication (Piccinin, 2000).

Consequently, the supervisory process requires constant adjustment, great sensitivity and interpersonal skill on the part of both the supervisor and student (Hockey, 1995, 1996; Piccinin, 2000). Good communication betweengraduate students and their supervisorswasthe most important element of supervision (Barger & Mighto-Chamberlain, 1983; Donald et al., 1995; Haksever & Manisali, 2000; Hockey, 1996; McQueeney, 1996; Phillips & Pugh, 2000; Spear, 2000; Waitie, 1994). Without open and honest communication it is very difficult to identify the nature of and reasons for the shortfalls perceived by the postgraduate student. Both parties should be open to criticism, willing to listen to each other and to talk openly (Haksever and Manisali, 2000) and trustworthy (Armitage & Rees, 1988; Hockey, 1996; Salmon, 1992).

Research Philosophy

This study adopted pragmatism as the research philosophical paradigm. Creswell (2009) describe philosophical paradigm as the overall approach to design. Pragmatism relates to matters of fact or practical affairs often to the exclusion of intellectual or artistic matters: practical as opposed to idealistic (Saunders, Lewis & Thornhill, 2012). Pragmatism is a philosophical tradition centered on the linking of practice and theory. It describes a process where theory is extracted from practice, and applied back to practice to form intelligent practice. There is general consensus among pragmatists that philosophy should take the methods and insights of modern science into account (Collis & Hussey, 2014).

Tashakkori & Teddlie (1998) asserts that the function of inquiry should be to relieve and benefit the condition of man. This is to make them happier by anabling them to cope more successfully with the phisical environment and with each other. It was applied in this study because supervision of thesis in postgraduate studiesshould be beneficial and relieve to the postgraduatestudents.

Pragmatists belief that both knowledge (epistemology) and social reality (ontology) were based on beliefs and habits which were socially constructed by the process of institutionalization and socialization. The epistemological orientation adopted by this research waspositivism. Epistemology questions the assumptions of what is acceptable as knowledge and that which constitutes an acceptable knowledge in a field of study (Saunders et al, 2009). In mixed methodresearch, espistemology questions the interaction of the researcher to that being researched. The researcher should remain distant and independent from that which has been researched, therefore, attempting to control for bias, selecting a systematic sample, and hence, being objective in assessing a situation is positivism. O'Leary (2010) defines epistemology as "how we come to have legitimate knowledge of the world" while ontology refers to "the study of what exists and how the things that exist were understood".

Cresswell (2009) further agues that knowledge and social reality were historical because institutions were not created instantaneously but always have a history of which they were the products. It is impossible therefore to understand an institution adequately without understanding historical nomative processess in which it was produced. Pragmatists see "truth" as a normative concept just like 'good' and maintain that 'truth is what works', hence knowledge claims couldnot be totally abstracted from contingent beliefs, interests and projections (Tashakkori & Teddlie, 1998).

This philosophy is relevant to this research because student- supervisor interaction in graduate studies is assummed to affect the completion rate of graduate studies in public universities in Kenya.The pragmatism philosophy is relevant to this study because it tries to give empirical and normative meaning to how the student-supervisor interaction affects graduate studies. Therefore, student-supervisor interaction in graduate studies in Kenya is a process that need to be legitimized, accepted and be internalized to exist as a process of socilization in graduate levels of education in Kenya and the rest of the world

Research Design

The study used a descriptive survey research design. A research design is the set of methods and procedures used in collecting and analyzing measures of the variables specified in the research problem (Muaz, 2013). The design of a study defines the study type (descriptive, correlational, semi-experimental and experimental) and sub-type (descriptive, longitudinal or case study), research problem, independent and dependent variables, experimental design, and data collection methods and a statistical analysis plan (Adèr, Mellenbergh& Hand, 2008). Research design is the framework created to find answers to research questions. The design in this study was linked to pragmatism philosophy because both tries to give empirical and normative meaning on how the student-supervisor interaction affects graduate studies.

This design was adopted to examine student-supervisor interaction in graduate studies in public universities in Kenya. It is used to investigate large populations by selecting samples to analyze and discover occurrences. Graduate students in public universities in Kenya formed the target population. The design involved observing and describing the general behavior of subjects without influencing them in any way (Shuttleworth, 2008). The purpose of using the descriptive survey design for this study was to provide numeric descriptions of some part of the population which was quantitative in nature. When it was observed that groups differ on some variable, the researcher attempted to identify the major factors that might have led to any difference. The researcher then described and explained events as they were. The phenomenon that was considered in this study was interactions in student-supervisor socialization in Kenyan public universities. The approach was appropriate because it enabled the researcher to portray situations, perceptions, opinions, attitudes and the general demographic information that were currently influencing student-supervisor interactions in public universities in Kenya.

The Researcher sought to find out how the supervisors manage their tasks and roles in Moi University (MU), University of Eldoret (UoE) and Kisii University (KU). This design allowed for the shared dialogue between the researcher and the participants through interviews. After each step the researcher used the procedures of data collection, note-taking, coding and memoing which occurred simultaneously from the beginning. Sorting was done when all categories were saturated and finally writing. Situational analysis of the study sites was done by visiting all the sampled public universities in Kenya. The aim of

the visits was to find out what was happening on the ground concerning student-supervisor interaction in graduate studies in public universities in Kenya. This helped in creating rapport which is a powerful technique in research and the root of effective communication, success and performance. I sought to find out the background of the institutions with regard to student-supervisor interaction in graduate studies in public universities in Kenya

The StudyLocale

The study was done in public universities in Kenya. The study locale comprised of the public universities in the North Rift Region, Uasin-Gishu County, which were: Moi Universty (MU), University of Eldoret (UoE), Jomo Kenyatta University of Agriculture and Technology (JKUAT), University of Nairobi (UoN) and Kisii University (KU) in Kenya. This study targeted the main campuses within the region and therefore, MU and UoE formed the study locale apart from KU Eldoret campus which was used for the pilot study.

Justification for the study locale

The study used only two public universities in the North Rift Region of Kenya because they had the main campuses found in the study area. They were purposively selected due to their uniqueness in the area of student diversity among other universities in Kenya. First, they had opened doors to post-graduate students. Secondly, each had unique historical and sociological characteristics of its own which prompted the researcher to have a desire to find out how student-supervisor interaction was designed and conducted to post-graduate students in those universities and how they were socialized and mentored by their supervisors. Uasin-Gishu County was purposively sampled as the locale for the study because it hosts a third of the public universities Kenya.

The study was carried out within public universities in Kenya and particularly those found in Uasin Gishu County. The County is one of the 47 counties of Kenya, located in the former Rift Valley Province. The city of Eldoret (capital and largest town in the county) is the county's educational, administrative and commercial centre. The county is located on a plateau and has a cool and temperate climate. It borders Trans-Nzoia, Elgeiyo-Marakwet, Nandi, Kericho and Baringo Counties in Kenya. These institutions were located within the city of Eldoret and its environs.

The area is selected because it hosts more than a third of the Kenya's satellite campuses and universities and there is no record of a similar study having been conducted in the institutions of higher learning in the area and will therefore, shed more light on the student-supervisor interaction in graduate studies in Kenya.The study area was also chosen because of the completion rate of postgraduate students on their studies. From the university records it was found out that on evarage, completion rate for the MU and UoE is five to six years. The summary is presented in table 3.1.

Table Completion Rate

Completion rate

MU&UoE	2013	2014	2015	2016	2017	Average
Masters	[2-9 YRS] 4.3	[2-11YRS]	[2-11YRS]	[2-16YRS]	[3-14 YRS]	5.52
PhD	[3-7YRS] 4.4	[3-10YRS]	[3-12YRS]	[3-18YRS]	[3-14YRS] 5.8	5.68
Average	4.4	5.6	5.4	6.4	6.3	5.62

Source: Office of post graduate studies MU and UOE (2018)

Moi University

Moi University is a public university located in Kesses, Uasin-Gishu County, in Rift Valley, Kenya. It was established in 1984 by the Moi University Act of Parliament of Kenya, after recommendations from the Mackay Commission. MU as a choice of study was influenced by the fact that the university admits post-graduate students as regular, school based/part-time and evening students in the campuses. On the other hand MU which was the first University to be managed by Africans came to existence as a result of the Mackay Report that also brought forth the 8-4-4 system of education in Kenya. In the report, Mackay insisted that Kenya ought to have a University that is situated far from the main road as well as the urban center.

Mackay's report was inspired by the several hapless cases of misdemeanour of campus students in Nairobi City who kept disrupting peace in the highly congested and busy government centre. Therefore, this university started a post-graduate unit in order to mentor and ensure students-supervisor interaction process was good so as to ensure completion rates was good and be able to cope up with the life far from the urban centers

to show a difference. At the same time the retired President Daniel Toroitich Arap Moi, at the time, decided to have this 'ideal' University built in Eldoret under his name.

That is how MU ended up 15 Kilometers from the Nakuru-Eldoret Highway and 35 kilometres from Eldoret Town. MU admits post-graduate students in all its Campuses at the time of study which include; Main, Odera Akang'o Campus in Yala, Town Campus, including: College of Health Sciences Medical Complex,School of Aerospace Sciences (Rivatext)and School of Law (Annex). While the Satellite campuses include; Alupe Campus, Kitale Campus,Nairobi Campus and Coast Campus. The university has a post-graduate population of 5,357 by 2016- 2017 of which 427were post-graduate students from the school of education who were the major concern for this study.

University of Eldoret

The University of Eldoret is one of the 31 public universities in Kenya and situated 9 km along Eldoret-Ziwa road in Eldoret town, Uasin-Gishu County. It was founded in 1946 by the white settlers as a large scale farmers training centre. In 1984, it was converted to a teachers training college and renamed Moi Teachers Training College to offer diploma in sciences. Due to double intake crisis, the college was taken over by Moi University as a campus in 1990, renaming it Chepkoilel Campus. It was a campus of Natural, Basic and Applied Sciences. In August 2010, the President through Legal Notice No 125 of 13 August 2010 upgraded the campus into a University College with the name Chepkoilel University College, a constituent college of Moi University. Upon the award of Charter by the President on March 2013, the University College was renamed University of Eldoret. The university has a post-graduate population of 800 by 2016-2017 of which 290 were post-graduate students from the school of education who were the major concern of this study.

Target Population

Kothari (2009) defines a target population as that population which a researcher wants to generalize the results of the study. A population is the entire group of individuals, events and or objects having similar observable characteristics. A target population is defined as all members that were described by the characteristics selected by the researcher. This entailed all the lecturers, and postgraduate students who had graduated between 2013 and 2017 in the school of education for masters' and Ph Ds degree at the time of the study.

This was because all the postgraduate students shared characteristics as conceptualized in Chapter One of this study. The target population for the study included all the lecturers teaching and supervising postgraduate students and postgraduate participants who had graduated by 2017 from 2013 a period of five years in the school of education in all public universities in Kenya. The postgraduate participants and supervisors in the public universities constituted the universe sample.

Target population is the accessible population within the area of study and which the researcher intends to study. The study targeted postgraduate participants and lecturers from the faculty of education in public universities in Kenya. The participants targeted were 60 lecturers who were supervisors and 250 postgraduate participants drawn from the Masters' and Ph Ds programme in the faculty of Education in the public universities in Kenya. These participants were targeted because they were able to provide clear and suitable information for the study since they understood the sociology of education; they had first-hand experience of interactions with their supervisors while they were being socialized through the postgraduate programme in the respective universities. The target population was therefore 310 participants as illustrated in the table 3.2.

Table : Target Population: Supervisors

University	Lecturers	Supervisors	Sample Size	Sampling
Moi University	164	55	40	Purposive
University of Eldoret 80		25	20	Purposive
Total	**244**	**80**	**60**	

Source: Records of MU and UoE Registrars Office (2018)

The target population for this study entailed all the postgraduate participants, supervisors, deans and heads of department in the school of education who were also lectures in all public universities in Kenya. A target population is defined as all members that were described by the characteristics selected by the researcher. The target population comprised 164 lecturers from MU and 80 lecturers from UoE giving a total of 244 lecturers.

The supervisors comprising 55 from MU and 25 from UoE totalling to 80 was my specific target population of lecturers because they hold Ph Ds and therefore qualified to be supervisors of the post-graduate participants. The 427 post-graduate students from MU having done their postgraduate studies and 100 post-graduate students also done their postgraduate studies in UOE giving a total of 527 postgraduate students from the two public Universities was targeted as illustrated in the table 3.3.

Table : Target Population: Postgraduate Participants

University	Postgraduate Graduated 2013-2017		Sample Size	Sampling
Moi University	912	427	200	Random
University of Eldoret	580	100	50	Random
Total	**1492**	**527**	**250**	

Source: Records of MU and UoE Registrars Office (2018)

Sample Size and Sampling Procedure

Selection of the public universities: sampling procedure

The study should have ideally involved all the public Universities in Kenya. However, the Universities were, widespread throughout the country and application of research instruments was likely to pose administrative and financial problems. Therefore, Moi University and University of Eldoret were purposively sampled for the study because they had postgraduate schools and postgraduate students under supervision and those who had graduated. Among the two sampled universities, all have established directorates of post-graduate studies which were good for the study. Therefore, the researcher wanted to find out how these universities were dealing with the graduate students in their studies and especially student supervision interaction process so as to enhance their completion rates and quality education at graduate levels.

Sample size determination

Kothari (2009), defines a sample as part of the target population that has been procedurally selected to represent the population under study. Sampling is the process of systematically

selecting representative elements of a population. The sample size of the study was calculated using Krejcie and Morgan (1970) formula for finite population which is calculated as under.

Sample size for supervisors

$$S = \frac{X^2NP(1-P)}{d^2(N-1)+X^2P(1-P)}$$

Where:

S   =   *Required Sample size*

X   =   *Z value (e.g. 1.96 for 95% confidence level)*

N   =   *Population Size*

P   =   *Population proportion (expressed as decimal) (assumed to be 0.5 (50%)*

d   =   *Degree of accuracy (5%), expressed as a proportion (.05); It is margin of error*

Therefore:

$$S = \frac{1.96^2 \times 80 \times 0.5\,(1-0.5)}{0.05^2(80-1)+1.96^2 \times 0.5\,(1-0.5)}$$

$$S = \frac{76.832}{1.1579}$$

S=60

Sample Size therefore equal to 60

Sample size for postgraduate participants

$$S = \frac{X^2NP(1-P)}{d^2(N-1)+X^2P(1-P)}$$

Where*:*

S   =   **Required Sample size**

X   =   **Z value (e.g. 1.96 for 95% confidence level)**

N   =   **Population Size**

P = **Population proportion (expressed as decimal) (assumed to be 0.5 (50%)**

d = **Degree of accuracy (5%), expressed as a proportion (.05); It is margin of error**

Therefore:

$$S= \frac{1.96^2 \text{x} 714 \text{x} 0.5\ (1-0.5)}{0.05^2 (714-1) + 1.96^2 \text{x} 0.5\ (1-0.5)}$$

$$S = \frac{685.7256}{2.7429}$$

S=250

Sample Size therefore equal to 250

Table: Sample Frame of the Participants

University	Supervisors	Postgraduate	Sample
Moi University	55/80 * 60 =41	225/375*250=150	191
University of Eldoret	25/80 * 60 =19	150/375*250=100	119
Total	**60**	**250**	**310**

Source: (Author, 2018)

The sample frame gave a total of 60 supervisors including deans and heads of departments and 250 postgraduate participants giving a total of 310 participants for the study. The participants for the study were selected using stratified sampling to represent each institution and department while simple random sampling was used to select the participants for the study from each of the institutions while purposive sampling was used to sample deans. The justification for using stratified sampling technique was appropriate because the population from which the sample was drawn did not constitute a homogenous group. In stratified sampling, the population is divided along some characteristics before the simple sampling is done (Yates, David & Dweren, 2008).

In this study, the year of study of the post-graduate students was the most important characteristics to be considered. Simple Random Sample is a subset of a statistical population in which each member of the subject has an equal probability of being chosen. The sampling is a random sampling without replacement, and this is the form of random

sampling most used in education practice. In simple random sampling, researchers provide all possible subsets of a population of their research interests with an equal probability of being chosen as a part of their sample. In this technique, each member of the population has an equal chance of being selected as subject. The entire process of sampling is done in a single step with each subject selected independently of the other members of the population.

Research Instruments for Data Collection

The researcher used questionaires and interview schedules as the main tools for data collection. Each of the tools is described below.

Questionnaires

The study employed the use of questionnaires to collect the data for the study. The questionnaires were administered to both the supervisors and graduate students.Kothari (2009) points out that a questionnaire is made up of a number of questions printed or typed in a formal order on a form or forms. In this study questionnaires were administered to all the sampled postgraduate participants and supervisors in MU and UoE. They included both open ended and closed ended questionnaires. Close-ended questions were especially used to elicit most important and precise responses on particular aspects on graduate studies interaction needs.

A 5-point Likert scale was used to construct the closed ended questionnaire where; 1=Strongly Disagreed, 2=Disagreed, 3=Undecided, 4=Agreed, and 5= Strongly Agreed. Likert scale is a measuring system whereby a value is assigned to a statement to transform it from qualitative to quantitative as it is desired in this current studies (Upagade & Shende, 2012). The questionnaire contained two sections: part I consisted of the participants background information also known as demographic data (Gender, associated university, programme at university, period of supervision). Part II addressed the objectives of the study; section B covered supervisory styles, section C covered postgraduate students opinion on characteristics of supervisor, section D covered experiences of student-supervisor interactions section E covered practices that would improve student-supervisor interaction. This was done in order to determine graduate studies in public universities in Kenya in relation to student-supervisor interaction and socialization process.

The open ended questions were used to collect qualitative data while the closed ended questions were used to collect quantitative data. They were preferred because they could be used to gather data quickly from geographically dispersed sample population. They were also deemed appropriate as many participants could be reached (Mugenda, 2003). The semi structured questionnaires were administered through an on the spot filling method. With a questionnaire, large amounts of data could be collected from a large number of people in a short period of time and in a relatively cost effective way, data could easily be quantified, it could be used to compare and contrast other research and might be used to measure change. A questionnaire is a useful instrument for gathering extensive amounts of information for large groups of individuals in a short time span. Questionnaires usually collect data that shows how widespread certain opinions were within a large group. It is a research instrument that gathers data over a large sample.

Interview schedule

There was need to interview the deans and heads of departments who were also supervisors of post-graduate students in postgraduate school in public universities in Kenya and therefore in this study, interview schedules were administered to the deans and heads of departments. This was the oral administration of questions which involves a face to face interaction with the participants. Kothari (2009) observes that interview schedules were particularly suitable for intensive investigations.

The advantage of using interview schedule is that the researcher obtained more information in greater depth. The schedules provided the researcher with greater opportunity to explain the purpose of the study and the items in the interview schedule (Cooper, & Schindler 2004). The two deans and heads of departments from the two public universities were purposely selected. The interview schedule enabled the researchers to seek an in-depth information on student-supervisor interaction and socialization processes involved in the study.

Pilot Study

According to Anastasi & Urbina, (2007) the pilot study is often defined as a smaller version of proposed study and it is conducted with the aim of refining the methodology. They were frequently carried out before large-scale quantitative research in an attempt to avoid time and money being wasted on an inadequately designed project. A pilot study was conducted in the month of January 2018 in Kisii University Eldoret campus in the

postgraduate faculty of education which had similarities with the universities studied in main study. The participants who took part in the pilot study were not included in the main study.

According to Connelly (2008), extant literature suggests that a pilot study sample should be 10% of the sample projected for the larger parent study. Pilot study used 6 supervisors and 25 postgraduate studenst at Kisii university postgraduate faculty. Therefore, targeting Kisii university postgraduate faculty of education for the pilot study was a sufficient representative for the study. A pilot study allowed the researcher to test the prospective study and was done on a smaller number of participants having similar characteristics as of those of the target participants. The results of the piloted research instruments enabled the researcher to determine the consistency of responses made by respondents and adjust the items accordingly by revising the document (Levos*et al,* 2014).

Validity of research instruments

Validity of an instrument is the success of a scale in measuring what it sets out to measure so that differences in individual scores could be taken as representing true differences on the characteristics under study (Koul, 2002). Predictive validity of scores was employed to test the validity of the research instruments. This was examined to determine the extent to which a particular measure is a good predictor of another variable. Content validity was ensured by doing a thorough literature review study on which the content of the questionnaire were based. Face validity was ensured by pre-testing of the data collection tool and scrutiny of the instruments by the research supervisor. External validity of a study is said to exist when the results obtained in a study could be generalized to other people and other settings. Generalization was made considering the degree of confidence with which the sample findings could be conferred on the population and whether similar findings would be obtained at other times and places.

Reliability of research instruments

Reliability refers to the extent to which an instrument yields similar results each time it is administered by independent persons under comparable conditions (De Vos et al., 2010). Odek (2002) notes that reliability of research instruments is concerned about the degree to which a particular measuring procedure gives similar results in repeated trials. The study used the reliability of questionnaire, which set the rating scale by using Cronbach's Alpha-Coefficient: This tests the level in which the questions in the questionnaire are consistent in

giving almost similar findings whenever the instruments are used on the same target population. The study used a Cronbach's Alpha coefficient of at least 0.7 as the threshold of reliability (Mugenda & Mugenda, 2003).

$$\alpha = \frac{n}{n-1}\left[1 - \frac{\sum Vi}{Vtest}\right]$$

Where :

α = Reliability

n = Number of questions in questionnaire

Vi = Variability of each of question score

Vtest = Variability of each of overall questions' score

As a general rule whereby, a value of α > 0.7 was considered reliable enough for the study. Reliability results were presented in table 3.5

Table Reliability Results

Before	After	Objective	Comment
0.521	0.793	Characteristics of Supervisors	Reliable

Source: (Author, 2018)

Data Collection Procedures

In order to carry out the study, the researcher sought to adhere to all the ethical issues that pertain to data collection. Permits were sought from The National Council for Science, Technology and innovation (NACOSTI) and the management of Moi university and University of Eldoret to carry-out the study. Once the permits were granted appointments were booked with the faculties of the various universities to determine the most suitable day and time to carry out the study. Research assistants were recruited who helped in administering the questionnaires after briefing them on ethical issues and how to conduct the research. While filling the questionnaires; participants were not required to write their names. This was expected to enable them give sincere and reliable responses. The information was gathered through on-the-spot questionnaire filling for the respondents who consent to take part in the study. This ensured high return rate of the questionnaires and rule out the problems likely to be encountered by collecting them later.

Data Analysis

Data for this research were both qualitative and quantitative. Qualitative data analysis involved decription and interpretation of information obtained from interview schedules. This was done through discussion and interpretation of study findings. Quantitative analysis was done for the numerical data obtained from the field through questionnaires. Scientific Package for Social Scientists (SPSS) version 20.0 was used to analyze the quantitative data. This was done through descriptive statistics. Descriptive statistics were statistics that quantitatively describe or summarize features of a collection of information (Mann, 1995). Some measures that were commonly used to describe a data set were measures of central tendency and measures of variability or dispersion. Measures of central tendency include the mean, median and mode, while measures of variability include the standard deviation (or variance), the minimum and maximum values of the variables, kurtosis and skewness (Dodge, 2003). The data was described in terms of frequencies percentages and means and presented using tables.

Ethical Considerations

Ethical considerations in research were critical. Ethics were the norms or standards for conduct that distinguish between right and wrong. They help determine the difference between acceptable and unacceptable behaviours (Burgess, 1989). Ethical is the philosophy of relating to the study of ethics and or morally approvable when referring to an action that affects others. This was done by informing the administration of the public universities about the research work through application of request letters to collect data in their institutions. To ensure that the study complies with the ethical standards of research, permission to conduct the research was sought from the respective authorities. A full disclosure of all the activities concerning the study was provided to the authorities. A high level of confidentiality and privacy was observed and the findings of the study would not be disclosed to unauthorized individuals. A letter of introduction was also obtained from the University

DATA PRESENTATIONS, INTERPRETATION, ANALYSIS AND DISCUSSIONS

Response rate

Response rate is the number of people who properly completed the research tools divided by the total number of people in the entire sample (Fowler, 2004). A total of 60 supervisors were sampled to participate in the study, but only 55 participated in the study, two deans

and six heads of departments included. This was a response rate of 91.67% which was considered sufficient for the study. A total of 250 postgraduate participants were sampled to participate in the study, but only 240 participated in the study. This was a response rate of 96% which was considered suitable for the study. Babbie (1990) suggested that a response rate of 50% is adequate 60% is good and 70% and above very good for analysis. Chen (1996) argued that the larger the response rate, the smaller the non-response error. This implies that 93.8% response rate was very appropriate for data analysis. The results of response rate were presented in table 4.1.

Table : Response Rate

Response Rate	Frequency	Percentage
Completed	295	95.2%
Not completed	15	4.8%
Total	310	100%

Demographic information

The study sought to determine the gender of participants. The study results were presented in table 4.2.

Table : Demographic Information of Supervisors

	Frequency	Percent
Male	43	78.3%
Female	12	21.7%
Total	55	100%

Source: (Author, 2018)

The study findings from table 4.2 indicated that 43(78.30%) of the supervisors were male while 12(21.70%) of the supervisors were female. This gives a clear indication that most of the respondents were male compared to that of females. Despite male being most respondents both genders were represented. The study results concur with those of Mann and Mikesell (2006) who found out that majority of institutions and colleges have more male than female.

Demographic information of the postgraduate students

The study findings sought to determine demographic information of the postgraduate students. The study findings were presented in table 4.3.

Table : Demographic Information of the Postgraduate Students

	Frequency	Percent
Male	125	52.08%
Female	115	47.91%
Total	**240**	**100%**

Source: (Author, 2018)

The study findings indicated that 125(52.08%) of the postgraduate students who participated in the study were male as compared to female students who were 115(47.91%). This implies the study got information concerning student-supervisor interaction in graduate studies in public universities in Kenya from both gender. The study also gives an implication that both gender completed graduate studies hence had information's concerning student-supervisor interaction.

The Characteristics of the Student-Supervisor Interaction in Public Universities in Kenya

The study sought to describes the characteristics in the student-supervisor interaction in the public Universities in Kenya. The study findings were presented in table 4.6. The study started with findings from postgraduate students opinion on the characteristics in the student-supervisor interaction in public universities in Kenya. The second objective of the study sought to describe students and supervisors opinion on the characteristic in the student-supervisor interaction in the public universities in Kenya. In this section, descriptive analysis of study objectives was done and presented. A scale was used to show the extent to which the respondent thought the statement of study variables. Therefore, the results of the study were as shown below. Using a five Likert scale with; 5=strongly Agree, 4= Agree, 3= Undecided, 2=Disagree, and 1=Strongly Disagree. The study findings were presented in table 4.6.

Table : Students Opinions on the Characteristic in the Student-Supervisor Interaction in Public Uni

Key SA- Strongly Agree, A –Agree U– Undecided, D – Disagree, SD – Strongly Disagree

Postgraduate Students Opinion on the Characteristics	Opinions of Postgraduate Students				
	SA	A	U	D	SD
My supervisor was consistent on what we agreed on during thesis writing.	86(35.8%)	97(40.4%)	24(10.0%)	20(8.3%)	13(5.4%)
My supervisor did not assume he/she knew but was able to influence progress through inspiring rather than commanding or demanding compliance.	99(41.3%)	125(52.1%)	8(3.3%)	8(3.3%)	0(0.0%)
My supervisor had good communication skills and was a good listener during the process of thesis writing.	106(44.2%)	100(41.7%)	16(6.7%)	18(7.5%)	0(0.0%)
The supervisor encouraged the best out of me and helped identify the unique talents which contributed to my research process.	98(40.8%)	127(52.9%)	9(3.8%)	6(2.5%)	0(0.0%)
The supervisor gave me credit for my work, pointed out my accomplishments, and acknowledged them either privately or in front of others.	83(34.6%)	97(40.4%)	39(16.3%)	21(8.8%)	0(0.0%)
The supervisor from time to	110(45.8%)	121(50.4%)	7(2.9%)	2(0.8%)	0(0.0%)

time gave me advises on how to improve whenever I encountered road blocks during my thesis writing.					
The supervisor resolved conflicts issues through an open and honest discussion as soon as possible so that they do not continue to escalate as we interacted.	109(45.4%)	107(44.6%)	15(6.3%)	9(3.8%)	0(0.0%)
The supervisor was wise and experienced such that he/she had the exact words to say during research process.	91(37.9%)	90(37.5%)	29(12.1%)	22(9.2%)	8(3.3%)
The supervisor was professionally trained and respectful during the process of thesis writing.	112(46.7%)	107(44.6%)	13(5.4%)	8(3.3%)	0(0.0%)

Source: Field Data (2018)

The study findings on the characteristic on the opinions of postgraduate students in Kenyan public universities showed that 86(35.8%) and 97(40.4%) of postgraduate students respondents strongly agreed and agreed that their supervisors were consistent on what they agreed on during thesis writing respectively. Further, 24(10.0%) of postgraduate students respondents were undecided and 20(8.3%) of postgraduate students disagreed on the opinion whereas 13(5.4%) of postgraduate students strongly agreed on the opinion. The study finding also indicated that 99(41.3%) of postgraduate students strongly agreed that their supervisor did not assume they knew but were able to influence progress through inspiring rather than commanding or demanding compliance from them. Further 125(52.1%) of respondents agreed on the same opinion while 8(3.3%) were undecided and 8(3.3%) disagreed with the opinion.

However, 106(44.2%) of postgraduate students strongly agreed that their supervisors had good communication skills and were good listeners during the process of thesis writing and a further 100(41.7%) of the postgraduate students supported the opinion by agreeing with the opinion while 16(6.7%) were undecided and 18(7.5%) of the postgraduate students disagreed with the opinion. The study findings also indicated that 98(40.8%) of the postgraduate students strongly agreed on the opinion that their supervisors encouraged the best out of them and helped identify the unique talents which contributed to their research process and success and 127(52.9%) of the postgraduate students agreed on the opinion too while 9(3.8%) of the postgraduate students took a neutral stand and 6(2.5%) of the postgraduate students disagreed with the opinion that their supervisors encouraged the best out of them.

Study findings indicated that 83(34.6%) of the postgraduate students strongly agreed that their supervisor gave them credit for their work, pointed out their accomplishments, and acknowledged them either privately or in front of others, while 97(40.4%) of the postgraduate students' agreed with the opinion and 39(16.3%) of the postgraduate students were undecided.A further 21(8.8%) of the postgraduate students disagreed with the opinion.The study sought to find out whether the supervisor gave them advises from time to time on how to improve whenever they encountered roadblocks during their thesis writing and indicated as follows, 110(45.8%) of the postgraduate students strongly agreed that supervisors gave them advices and a further 121(50.4%) of the postgraduate students agreed with the opinion while 7(2.9%) of the postgraduate students were undecided and 2(0.8%) of the postgraduate students disagreed with the opinion.

The findings also indicated that 109(45.4%)of the postgraduate students strongly agreed that the supervisors resolved conflict issues through an open and honest discussion as soon as possible so that they did not continue to escalate as they interacted during the process of thesis writings. Those who agreed with the opinion were 107(44.6%) of the postgraduate students, while 15(6.3%) of the postgraduate students were undecided and 9(3.8%) of the postgraduate students disagreed with the opinion of others.

Further, the study found out that 91(37.9%) of the postgraduate students strongly agreed that their supervisors were wise and experienced such that they had the exact words to say during research process and 90(37.5%) of the postgraduate students agreed on the same opinion while 29(12.1%) of the postgraduate students were undecided. Twenty two

22(9.2%) of the postgraduate students disagreed and 8(3.3%) of the postgraduate students strongly disagreed on the same opinion. Lastly, the study found out that 112(46.7%) of the postgraduate students strongly agreed that the supervisors were professionally trained and respectful during the process of thesis writing and 107(44.6%) of the postgraduate students agreed on the opinion while 13(5.4%) of the postgraduate students were undecided and 8(3.3%) of the postgraduate students disagreed with the opinion taken by others.

The study results concur with Spears (2000) who stated that supervisors should read the student's written work thoroughly and provide constructive criticism as this was an essential element in the student's intellectual development. It was also supported by Lesssing and Schulze (2002) who described the supervisory role as a balancing act between various factors: expertise in the area of research, support for the student, critique, and creativity. Further, advice on the desirable amount of reading, experimentation and analysis would normally be expected (Holdaway et al., 1995). According to Spear (2000), feedback is normally given in relation to topic selection, methods of inquiry, writing style and layout, the clarity of the student's work and ideas, the completeness and direction of the work, and the student's general progress.

The study findings also agreed with Hodza (2007) who indicated that supervisors must be willing to make adjustments in the interaction process to meet the supervisee's learning needs. This includes the consultation and appointment with the students. Therefore, faculty and even the university must assist graduate students by providing enough information for a potential supervisor and supervisors should make themselves accessible for the students. The supervisor should make equal information, time and energy available to all students (Brown and Krager, 1985). According to them, the supervisor needed to be sensitive to students' time and competence limitations and to assist them to become aware of their own limitations and any constraints on them. Russell (1996) and Moses (1992) found that both supervisors and students agreed that one role of the supervisor was to assist graduate students. The amount of assistance that supervisors gave to graduate students varied, depending upon the stage that the latter had reached (Moses, 1992). Thus, supervisors should help students more in research input.

The study findings also agreed with Phillips and Pugh (2000) who reviewed that academic research work is an interactive process and requires the development of social as well as academic skills. The school administrative and supervisor should support students towards

the completion graduate studies. They also indicated that for good progress in supervision there should be definite plan in writing, probably different for each department, that describes the department's view on good supervisory practice; establishing regular meetings between student and supervisor, setting up adequate methods of assessing coursework and thesis supervision record keeping, thesis advancement and submitting a comprehensive annual progress report to the supervisor.

However, according to Malfroy (2005) students still need support from the institution and supervisors because they often experience frustration as a result of a perceived lack of support or what is referred to as a disjunction in expectations between the student and the supervisor. Moses (1992) noted that given the length and complexity of graduate student supervision, it is understandable that various difficulties arise due to organizational or professional factors. Some of the professional factors influencing the interactions of the student-supervisor were misinformed or inadequately prepared supervisor or a supervisor whose research interests were different from those of the student.

Further, Salmon (1994) noted that the supervisor needed to be flexible in an attempt to meet the needs of individual students. Supervisors who have this flexibility could be more helpful to their research students. Supervisors contribute to thesis writing advising students on how to organize the work, how to develop thesis writing skills, how to collect relevant literature and how to interact with colleagues as they write the thesis.

The study results implies that post graduate supervisors were consistent on advising students thesis writing. They were able to influence thesis writing progress through inspiring rather than commanding or demanding compliance and good communication. They were able to listent to student's views before giving advice on how to write thesis. By listening to students opinion first supervisors were able to encourage students to identify the unique skills and knowledge which could contribute to research process. The supervisor resolved conflicts issues through an open and honest discussion as soon as possible so that they did not continue to escalate as they interacted.

Student-supervisor interaction was characterized by advising and encouraging postgraduate students because thesis writing was inspired by general principle of good writing: therefore students should be advised and encouraged through the socialization process of postgraduate studies. Also since the supervisors acted as the third party in thesis writing,

they were responsible for handling issues and challenges since they were responsible for what was required in a thesis.

Table : Supervisors Opinions on the Characteristic of the Student-Supervisor Interaction in Public U

Key SA- Strongly Agree, A –Agree U– Undecided, D – Disagree, SD – Strongly Disagree

Supervisor Opinion on the Characteristic	Opinions of Supervisors				
	SA	A	U	D	SD
My students were consistent in what we agreed on during thesis writing.	24(43.6%)	25(45.6%)	3(5.5%)	3(5.5%)	0(0.0%)
My students did not assume they know but were motivated to always consult on what they did not understand during thesis writing.	20(36.4%)	33(60.0%)	1(1.8%)	1(1.8%)	0(0.0%)
My students had good communication skills and were good listeners during the process of thesis writing.	23(41.8%)	27(49.1%)	2(3.6%)	3(5.5%)	0(0.0%)
I encouraged good relationship with my students which contributed to research success during the process of thesis writing.	30(54.5%)	25(45.5%)	0(0.0%)	0(0.0%)	0(0.0%)
The students acknowledged my work; pointed out my accomplishments despite the minimal contact I had with them during the process of thesis writing.	8(14.5%)	20(36.4%)	19(34.5%)	6(10.9%)	2(3.6%)
I gave my students advise from time to time on how to improve	30(54.5%)	25(45.5%)	0(0.0%)	0(0.0%)	0(0.0%)

whenever they encounter roadblocks during thesis writing.					
I resolved the conflicts issues through an open and honest discussion with my students as soon as possible so that they did not continue to escalate.	30(54.5%)	23(41.8%)	1(1.8%)	1(1.8%)	0(0.0%)
My students were wise and motivated such that they knew the exact words to say during research process.	5(9.1%)	26(47.3%)	17(30.9%)	7(12.7%)	0(0.0%)
My students' were professionally trained and respectful during the process of thesis writing.	22(40.0%)	28(50.9%)	5(9.1%)	0(0.0%)	0(0.0%)

Source: Field Data (2018)

The study findings on the characteristic in the student-supervisor interaction in the public Universities in Kenya were presented in table 4.7. The results indicated that 24(43.6%) of respondents strongly agreed that the students were consistent in what was agreed on during thesis writing, and 25(45.6%) of the supervisors also agreed that there was consistency on both parties during thesis writing. However, 3(5.5%) of the supervisors were undecided while 3(5.5%) of the supervisors disagreed that there was consistency during the process of thesis writing. The study findings also revealed that 20(36.4%) of the supervisors believed that postgraduate students did not assume they knew but were motivated to always consult on what they did not understand during thesis writing. Those who were undecided with the opinion were 33(60.0%) of the supervisors while those who disagreed with the opinion were 1(1.8%).

Further, the study findings indicated that 23(41.8%) of the supervisors strongly agreed that their students had good communication skills and were good listeners during the process of thesis writing. Those supervisors who agreed that their students had good communication skills and were good listeners during the process of thesis writing were 27(49.1%). However, 2(3.6%) of the supervisors were undecided and 3(5.5%) of the supervisors disagreed respectively on the opinion that students had good communication skills and were good listeners during the process of thesis writing.

On the opinion that supervisors encouraged good relationship with their students which contributed to research success during the process of thesis writing, the study found out that 30(54.5%) of the supervisors strongly agreed that supervisors cultivated the relationship well. Those supervisors who agreed that that supervisors encouraged good relationship with their students which contributed to research success during the process of thesis writing were 25(45.5%).

The study findings on acknowledgement of accomplishment, 8(14.5%) of the supervisors strongly agreed that the students acknowledged their work; pointed out their accomplishments despite the minimal contact supervisors had with the postgraduate students during the process of thesis writing, while 20(36.4%) of the supervisors agreed on the same opinion as 19(34.5%) of the supervisors were undecided on the opinion that students acknowledged their work; pointed out their accomplishments despite the minimal contact supervisors had with the postgraduate students during the process of thesis writing. However, 6(10.9%) and 2(3.6%) of the supervisors disagreed and strongly agreed respectively on the same opinion about student acknowledgement of supervisors work.

The study finding on frequent advice during thesis writing, 30(54.5%) of the supervisors strongly agreed that they gave their students advises from time to time on how to improve whenever they encountered roadblocks during thesis writing, while 25(45.5%) of the supervisors agreed on the opinion that they give their students from time to time advises on how to improve whenever they encountered roadblocks during thesis writing.

The study findings on conflict resolution during supervision indicated that 30(54.5%) of the supervisors strongly agreed that they resolved the conflicts issues through an open and honest discussion with their students as soon as possible so that they did not continue to escalate during the process of thesis writing, while 23(41.8%) of the supervisors agreed that they resolved the conflicts issues through an open and honest discussion with their students as soon as possible so that they did not continue to escalate during the process of thesis writing. However, 1(1.8%) of the supervisors were undecided as similar number of supervisors disagreed that they resolved the conflicts issues through an open and honest discussion with their postgraduate students as soon as possible so that they did not continue to escalate during the process of thesis writing.

The study findings on respectful interaction during supervision indicated that 5(9.1%) of the supervisors strongly agreed while 26(47.3%) of the supervisors agreed that the students were wise and motivated such that they knew the exact words to say during research process. However, 17(30.9%) of the supervisors took a neutral ground as they were undecided on the opinion. The postgraduate students were respectful and motivated during the process of thesis writing. However, 7(12.7%) disagreed on the opinion that the students were wise and motivated such that they knew the exact words to say during research process. Further, on professionalism during interaction of student and supervisor the study findings indicated that 22(40.0%) of the supervisors strongly agreed that their students' were professionally trained and respectful during the process of thesis writing, while 28(50.9%) of the supervisors agreed that students' were professionally trained and respectful during the process of thesis writing. However, 5(9.1%) were undecided whether students' were professionally trained and respectful during the process of thesis writing.

The study results gave implications that students were not consistent with getting advice from the supervisor during thesis writing. Some students assumed that they knew how to write thesis and failed to always consult on what they did not understand during thesis writing. However, for those students who responded to supervisors advices was therefore the natural complement to the struggles of a postgraduate student, because this could provide quicker and better solutions to problems that the student might encounter during thesis writing. Supervisors prefered students with good communication skills and who were good listeners during the process of thesis writing. Supervisors encourage students to use online communication, because some students were far and could not meet frequently to discuss the thesis writing progress face to face.

The study results concured with Cox, Carr and Hall (2004) who observed that online communications have been used with success in several studies of distance learning environments. The most common forms of such communication were; emails, chat or instant messaging. Schwier and Balbar (2002) noted that synchronous chat created a feeling of community among students enrolled in a graduate course. Spencer and Hiltz (2003) conducted a study of synchronous chat in an online course and found out that student satisfaction was highest in courses where synchronous chat sessions were offered in addition to face-to-face methods. This finding was consistent with Cox, Carr, and Hall's (2004) study which found out that the "chat" function of commercial course management systems was less effective for more in-depth topics.

Further, Meyers (2003) found that students who had participated in virtual class discussions had higher levels of comfort and confidence during traditional classroom discussions. In a recent experiment at Harvard Business School, virtual office hours were offered to students in an introductory computer science class with the intent of addressing the need for flexibility and convenience. Feedback from students was generally positive about the availability of help outside the classroom although professors indicated they did not foresee virtual office hours completely replacing traditional hours anytime soon (Riley, 2007).

Also, Jeong (2007) noted issues related to miscommunication due to lack of verbal cues and drawbacks associated with lack of interoperability between IM clients. This also addresses lower level of media richness that might be found in any non face-to-face communication media (Daft, 1987; Dennis, 1999). A recent study by (Li & Pitts, 2009) found that, while offering virtual office hours improved students' satisfaction of outside-of-classroom student-faculty interaction, students' usage of virtual office hours was very limited. The study also reported that students prefered asynchronous tools such as email to communicate with professors. This study therefore, aimed to look at how these different types of student-faculty interactions influenced the student-supervisor socialization process.

Research therefore, was an interactive process and requires the development of social as well as academic skills (Phillips & Pugh, 2000). A school's administrative function was commonly interpreted as referring to managing, operating or directing an organization (Burton and Bruekner, 1995) in order to support students towards the completion of graduate studies. Some suggestions regarding the supervisory framework and timelines for supporting and defining the students' graduate programme included producing a definite plan in writing, probably different for each department. These described the department's view on good supervisory practice.

It also established regular meetings between student and supervisor, setting up adequate methods of assessing coursework, thesis or dissertation supervision record keeping and project advancement (Brown and Atkins, 1988; Council of Graduate Schools, 1990). It also invloved submitting a comprehensive annual or monthly progress report to the supervisor. Given the length and complexity of graduate student supervision, it was understandable that various difficulties arose (Brown and Atkins, 1988; Moses, 1992) due

to organizational or professional factors. Some of the professional factors influencing the interactions of the student-supervisor had misinformed or inadequately prepared supervisor or a supervisor whose research interests were different from those of the student.

Further, Humphrey and McCarthey (1999) explained that many postgraduate students were mature and/or distance learners with needs different to those of residential and undergraduate students.

Salmon (1994) picked up the theme of changing research stages and the need for a supervisor to be flexible in an attempt to meet the needs of individual students. Supervisors who have this flexibility could be more helpful to their research students, Haksever and Manisali (2000). Supervisors believed that they were contributing by organizing help with skills, developing English, writing, by collecting relevant literature and through networking or putting students in contact with others in the area (Brown and Atkins, 1988).

However, support from the institution and supervisor still needed as reported by Malfroy (2005) that postgraduate students often experienced frustration as a result of a perceived lack of support or what is referred to as "a disjunction in expectations" between the student and the supervisor. Spears (2000) further stated that supervisors should read the student's written work thoroughly and provide constructive criticism as this was an essential element in the student's intellectual development. This was further supported by Lesssing and Schulze (2002) who describe the supervisory role as a balancing act between various factors: expertise in the area of research, support for the student, critique, and creativity. Also, advice on the desirable amount of reading, experimentation and analysis will normally be expected (Holdaway et al., 1995). According to Spear (2000), feedback was normally given in relation to topic selection, methods of inquiry, writing style and layout, the clarity of the student's work and ideas, the completeness and direction of the work, and the student's general progress.

According to Hodza (2007), supervisors must be willing to make adjustments in the interaction process to meet the supervisee's learning needs. This includes the consultation and appointment with the students. Holloway (1995) referred to this as the artistry of supervision. Therefore, faculty and even the university must assist these students by providing enough information for a potential supervisor and supervisors should make

themselves accessible for the students. The supervisor should make equal information, time and energy available to all students (Brown and Krager, 1985).

According to them, the supervisor needs to be sensitive to students' time and competence limitations and to assist them to become aware of their own limitations and any constraints on them. Russell (1996) and Moses (1992) found that both supervisors and students agreed that one role of the supervisor was to assist students in general. The amount of assistance that supervisors give to graduate students varies, depending upon the stage that the latter had reached (Moses, 1992). Thus, supervisors should help the students more in research input.

The supervision literature indicated that ethical, technical and methodological problems could be minimized or prevented if all the participants in the interaction strive to enter it with clear expectations for their respective roles and about the rules for their interactions (Goodyear et al., 1992). Therefore, both on a departmental and individual basis, the supervisor must be diligent about explicitly working with students to establish mutual expectations, responsibilities and benefits for working together and with other interested parties (Phillips & Pugh, 2000).

On the other hand, Moses argued that at each stage of the research progress, students were likely to need different forms of guidance. They need particular guidance on when to stop data collection and analysis, when to start drafting the thesis and how to structure it (Moses 1992). Thus, the supervisors were expected and assumed to be guides (Cryer, 2000) and critical friends during and after thesis writing (Hockey, 1996; Sheehan, 1994). On the other hand, they should also be able to adopt flexible supervision strategies depending on the individual requirements, which were influenced by the attributes of the particular student (Hockey, 1996; Hill et al., 1994; McQueeney, 1996). This was due to the fact that graduate students were not homogenous, but highly diverse in terms of academic ability, personality attributes, motivation and attitude.

Hence, how supervisors responded to students was, in part, be conditioned by these different factors and applying the same rigid strategy for each student might not always work effectively (McQueeney, 1996). Burgess et al. (1994) also picked up the theme of changing research stages and the need for supervisors to be flexible in an attempt to meet the needs of individual students. Supervisors who had this flexibility could be more helpful

to their research students (Haksever & Manisali, 2000). Norhasni & West (2007) explained that research student supervision had a blend of academic expertise and the skillful management of personal and professional relations. Accessibility of the supervisors should be improved so that the postgraduate students could sought advice from them. Students needed guideline from the institution to select a potential supervisor.

Haksever &Manisali (2000) defined the supervisory requirements of the student as follows: (1) personal help: support, motivation, socializing, help in organizing accommodation and other things that might be required, but were unrelated to the research; (2) indirect research related help: providing contacts, both industrial and academic, providing equipment and initial help in locating references; and (3) direct research-related help: critical analysis of work, help with methodological problems, precise direction and help with the management of the project.

Therefore, the interaction between the student and supervisor involved selecting a research topic, planning the research, identifying and acquiring the necessary resources, managing the project, actively conducting the research, carrying out the literature review, analysis and interpretation of the data, writing the thesis, defending it and possibly publication (Piccinin, 2000). Consequently, the supervisory process required constant adjustment, great sensitivity and interpersonal skill on the part of both the supervisor and postgraduate student (Hockey, 1995, 1996; Piccinin, 2000). Good communication between students and their supervisors was the most important element of supervision (Barger & Mighto-Chamberlain, 1983; Donald et al., 1995; Haksever & Manisali, 2000; Hockey, 1996; McQueeney, 1996; Phillips & Pugh, 2000; Spear, 2000; Waitie, 1994). Without open and honest communication it was difficult to identify the nature of and reasons for the shortfalls perceived by the postgraduate student. Both parties should be open to criticism, willing to listen to each other and to talk openly (Haksever and Manisali, 2000) and trustworthy (Armitage & Rees, 1988; Hockey, 1996; Salmon, 1992).

In summary, the study findings on the characteristic in the student-supervisor interaction in the public universities in Kenya indicated that 46(83.29%) of the supervisors were for the opinion that there were good characteristic in the student-supervisor interaction in the sampled public universities in Kenya. While 207(83.89%) of the postgraduate students held that there were positive characteristic in the student-supervisor interaction in the

sampled public universities in Kenya. This implies that there were good characteristic in the student-supervisor interaction in the public universities in Kenya.

Student-supervisor interaction was characterized by advising and encouraging postgraduate students because thesis writing was inspired by general principle of good writing: therefore students should be advised and encouraged through the socialization process of postgraduate studies during their seminar presentation sessions. Also since the supervisors act as the third party in thesis writing, they should be responsible for handling issues and challenges since they were responsible for what was required in a thesis. Responding to supervisors advices was therefore the natural complement to the struggles of a postgraduate student, because this could provide quicker and better solutions to problems that the student might encounter during thesis writing. Though there were many sources for such feedback most postgraduate students considered their supervisors to be the most important figures in this respect, because their supervisor was not only closest to their work, but also the one who eventually and ultimately decide whether the students' dissertation was ready to be defended or not.

Moreover since the supervisor was primarily someone who helped students to write a good dissertation: assists in formulating the research questions, planning the work, organizing fieldwork and experiments, and analyzing and interpreting their results, the postgraduate students always prioritised their advice. The supervisors also helped the students to get in touch with the academic community by opening their networks for them in the research field. This implied that students who responded to supervisors advices had better solutions to problems that they might encounter during thesis writing and could complete within the scheduled period.

Heads of departments opinion on the characteristic of the student-supervisor interaction in public Universities in Kenya

According to heads of departments, the characteristic in student-supervisor interaction in public universities in Kenya showed that 4(66.67%) of the HODs gave their opinion that characteristic supervisory interactions used in their departments included assumption of knowledge by the student because both postgraduates and supervisors were lecturers therefore they treated each other as equals. Further, 2(33.33%) of heads of departments agreed that advancing and encouraging students was the main supervisory characteristics of interaction used. This was because the supervisors also acted as role models and

mentors to the postgraduate students and therefore, they were responsible for encouraging and advising students.

> "Supervisors act as role models and mentors to the postgraduate students and therefore, they were responsible for encouraging and advising them on best ways to do the thesis. They should always discuss with the student on the research to be done, the research design, the progress of analysis, writing and publication strategies".

The supervisor should try to know everything about the personal feelings and emotional characteristics of the students and in meeting personal characteristics and emotions get a lot of attention.

> "Energy invested by the supervisors during thesis writing was always very optimal and also it could be very intensive, with daily meetings, teaching and lots of joint activities for the department". One of the heads of department said.

 They recommended that the substantial relationship should only be of two kinds, a product orientation or a process orientation during thesis writing. Where all meetings were always about the results, with a tendency to focus on concept publications or chapters and also meetings were never about results, but always about the process to get to results. To achieve this, supervisors were advised to have schedules of meetings about the discussion of written chapters, and they tend to stick to deadlines and time lines given. In the second case scenario, supervisors saw their roles mainly as process managers, stimulating candidates to grow and complete their work on time.

The study findings concured with Kim and Sax (2009) who indicates that students needed adequate supervision and clear communication with supervisors. They should also be familiar with evaluation criteria (Shannon, 1995). Research is an interactive process and requires the development of social as well as academic skills (Phillips & Pugh, 2000).

It was supported by Lesssing and Schulze (2002) who described the supervisory role as a balancing act between various factors: expertise in the area of research, support for the student, critique, and creativity. Also, advice on the desirable amount of reading, experimentation and analysis was normally expected (Holdaway et al., 1995). According to Spear (2000), feedback was normally given in relation to topic selection, methods of inquiry, writing style and layout, the clarity of the student's work and ideas, the completeness and direction of the work, and the student's general progress.

According to Hodza (2007), supervisor must be willing to make adjustments in the interaction process to meet the supervisee's learning needs. This included the consultation and appointment with the students. Holloway (1995) referred to this as the artistry of supervision. Therefore, faculty and even the university must assist these students by providing enough information for a potential supervisor and supervisors should make themselves accessible for the students. The supervisor should make equal information, time and energy available to all students (Brown and Krager, 1985).

According to them, the supervisor needed to be sensitive to students' time and competence limitations and to assist them to become aware of their own limitations and any constraints on them. Russell (1996) and Moses (1992) found that both supervisors and students agreed that one role of the supervisor was to assist students in general. The amount of assistance that supervisors gave to graduate students varied, depending upon the stage that the latter had reached (Moses, 1992). Thus, supervisors should help the students more in research input.

> "….some graduate students drop out after cousework only to resurface
> long after their cohort had graduated delaying themselves with varied
> exuses like family issues, work constraints, broken relationships, or fees
> for their children took priority"

The study findings implied that supervisors were role models and mentors to the postgraduate students. Students believed that because the supervisors had passed the same process understand what should be done during thesis writing. Therefore, supervisors were responsible for encouraging and advising students. They should have proffessional relationship where they focus on research work. Personal elements were less important during thesis journey in postgraduate studies. They should not try to know everything

about the personal feelings and emotional characteristics of the students because this diverted the attention of discussion. The meeting between the supervisor and the student should always be about progress of thesis in terms of chapters, corrections, challenges encountered, advices and way forward to complete the thesis.

Dean's opinion on the characteristic of the student-supervisor interaction in public universities in Kenya

According to deans opinion on characteristic in supervisor interaction in public universities in Kenya all of them 2(100%), were for the opinion that there were good characteristics of supervisory interaction in the university.

> "Both supervisors and postgraduate students had their own unique ways of interaction among themselves depending on the postgraduate students. There are different approaches used to supervise postgraduate students appropriately depending on postgraduate student's ability and commitment since weaker postgraduate students are approached differently from the able one. The supervisors must understand their postgraduate students and then decide on the best way to handle them".

McDonald (2017) suggested that to improve the mentioned satisfaction, not only was there a need to invest time, as does the physician to his/her patients, but also both the supervisor and the graduate student must be willing to negotiate a research path to follow that would be practical and achievable. The communication between the physician and patient is of paramount importance for the provision of health care(Ha & Longnecker, 2013) so was the communication between the supervisor and graduate student which encouraged the progression of both the research and the graduatestudy (Yarwood-Ross & Haigh, 2014).

According to the Ogedegbe et al (2012) who further said that for a smooth transition to the postgraduate life, supervisors should start thinking about providing the same kind of positive reinforcement that every student was experiencing in the undergraduate. The recognition for a job well done would mean a lot for a graduate student, as it did for a patient.

> "….flexibility was a key characteristic in the student-supervisor interaction especially on the graduate student who was required to adapt

to changes in corrections of thesis writing even after oral defense, flexibility is a major characteristic for smooth transition to next levels of thesis"

Bazrafkan, Shokrpour, Yousefi& Yamani (2016) further said that supervisors could organize regular meetings for graduate students in order to not only discuss their projects but also improve their coping skills, including critical thinking and problem-solving methods. The act of sharing knowledge and experiences could motivate the graduate students to persevere in their studies (McCarthy, Hegarty, Savage & Fitzpatrick, 2010). When needed, supervisors should use their power of influence to increase the time that the postgraduate student had devoted to research while maintaining part of their employment activities, since many graduate students were also full-time workers.

According to Bazrafkan, Shokrpour, Yousefi& Yamani (2016), supervisors and faculty members must encourage graduate students to pursue the available funding opportunities. Socioeconomic problems were known to be an issue for graduate students. Without the supervisor's support by dealing with graduate student's emotions and personality, research time, funding, and the student's pro-activeness, the graduate journey might not attain success and encounters long time to completion.

The roles and responsibilities of the supervisor and supervisee should be clear to all participants in supervision (Kohner, 2014). Besides, supervisors and supervisee should be aware of the ethical codes for supervision (Butterworth et al., 2012). As Carroll (2016) mentioned, good supervisors were able to adopt a multiplicity of roles in relation to the supervisee. Carroll (2016) emphasized the meaning of the task and role of the supervisor and states that tasks were the behavioral side of functions and roles. The role was person-centered, the task was action-centered, and the function wasa combination of both roles and tasks. Van (2010) argues that, even though a strong notional distinction wasmade between roles and tasks, in reality they combined. Traditionally, part of the supervisor's job was to ensure that work was done well and to standard (Rogers, 2017).

Hawkins and Shohet (2014) and Proctor (2018) argue that a supervisor could be seen as having three tasks. The administration or normative task examines the management part of practitioners' roles and was concerned with on-going monitoring and quality (Berger and Bushholz, 2013; Carroll, 2016; Goldhammer et al., 2012). The formative task involved the

process of skill development and the ability to reflect on experiences. Lastly, the support or restorative task involved the supportive and helping function. Goldhammer et al. (2012) additionally suggest curricular and instructional components as supervisor's job. Carroll (2016) states that the generic tasks of counseling supervision should include consulting, evaluating (Pierce, 2014; Van, 2010) and monitoring professional or ethical issues and highlights the fact that emotional awareness and self-evaluation were also among the tasks that were necessary for all counselors as they work with clients.The study results gave an implication that characteristics on student supervisor interaction might impact on the performance and extent their length of study because some of them required close attention for them to accomplish their tasks on time. Knowledge should not be assumed when interacting with postgraduate students because the students might think that they were right on their own views but they were in most cases completely wrong and thus they needed to be guided throughout thesis writing. Supervisors should not only use a feature only to fulfill the need of supervision only but they should ensure that postgraduate students get the necessary knowledge and concepts needed for the thesis writing.

Supervision characteristics according to supervisors

The study findings sought to decribes the supervision characteristics according to supervisors. The study findings were presented in table 4.8. It was presented in form of frequency and percentages. The characteristics described were number of universities the supervisor had supervised in, programmes supervised, starting dates in teaching and supervision length.

Table : Supervision Characteristics according to Supervisors

Number of Universities

Supervisors have Supervised in	Frequency	Percent
One	10	19.2%
Two	30	57.7%
Three	6	11.5%
Six	4	7.7%
Ten	2	3.8%
Total	**52**	**100**%

Programmes Supervised

	Frequency	Percent
Masters	12	26.09%
Both Masters and PhD	35	73.91%
Total	47	100.00%

Starting Dates in Teaching

	Frequency	Percent
Before 2000	4	8%
Between 2001-2010	28	56%
Between 2011-2017	18	36%
Total	**50**	**100**%

Supervision length

	Frequency	Percent
Five years	2	4.2%
More than 5 years	2	4.2%
Less than 5 years	43	87.5%
Total	**47**	**100**%

Source: (Author, 2018)

The study findings indicated that 30(57.7%) of the supervisors have supervised in two universities, 10(19.2%) of the supervisors have supervised only one university and 6(11.5%) have supervised in three universities. While 4(7.7%) of the supervisors have supervised in four universities and 2(3.8%) of the supervisors have supervised in 10 universities.Overall the findings implied that most supervisors were supervising students in more than one university.

This was due to the fact that the numbers of postgraduate students in Kenya's universities had grown high, while the number of lecturers and supervisors had remained constant. This forces most staff in public universities to do part-time jobs. They mostly teach in other universities and spending their days crisscrossing from one university hall to another with

the aim of filling a gap in service provision. This has forced them to hadle the huge number of postgraduate students that were enrolling in large numbers. Additionally the public universities in Kenya were not able to pay a rewarding amount of money to their lectures thus forcing them to look for extra money by providing their services in other universities on part time basis.

The study findings indicated that 35(73.91%) of the supervisors supervises both masters and Ph D and 12(26.09%) of the supervisors supervises only masters. This implied that the researcher considered the opinion of all supervisors who supervised Ph D, masters and undergraduate programmes. The supervisory rules and regulations in Kenyan universities allowed the supervisors to supervise both Ph D and master students at the same time and to be precise the supervisor is expected to supervise three Ph D and five Masters students in an academic year. It might be also due to the small number of supervisors in public universities the few available ones were overused and overworked by being assigned duties to supervise more of both Ph D and masters students. Assigning of supervision duties to supervisors in public universities might be depending on the supervisors ability to supervise therefore some supervisors might choose to supervise more students either masters or Ph D to increase their rewards although the requirements demand that each supervisor must supervise at most three Ph D and five masters students at a given time. In addition to supervision of Ph D programmes in postgraduate studies, it requires a highly qualified and experienced supervisor to supervise Ph D and masters students. There were strict rules and regulations governing supervision of Ph D and masters students therefore the universities policy on the guidelines of postgraduate supervision is in place and must be followed to the later.

The study findings indicated that 28(56.00%) of the supervisors started working in the university between 2001 and 2010 and 18(36.00%) of the supervisors started working in the university between 2011-2017. While 4(8.00%) of the supervisors started working in the university before 2000. This implies that the researcher considered the opinion of all supervisors irrespective of the time they started supervision to get rich information on supervision interaction in public universities in Kenya. Hence the findings represented the opinion of very experienced supervisors in Kenyan public universities. Also the findings implied that there were few lecturers completing their Ph D programs in universities in Kenya therefore most supervisors have been supervising for a longer period of time.

The study findings indicated that 43(87.50%) of the supervisors have supervised in less than five years and 2(4.20%) of the supervisors have been supervising for five years while 2(4.20%) of the supervisors have supervised for more than five years hence good experienced in the supervision process.

This implies that the supervisory rules and regulations in Kenyan universities allow the supervisors to supervise both Ph D and master students at the same time and to be precise the supervisor is expected to supervise two Ph D and three Masters students in an academic year. This is due to the small number of supervisors in public universities the few available ones were overused and overworked by being assigned duties to supervise more of both Ph D and masters students. There might be few experienced supervisors in public universities and also Ph D students. Assigning of supervision duties to supervisors in public universities might be depending on the supervisors ability to supervise therefore some supervisors might choose to supervise more students either masters or Ph D to increase their rewards although the requirements demand that each supervisor must supervise at most three Ph D and five masters students at a given time. In addition to supervision of Ph D programmes in postgraduate studies, it requires a highly qualified and experienced supervisor to supervise Ph D and masters students.

The study findings agreed with Nagda et al. (2011) that research engagement is an important feature of doctoral student completion in time, though seldom mentioned, is the level of engagement in academic research. Hughes and Pace (2013) conducted a study with college students, concluded that students who were less engaged in such activities delay in college completion or without completion.

Lambie, Hayes, Griffith, Limberg, and Mullen (2014) showed that doctoral students' levels of engagement in research activities, including publishing manuscripts, have significantly higher levels of research self-efficacy, which is also related to research knowledge and productivity. Given that preparing scholars in the field is the primary goal of Ph.D. programs, it makes doctoral students' engagement in research activities critical in the formation of scholars.

Supervision characteristics according postgraduate students

The study sought to determine supervision characteristics according postgraduate students in Kenyan public universities. The study findings were presented in table 4.9.

Table : Supervision Characteristics according to Postgraduate Students

University Attended	Frequency	Percent
Moi university	135	54.8
U.O.E	70	29
U.O.N	7	3.2
S. Technical U.	7	3.2
Catholic	7	3.2
Kenyatta U.	14	6.5
Total	**240**	**100**
Reasons for Choosing the Programme		
Good quality	157	95.00
Poor quality	8	5.00
Total	**165**	**100.00**
Start of Programme		
Before 2010	128	53.3
Between 2010-2015	111	46.7
Total	**239**	**100**
Length to Complete Programme		
Between 2-5 years	183	85.19
More than 5 years	32	14.81
Total	**215**	**100**
Completion Dates		
Before 2010	56	24.1
Between 2010-2015	127	55.2
Between 2016-2017	48	20.7
Total	**231**	**100**

Source: (Author, 2018)

The study findings indicated that 135(54.80%) of the postgraduate students who participated in the study were from Moi university, 72(29.00%) of the postgraduate were from university of Eldoret and 16(6.50%) of the postgraduate students were from Kenyatta University. The Remaining 8(3.2%) of the postgraduate students were from Southern Technical University, 8(3.20%) of the postgraduate students were from Catholic university and also 8(3.20%) of the postgraduate students were from University of Nairobi. This might be because the study was conducted in Eldoret and thus most postgraduate students who participated in the study were employed in Moi University which is one of the biggest employers in the region

The study findings indicated that 157(95.00%) of the postgraduate students students held that they selected their respective university for postgraduate programme because of good quality education according to referrals. While 8(5.00%) of the postgraduate students held that they selected their respective universities for postgraduate programmes because of other factors. This might be because that most students who paid for their own education at the postgraduate level would prioritize good education over other forms of considerations. Good quality of education at this level was necessary to ensure that the graduates get good jobs after the programme was completed including the lecturing jobs at the universities in Kenya.

The study findings indicated that 128(53.30%) of the postgraduate students started postgraduate program before 2010 and 111(46.70%) of the postgraduate students started post -graduate program between 2010- 2015. This indicated that very few students were able to complete their graduate programs within a period of 5 years as evidenced by the low numbers of Alumni students available and having completed the 2 year and 3 year programs respectively between 2010 and 2015.

The study findings indicated that 183(85.19%) of the alumni students' in post-graduate programs took between 2-5 years and 32(14.81%) of the postgraduate students took more than 5 years. This might be because postgraduate program could either be 2 or 3 years a total of five year. This was also an indication of some form of delay in undertaking the postgraduate programs. The number taking more than 5 years was still high considering that the program should take a maximum of 2 years for the masters program and 3 years for the Ph D program.

The study findings indicated that 127(55.2%) of the postgraduate students completed post-graduate programme in between 2010-2015, 56(24.1 %) of the postgraduate students completed undergraduate programme before 2010 and 48(20.70%) completed postgraduate programme between 2016 to 2017. This might be because most students take more than expected time to complete postgraduate programmes. This might be because most post-graduate students' combines work with studies by studying on part time basis but it could also be an indication of other related university experiences and challenges such as the student supervisor interaction during the thesis writing period which was investigated by this study.

Therefore, it was common for them to experience self-doubt as they juggle their coursework with other undertakings depending on their motivation and self drive. Additionally some students were struggling with payment of fees and therefore some were forced to delay their completion time by some years. Postgraduate students were underestimating the time they spend on existing commitments whether these involved work, family or friends while overestimating their available time to study. Due to high commitment among the supervisors they lack time for each student independently and as a result they might not know the delay they were causing to the students. Finally the university might not be able to provide support to all postgraduate students as a way of ensuring that they complete their studies on time.

According to Nagda et al., 2011, Research engagement was an important feature of graduate student completion in time, though seldom mentioned, was the level of engagement in academic research. Although other studies that have explored this issue of student engagement primarily utilized undergraduate students, results convey compelling evidence that student engagement in academic and educational activities should be considered when discussing graduate students' completion. For example, Hughes and Pace (2013) conducted a study with college students, concluded that students who were less engaged in such activities delayed in college completion or without completion.

Similarly, a more recent study with college students showed that student engagement had a significant impact on students' persistence and grades (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2012). Lambie, Hayes, Griffith, Limberg, and Mullen (2014) showed that doctoral students' levels of engagement in research activities, including publishing manuscripts, have significantly higher levels of research self-efficacy, which is also related to research knowledge and productivity. Given that preparing scholars in the field was the primary goal of graduate programs, it made graduate students' engagement in research activities critical in the formation of scholars.

Hadjioannou, Shelton, Fu and Dhanarattigannon (2017) on their study found out that, the challenges to graduate education include high attrition rates, lack of financial resources, mismatch between opportunities and experiences, difficulties establishing support in addition to domestic responsibilities especially for non-traditional students. Creating opportunities and an environment that promotes scholars who were able to be successful

and productive participants in the greater academic and educational research community wasa challenging task that required unwavering dedication.

Gardner (2017) on his research argued that, a key component in doctoral student success was the socialization process among peers, the supervisors and the support they provided each other. Weidman, Twale, and Stein (2001) described four developmental stages of socialization in doctoral education: anticipatory stage, formal stage, informal stage, and personal stage. Within each of these stages, graduate students were navigating their social experiences to foster developmental growth as a scholar by gaining knowledge, skills, and values necessary for completing their degrees and advancing their careers in the field.

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

The Characteristics of the Student-Supervisor Interaction in Public Universities in Kenya

The study findings on the characteristics of the student-supervisor interaction in public universities in Kenya implied that the postgraduate opinion on a unique feature of supervisor interaction was slightly higher than the supervisor's opinion. They argued that some unique characteristics in the student-supervisor interaction in the public Universities in Kenya should be enhanced. This implied that there were unique characteristics in the student-supervisor interaction in the public Universities in Kenya which could be used to enhance student supervisor interaction.

According to heads of department opinions, they held that the main unique characteristics included the assumption of knowledge by the postgraduate student because both supervisors and some of the postgraduates were lecturers, therefore, treated each other as equals and colleague in training. According to deans opinion, they held that there were unique features in supervisory interaction in Kenyan public universities. They argued that both supervisors and postgraduate students had their own unique ways of interaction among themselves depending on the postgraduate student socialization process.

Conclusions

There were unique features in student supervisor interaction in the public universities in Kenya. Student-supervisor interaction was characterised by other features that were used by supervisors to inspire the postgraduate students and make their work easier. The postgraduate students were required to respond to the supervisor's requirements so that

they could provide quicker and better solutions to problems that the postgraduate student might have encountered.

Recommendations

The study recommended that;

Policies guiding postgraduate student supervisor interaction should be revised to meet upto date challenges facing student supervisor interaction. The policy should ensure that postgraduate students complete post-graduate studies on time and ensure good interaction between graduate students and supervisors.

References

Armitage, S., & Rees, C. (1988). Project supervision. *Nurse Education Today*, *8*(2), 99-104.

Armitage, S., & Rees, C. (1988). Project supervision. *Nurse Education Today*, *8*(2), 99-104.

Austin, A. E. (2002). Preparing the next generation of faculty. The Journal of Higher Education,   73(1), 94–122.Australia.

Bazrafkan, L., Shokrpour, N., Yousefi, A., & Yamani, N. (2016). Management of stress and anxiety among phd students during thesis writing: a qualitative study. *The health care manager*, *35*(3), 231-240.

Bennett, J. B. (1997). 'The academy, individualism, and the common good', *Liberal Education,*83(4): 16–24.

Boden, D., Borrego, M., & Newswander, L. K. (2011). Student socialization in interdisciplinary doctoral education. *Higher Education*, *62*(6), 741-755.

Brown, R. D., & Krager, L. (1985). Ethical issues in graduate education: Faculty and student responsibilities. *The Journal of Higher Education*, *56*(4), 403-418.

Brown, R. D., & Krager, L. (1985). Ethical issues in graduate education: Faculty and student responsibilities. *The Journal of Higher Education*, *56*(4), 403-418.

Buber, M. (1996). *I and thou* (Trans. W. Kaufmann, Trans.), New York: Touchstone.

Buber, M. (2002). *Between man and man* (R. Gregor-Smith, Trans.), London: Routledge

Burkard, A. Z. (2014). Dissertation experiences of doctoral graduates from professional psychology programs. *Counselling Psychology Quarterly*, *27*(1), 19-

Burton, W. H., & Brueckner, L. J. (1995). Supervision: A process.

Cakmak, E., Isci, S., Uslu, F., Oztekin, O., Danisman, S., & Karadag, E. (2015). Overview of the dissertation process within the framework of flow theory: A qualitative study. *Educational Sciences: Theory & Practice*, *15*(3), 607-620. http://dx.doi.org/10.12738/estp.2015.3.2606.54.

Coates, H., James, R., & Baldwin, G. (2005). A critical examination of the effects of learning management systems on university teaching and learning. *Tertiary education and management*, *11*, 19-36.

Cox, G., Carr, T., & Hall, M. (2004). Evaluating the use of synchronous communication in two blended courses. *Journal of Computer Assisted Learning*, *20*(3), 183-193.

Darinskaya, L. (2012). DEVELOPMENT OF SELF-ORGANIZATION AND SELF-PRESENTATION SKILLS IN STUDENTS 'CREATIVE AND RESEARCH ACTIVITY. In *EDULEARN12 Proceedings* (pp. 2684-2688). IATED.

Darinskaya, L. A., & Rozum, S. I. (2014). Role of cognitive processes in the implementation of research activity by students. *Procedia-Social and Behavioral Sciences*, *112*, 235-241.

Elgar, F. (2003). *Ph D Completion in Couldadian Universities. Final Report.* Halifax, Nova Scotia:Graduate Students Association of Couldada.

Elliott, K. M. & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management,* 24(2), 200-209.http://dx.doi.org/10.1080/1360080022000013518

Ferreira, M., Cardoso, A. P., & Abrantes, J. L. (2011). Motivation and Relationship of the Student with the School as Factors Involved in the Perceived Learning. *Procedia-Social and Behavioral Sciences*, *29*, 1707-1714.

Field, J. R., & Brown, R. A. (Eds.). (1988). *Treatment of sexual problems in individual and couples therapy*. PMA Publishing Corporation.

Gibbs, C. J. (2006). *To be a teacher: Journeys towards authenticity,* Auckland, New Zealand: Pearson Education

Golde, C. M. (1998). Beginning graduate school: Explaning first-year doctoral attrition. In M. S. Anderson (Ed.), The experience of being in graduate school: An exploration. San Franciso, CA: Jossey-Bass.

Hartrick, D. G. A. (2002). 'Beyond behavioral skills to human involved processes: Relational nursing practice and interpretive pedagogy', *Journal of Nursing Education,* 41(9):

Holdaway, M. A., Radford, S. J., Owen, F. N., & Foster, S. M. (1995). *Fast Switching Phase Calibration: E ectiveness at Mauna Kea and Chajnantor*. MMA memo 139.

Hooks, B. (2003). *Teaching community: A pedagogy of hope*, London: Routledge.

Iskra, N., & Moskvicheva, N. (2014). Values and research potential in students of medical and human sciences. *Procedia-Social and Behavioral Sciences*, *112*, 252-259.

Ismail, A., Abiddin, N. Z., & Hassan, A. (2011). Improving the Development of Postgraduates' Research and Supervision. *International Education Studies*, *4*(1), 78-89.

Javaid, Z., & Hussain, S. (2018). Perceptions of Research Scholars towards Research Supervision and Supervisory Practices at Doctorate Level. *European Online Journal of Natural and Social Sciences*, *7*(4), pp-710.

Kim, Y. K., & Sax, L. J. (2009). Student–faculty interaction in research universities: Differences by student gender, race, social class, and first-generation status. *Research in Higher Education*, *50*(5), 437-459.

Kim, Y. K., & Sax, L. J. (2009). Student–faculty interaction in research universities: Differences by student gender, race, social class, and first-generation status. *Research in Higher Education*, *50*(5), 437-459.

King, S. B., & Williams, F. K. (2014). Barriers to completing the dissertation as perceived by education leadership doctoral students. *Community College Journal of Research & Practice*, *38*(2/3), 275-279.

Kostromina, S., & Bordovskaia, N. (2013). Personal features and research potential of students. *European Journal of Social & Behavioural Sciences*, *5*, 1284-1293.

Kothari, C. K. (2009). Research methodology: Methods & Techniques (Paperback). *New age international (P) Ltd, India*.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, *30*(3), 607-610.

Kuo, Y. (2009). January-February). *Directing and chairing EFL doctoral student' qualitative research dissertations in Taiwan*. Paper presented at the First Philippine International English Language Conference, Manila, Philippines

Lambie, G. W., Hayes, B. G., Griffith, C., Limberg, D., & Mullen, P. R. (2014). An exploratory investigation of the research self-efficacy, interest in research, and research knowledge of Ph. D. in education students. *Innovative Higher Education*, *39*(2), 139-153.

Lessing, A. C., & Schulze, S. (2002). Postgraduate supervision and academic support: students' perceptions. *South African Journal of Higher Education*, *16*(2), 139-149.

Lessing, A. C., & Schulze, S. (2002). Postgraduate supervision and academic support: students' perceptions. *South African Journal of Higher Education*, *16*(2), 139-149.

Li, L., & Pitts, J. P. (2009). Does it really matter? Using virtual office hours to enhance student-faculty interaction. *Journal of Information Systems Education*, *20*(2), 175.

Li, L., Finley, J., Pitts, J., & Guo, R. (2011). Which is a better choice for student-faculty interaction: synchronous or asynchronous communication?. *Journal of Technology Research*, *2*, 1.

Lovitts, B. E. (2001). *Leaving the ivory tower: The consequences of departure from doctoral study*. Lanham, MD: Rowman and Littlefield.

Macionis, J. J. (2013). *Sociology* (15th ed.). Boston: Pearson. p. 126. ISBN 978-0133753271.

Makokha, G. L., & Mutisya, D. N. (2016). Status of e-learning in public universities in Kenya. *The International Review of Research in Open and Distributed Learning*, *17*(3).

Martin, M. M., Myers, S. A., & Mottet, T. P. (1999). Students' motives for communicating with their instructors. *Communication Education*, *48*(2), 155-164.

McCarthy, G., Hegarty, J., Savage, E., & Fitzpatrick, J. J. (2010). PhD Away Days: a component of PhD supervision. *International nursing review*, *57*(4), 415-418.

McQueeney, E. (1996). The nature of effective research supervision. *JOURNAL FOR FURTHER AND HIGHER EDUCATION IN SCOTLAND*, *20*, 23-30.

Metcalfe, A., & Game, A (2006). 'The teacher's enthusiasm', *The Australian Educational Researcher,* 33(3): 91–106.

Miller, J.P., & Nakagawa, Y. (2002). *Nurturing our wholeness: Perspectives on spirituality in education,* Brandon, VT: Foundation of Educational Renewal

Moskvicheva, N. (2012). ANALYSIS OF MOTIVATION IN UNIVERSITY STUDENTS'RESEARCH ACTIVITY. In *EDULEARN12: 4TH INTERNATIONAL CONFERENCE ON EDUCATION AND NEW LEARNING TECHNOLOGIES*. International Association of Technology, Education and Development.

Mouton, J. (2001). *How to Succeed in your Master's and Doctoral Studies*. Pretoria: Van Schaik

Nicholls, J. G., Cheung, P. C., Lauer, J., & Patashnick, M. (1989). Individual differences in academic motivation: Perceived ability, goals, beliefs, and values. *Learning and individual differences*, *1*(1), 63-84.

Oradini, F., & Saunders, G. (2008, February). The use of social networking by students and staff in higher education. In *iLearning Forum* (pp. 4-5).

Palmer, P. J. (1997). The heart of a teacher: Identity and integrity in teaching. *Change*, 29(6): 14-21.

Palmer, P. J. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life*, San Francisco: Jossey-Bass.

Palmer, P. J. (1999). 'The grace of great things: Reclaiming the sacred in knowing, teaching and learning', in Glazer, S. (ed.), *The heart of learning. Spirituality in education*, New York: Tarcher/Putnam: 15–31

PHILLIP, E., & Pugh, D. (2000). How to get a PhD.

Phillips, E., & Pugh, D. (2010). *How to get a PhD: A handbook for students and their supervisors*. McGraw-Hill Education (UK).

Rugut, C. K. (2017). *The nature of postgraduate student-supervisor relationship in the completion of doctoral studies in education: An exploration in two African universities.* Unpublished Thesis.

Saunders, M., Lewis, P., & Thornhill, A. (2012). Research methods for business students (6. utg.). *Harlow: Pearson*.

Seagram, B., Gould, J., & Pyke, S. (1998). An investigation of gender and other variables on time to completion of doctoral degrees, *Research in Higher Education,* 39 (3), 319-335.

Smith, P., & West-Burnham, J. (Eds.). (1993). *Mentoring in the effective school*. Longman.

Smyth, S., Houghton, C., Cooney, A., & Casey, D. (2012). Students' experiences of blended learning across a range of postgraduate programmes. *Nurse education today*, *32*(4).

Spencer, D. H., & Hiltz, S. R. (2003, January). A field study of use of synchronous chat in online courses. In *36th Annual Hawaii International Conference on System Sciences, 2003. Proceedings of the* (pp. 10-pp). IEEE.

Spencer, D. H., & Hiltz, S. R. (2003, January). A field study of use of synchronous chat in online courses. In *36th Annual Hawaii International Conference on System Sciences, 2003. Proceedings of the* (pp. 10-pp). IEEE.

Tashakkori, A., Teddlie, C., & Teddlie, C. B. (1998). *Mixed methodology: Combining qualitative and quantitative approaches* (Vol. 46). Sage.

Too, J, Kande, A., Kiptoo,S., Mukhwana, E., and Some, D.K. (2016). National Policy on University Education.

Ulug, M., Ozden, M. S., & Eryilmaz, A. (2011). The effects of teachers' attitudes on students' personality and performance. *Procedia-Social and Behavioral Sciences*, *30*, 738-742.

Upagade, V., & Shende, D. A. (2012). Research Methodology, 2nd Editions, S. *Chand & Company Ltd. New Delhi–2011*.

Weidman, J. C., Twale, D. J., & Stein, E. L. (2001). *Socialization of graduate and professional students in higher education: A perilous passage?* (Vol. 28). San Francisco: Jossey-Bass. 123 View publication stats

Weidman, J. C., Twale, D. J., & Stein, E. L. (2001). *Socialization of graduate and professional students in higher education: A perilous passage?* (Vol. 28). San Francisco: Jossey-Bass. 123 View publication stats

Weidman, J. C., Twale, D. J., & Stein, E. L. (2001). *Socialization of Graduate and Professional Students in Higher Education: A Perilous Passage? ASHE-ERIC Higher Education Report, Volume 28, Number 3. Jossey-Bass Higher and Adult Education Series*. Jossey-Bass, Publishers, Inc., 350 Sansome Street, San Francisco, CA 94104-1342.

Yarwood-Ross, L., & Haigh, C. (2014). As others see us: what PhD students say about supervisors. *Nurse researcher*, *22*(1).