

An Assessment of Critical Success Factors in Thesis Writing: The Case of Ethiopian Civil Service University and Addis Ababa University

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Abstract

The quality of education continues to challenge Ethiopian higher education. This study has explored and account thesis writing, its governance, factors, and critical challenges in Ethiopian public universities, taking Addis Ababa University and Ethiopian Civil Service University as case. The study employed a concurrent triangulation mixed research design. Both quantitative and qualitative data were collected from sample public universities. Thus, in the case of Ethiopian Civil Service University, from the total graduate degree students of 2014, 334 students were sampled; and in the case of Addis Ababa University, 388 sample students were sampled—in total 722 survey questionnaires were collected. Qualitative data using a semi-structured interview were generated from 40 participants drawn from students and teachers in these two sample universities. The descriptive analysis of this study revealed that advisor's capacity was found slightly higher than average in both sample universities (ECSU, 3.32; AAU, 3.68; Total, 3.51). The level of knowledge gained in the process of thesis writing in ECSU (Mean value, 3.19) and AAU (Mean value, 3.16) were found to be significant. The effectiveness of management practices was found below average (Mean value, 2.78). Written feedback is found to be the dominant mode of communicating comment by advisors in the process of thesis writing— while provision of feedback through face-to-face communication is found to be very minimal in both institutions. The quality of feedback, measured in terms of timeliness (Mean value, 2.34), degree of detail (Mean value, 2.40), comprehensiveness (Mean value, 2.40), and constructiveness (Mean value, 2.39)— were found to be far below average (total mean value, 2.38). This study also came up with evidence that a significant number of students, 78 percent of respondents, have received external technical support from family, friend, colleagues, and classmates in the process of thesis writing. This evidence corroborates the fact that external support plays a significant role in thesis writing. The overall thesis writing and management in public higher education institutions suffer significant limitations, including the absence of guiding documents in research and thesis writing as well as the existence of loose monitoring and evaluation system on the key actors— advisors and students. The management of thesis feedback in general, the guidance, documentation, utilization, and monitoring were found to be ineffective. Advisors commitment is also inhibited by poor incentive mechanism in place. Students lack key set of critical skills, including English language and writing. Last but not least, the lack of vibrant research culture and practice in both institutions were found to play an inhibiting role for effective thesis writing in higher education institutions. In order to ensure the quality of thesis writing, leaders and academicians is better to consider the following measures— to prepare and execute high quality guiding documents and protocols for research; to launch an effective feedback management system; to provide performance based incentive; to strengthen effective monitoring and follow up on students and advisors; to enhance students awareness through training; to avail digital and analytical resources; and, last but not least, to conduct permanent seminars on research, writing, and methods.

Key words: Thesis writing, quality, management, factors, challenges

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1. Introduction

Ethiopia has enjoyed a significant growth in terms of both number and size of universities, the majority of which run graduate degree programs—as a result, thousands of students have had the opportunity to attend graduate programs in a number of fields of study. For most graduate programs, the writing and successful defence of a research thesis is a partial requirement to earn a higher degree. This important instrument is introduced, on the one hand, to provide an opportunity for graduate students to exercise and in the process to nurture their research and critical thinking skills. On the other hand, thesis writing also serves as an evaluation tool to measure students' scholarly capacity and, based on grading of thesis paper, universities award higher degree. Developing research and academic skills among graduate students, through thesis program, a global academic tool, is probably the most essential component in graduate programs of any field of study—its successful application and management significantly determines the quality and effectiveness of graduate programs. But, the implementation of a thesis program requires significant resource.

Ethiopian higher education institutions direct tremendous amount of resources annually for implementation of thesis program. Millions of public money is spent to finance the thesis program in the form of payment to advisors and examiners as well covering costs incurred by graduate students. Thousands of graduate students commit one full academic year to develop and complete their thesis paper—but even more several thousands of survey respondents and interviewee also spend their crucial time in giving responses and spending time with students and researcher. However, all these cost seemed to yield small return.

Numerous graduate students have shown poor performance in the writing of thesis paper. One of the yardsticks used to measure the quality of research paper is its appearance on journals, including international journals. Research and studies by graduate students of Ethiopian universities occupy very insignificant position in international journals. Also, the publication of research article on local journals is at its infant stage. One possible interpretation of this fact is that the majority of the thesis papers are below par to the standards and quality set by journal articles.

Many students plagiarize and copy-paste the works of others. “We are not getting adequate guidance and feedback from advisors”, students complain, on the one hand; “students lack the basic essential skill before they sign in to thesis writing”—is the common cry of thesis advisers, on the other side of the coin. Studies have also shown that there exist capacity gaps among graduate students, including the writing skill deficit, which probably led students to copy-paste and plagiarize (Hagos, 2020).

Lack of quality in thesis and research by graduate students has also brought an important opportunity cost. If the thesis writing program had been a success, several areas would have been well researched and as a result numerous empirical facts² would have been established in many areas.

The lack of quality in thesis paper can only be addressed if significant intervention, driven by a comprehensive study in the area, is introduced. And therefore, this study undertakes an in-depth investigation in to the process of thesis writing in Ethiopian higher education institutions. This study is believed to provide a comprehensive account of the practice as well as the challenges of students and advisers in the process of thesis writing. It will identify the critical

² Facts on a specific issue or topic developed, based on extensive and frequent evidence resulted from quality research.

gaps that require reforms in order to enhance the quality of thesis papers, and also the experience of graduate students. This study aims to a) measure and examine factors affecting thesis writing effectiveness in public universities; and b) identify and investigate critical challenges (along with their underlying root causes) impeding thesis writing process and its effectiveness in public universities

2. Significance of the Study

This study is hoped to provide policy makers and practitioners in higher education with an in-depth account on the management and implementation of thesis writing as well as on critical challenges inhibiting graduate degree programs. The study will give an essential lesson to graduate degree students, teachers, and faculty members on how to improve thesis quality and performance as it will identify key factors affecting student's thesis writing performance. It will also locate key intervention areas with a detail recommendation that will enhance the practice and management of thesis programs in general, student's thesis writing performance in particular. This study can also contribute its share to the improvement of research quality and performance in higher education. The overall writing and analysis of this study will enrich existing literature in the field of pedagogy and higher education.

3. Scope and Limitations of the Study

This study explored thesis writing, its process, governance, and contributing success factors as well as challenges in two sample public universities. Sample students, teachers, and advisors, college deans and department heads were only be drawn from the field of social science. As a result, the analysis and finding of this study may not fully reflect the case in private colleges and universities as well as thesis writing in the field of natural science.

This study will also be limited in other areas. For instance, the quality of analysis and finding of interview will depend on the capacity of participants to explain and share their thoughts and experience. In addition, the analysis and finding from interview can be difficult to be generalized across all higher education institutions. This study can also be limited by the fact that there exist other confounding variables and issues that plays in the relation between variables and themes to be examined and explored in this study.

4. A Brief Review of Literature

4.1 The Purpose of Thesis Writing in Graduate Degree Programs

The present college and university degree, according to Mauch and Park (2003), along with its thesis and dissertation writing dated back 700 years ago. Currently according to these scholars, thesis and dissertation in higher learning institutions underlies two major fundamental reasons. The first is that thesis and dissertation are seen as a requirement in the attainment of advanced degrees in order to evaluate and evidence the capacity of students in making a rational and scientific argument. The second is that thesis and dissertation is introduced to stimulate candidates to achieve higher learning, including critical thinking and problem solving capacity, in a particular field with a significant help from faculty. The second view gives emphases to the learning process while the first to evaluation. However, much focus seems to be allotted to the first cause.

Currently, in college and university learning, the writing of thesis is a requirement to earn a degree—though it is in the process of doing a thesis that a significant amount of learning is accomplished. The essence of writing thesis and dissertation is therefore to provide students an opportunity to practice and test their capacity as to whether they can independently (with substantial independence) advance a scientific and rational argument by undertaking research as well as reveal the knowledge and skill appropriated in the process.

Thesis writing with its several forms target to build the capacity and skill of students to advance scientific argument. In general, academic writing, including thesis writing, has the following four purposes: to report the process and outcome of a research project, to answer a question forwarded to the writer, to discuss a subject, to review and synthesize previous research on a particular subject (Bailey, 2011, p. 3).

4.2 Factors Affecting Thesis Writing Effectiveness

There exist several factors and issues relevant for thesis writing effectiveness. The examination and analysis of empirical studies on thesis have indicated the presence of several factors that can potentially impact thesis writing effectiveness. In this brief review of relevant literature, six areas (factors), which have a potential impact on student's thesis writing performance, have been discussed.

Support and Guidance from Advisors. Support and guidance, according to several studies (including Tauber, 2016; Sugimoto, 2012), is one of the key factors that determine the student's performance in thesis. Advisor's comments and suggestion not only affects student's thesis area and quality but also students' knowledge and understanding in research (Tauber, 2016; Dodson, Fernyhough, Holman, 2006). And therefore the nature and quality of advisors' guidance of student on thesis is worth the effort to further explore and analyse.

Advisor's Research Capacity. The knowledge and research skill of an advisor as well as its exposure to research and research practice can have direct positive effect on the quality and effectiveness of advice he/she provides to students (Ondrusek, 2012; Mauch and Park, 2003). An advisor with rich understanding and practice of research is expected to provide effective guidance to advisees and vice versa.

Department/Faculty Role. The role of faculty /department in providing guidance to students regarding resources and material can also play a positive role in students' effectiveness in thesis performance. According studies (such as: Clark, 2005; Chapman, 1989), apart from area specific guidance given by advisors, faculty and department can provide other key supports to student, including provision of training and seminar on research and thesis writing, effective writing manuals and also research resources (such as data analytical software).

Student's Role. Despite advisors critical support, the role of students in thesis performance is unique. First of student's previous academic capacity and skill in general and their writing, language and research skills in particular play an important role in their master thesis effectiveness (Channon, Savva and Nygaard, 2021). In addition, student's practical effort and their enthusiasm, which can be determined by other several factors and issues, can also impact the quality of their thesis (Loss, and Ryan, 2016). The more time and effort students put in to their thesis —the more the quality of their thesis.

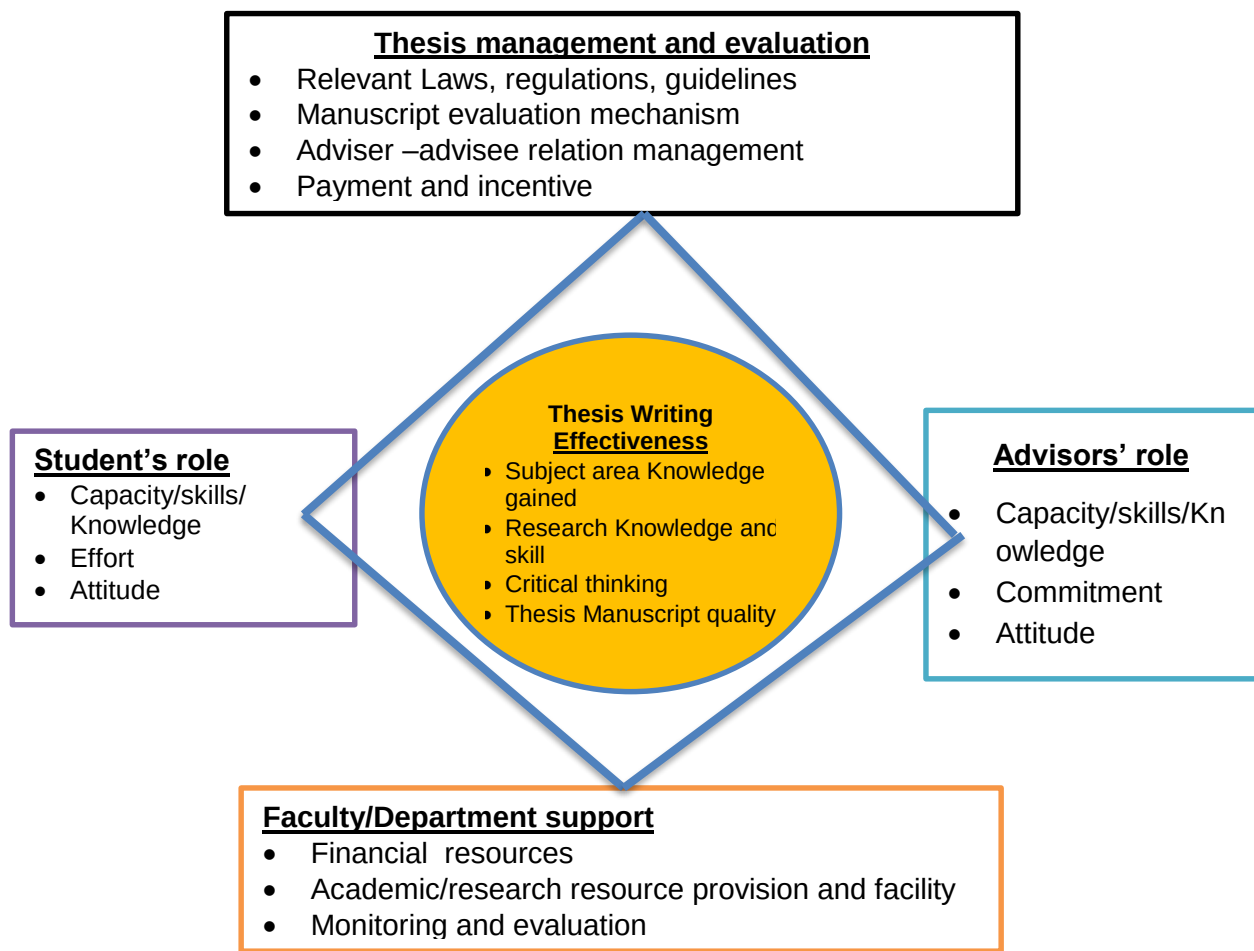
Student's view of their thesis research programs is also another important factor. A student who mainly sees thesis writing as a mere criteria to award a degree may give a significant

attention to final product of the thesis rather than the process, which is believed to build student's critical and research skill (Tauber, 2016).

Graduate Research Course. The majority of students who joined graduated degree programs have come to take graduate and advanced research courses for the first time. According to Feldon et al. (2016), graduate research courses are the main mechanism to build the knowledge and skill of students who sign in to thesis writing. And therefore the quality and effectiveness of graduate research courses can have its own significant impact on students' performance in thesis writing (Channon et al. 2021; Feldon et al., 2016).

Thesis Management and Evaluation. The overall thesis and student research management can also play a critical role in the success of the thesis program. An effective system, including relevant regulatory and implementation framework, practice and management, effective thesis evaluation mechanisms, and efficient assignment of advisors over advisees— can bring significant result in the success of student's research performance (Bailey, 2011). A thesis management system with strong research ethics and implementation has a positive contribution to the overall thesis program effectiveness. Payment and incentive to advisors and examiners can also play an important role in thesis effectiveness—attractive payment package is expected to play a positive role in motivating advisors and examiners (Ondrusek, 2012).

4.3 Conceptual Framework



Source: Own computation from review of literature

5. Methods and Materials

5.1 Research Design

This study pursued a concurrent triangulation mixed research design in which both quantitative and qualitative research methods will be applied. The quantitative research method was used to measure the key characteristics and potential factors relevant for thesis writing effectiveness. The qualitative research method was used to explore challenges inhibiting the overall quality of thesis in higher education. The quantitative research was carried out in parallel with qualitative research phase—and finally a thorough triangulation of data and analysis will be conducted.

5.2 Data Source and Data Collection Instruments

In this study both primary and secondary data were collected. The source of primary data was graduate students and teachers in sample public universities: Ethiopian Civil Service University and Addis Ababa University. Secondary data were also collected from these sample public universities and their colleges and faculties as well as from the Ministry of Education.

This study has employed two major primary data collection instruments: survey questionnaire and semi-structured interview. A survey questionnaire was designed in order to measure key practices, characteristics, and critical success factors affecting student's thesis performance. The semi-structured interview was used to explore and account the critical challenges hindering the quality of thesis research in public universities.

5.3 Sample Size Determination and Sampling Techniques

The sampling unit of this study is a graduate degree student. This study, using survey and semi-structure interview, collected data from two public universities. For the sample survey, proportional random sampling technique was employed to select sample graduate degree students in social science field from Ethiopian Civil Service University and Addis Ababa University. One of the chief aim of this study is not only to provide a statistically viable account of issues and findings on thesis writing at higher education level in Ethiopia, but also aim to produce statistically significant variables and factors for each sample case: Ethiopian Civil Service University and Addis Ababa University— so that comparison can be made between these two sample universities across variables and themes. As a result, to accommodate these analytical objectives (to produce statistical significant findings in each sample case and to make comparisons), the total sample required for the survey was determined after the sample size of each sample university is calculated.

And therefore, in these two public universities, sample students were selected for each university using a sampling formula of Yemane (1967). Thus, in the case of Ethiopian Civil Service University, from the total graduate degree students of 2014, 334 students were sampled; and in the case of Addis Ababa University, 388 sample students were selected—in total 722 students were selected and survey data through questionnaire were collected from these students. (See Annex 1 in the Appendix for detail sample size determination). The total sample of each public university therefore was proportionally distributed across their respective graduate degree programs, in order to fully consider differences of program specializations in each university.

For the semi-structured interview, participants were drawn from sample public universities using purposive sampling. Participants for interview were composed of graduate degree students, teachers, thesis advisors, college and department heads. Studies on interview data collection

show that saturation happens in the range of 15 to 20 participants (Guest, Bunce, & Johnson, 2006). This study, based on the recommendation of Crouch & McKenzie (2006) on saturation of information for interview, interviewed 20 sample participants from each sample public universities. And in total, 40 participants (i.e.2*20) were selected and interviewed using purposive sampling technique.

5.4 Data Processing and Analysis

The quantitative data from survey questionnaire was processed and analysed using SPSS. A reliability test using Cronbach's alpha was undertaken for each group of items in the survey. In addition, factor analysis as well as descriptive statistical tests (such as mean, standard deviation, weighted mean) was conducted. The qualitative data from semi-structured interview were meticulously transcribed. And then the qualitative data were thoroughly coded using open coding. Using coding and qualitative data analysis, an effort was made to produce significant themes that reveal and describe critical challenges hindering thesis writing program.

5.5 Validity and Reliability

Several measures were taken to maintain the validity and reliability of instruments and findings of this study. In order to ensure the validity and reliability of survey questionnaire, proper operational definition based on relevant literature and sources were established for each variable and theme to be explored in this study. Based on these operational definitions, a number of relevant items were constructed for each variable in the survey questionnaire.

Cronbach's alpha test, as indicated the following Table, for each major variables and constructs were conducted. Besides, operational definition of each variable was consistently applied across all stages of this study starting from data collection up to analysis and interpretation.

Table 5.1: Result of Cronbach's alpha reliability test

S.N	Variable/Related Items	Total Number of Items employed	Valid No of Items	Cronbatch's Alpha Test	Remark
1	Students perception on advisors capacity	4	4	0.81	All items were qualified for Analysis
2	Student's capacity and attitude	3	3	0.78	All items were qualified for Analysis
3	Knowledge gained	6	6	0.88	All items were qualified for Analysis
4	Thesis management	4	4	0.80	All items were qualified for Analysis
5	Feedback	7	7	0.90	All items were qualified for Analysis
6	Ethics and plagiarism	3	3	0.77	All items were qualified for Analysis
7	Resource for research	4	4	0.86	All items were qualified for Analysis

To ensure statistical and external validity of the data processing and analysis made on survey questionnaire, statistical tests and procedures were strictly applied. And to ensure the reliability

of qualitative data analysis, several measures were also undertaken: the application of thorough coding, peer debriefing, thick and rich description, and effective data triangulation.

As seen in Table 5.1, Cronbach's alpha test were conducted for seven group of items and the alpha test revealed that these groups of items employed in survey questionnaire were reliable.

6. Result and Discussion

Descriptive Analysis

A sample survey was conducted on second degree graduate students' in ECSU and AAU to measure relevant variables and items affecting thesis writing quality. A total of 722 respondents have participated in the survey. However, due to poor quality of returned survey questionnaire, 64 questionnaires were excluded from the sample. And therefore a total of 658 (309 from ECSU and 349 from AAU) survey questionnaires were entered in to SPSS. Presentation and descriptive analysis of survey result has been presented below.

Demographic Characteristics of Respondents

- **Sex and Age**

As indicated in the following Table 5.2, the majority of respondents were male (70.79 per cent) while the remaining (39.03 per cent) were female.

Table 5.2: Sex of respondents

Sex	Freq.	Percent	Cum.
Male	467	70.97	70.97
Female	191	39.03	100.00
Total	658	100.00	

In regard to age of respondents, the following Table 5.3 depicts the age composition of respondents.

Table 5.3: Age of respondents

Age Category	Freq.	Percent	Cumulative
<25	28	4.26	4.26
25-30	124	18.84	23.10
31-40	385	58.51	81.61
41-54	121	18.39	100.00
Total	658	100	

As indicated in the above Table 5.3, young respondents (with the age of less or equal to 30 years) constituted 23.1 per cent of the total respondents. The majority of respondents (58.21 per cent) were between the ages of 31 up to 40 years. Senior student respondents (with the age of 41- 54 years) constitute 18.39 per cent of the total share of the respondent).

The Role of Advisor

- **Student's assessment of advisor's capacity**

The intellectual capacity of advisors in general and their knowledge and skill in the specific field of study they are assigned to advise students in particular—plays a very critical role for the success of thesis writing in higher education in Ethiopia. The following table depict graduate students perception of the capacity of their advisor in ECSU and AAU.

Table 5.4: Student's assessment of advisor's capacity in percentage

Degree	ECSU and AAU				
	Subject mater	Research	use of Research tools	Total	Cum. average
Very low (1)	2.4	9.7	9.4	7.1	7.1
Low (2)	6.8	14.7	14.2	11.8	18.9
Medium(3)	16.4	23.8	28.2	22.7	41.6
High (4)	49.8	34.3	33.9	39.5	81.1
Very high (5)	24.5	17.5	14.4	18.9	100.0
Total	100.0	100.0	100.0	100.0	
Mean	3.87	3.35	3.30	3.51	

As indicated in the above table, three broader items, such as subject matter knowledge of advisor, research knowledge of advisors, and the ability to apply research tools and software, were introduced. In regard to subject matter knowledge, the greater majority of students (74.5 per cent) have rated their advisor's capacity as high and very high; it is only 9.2 percent rated this particular attribute as low and very low. However, in regard to knowledge on research, a simple majority of students, 51.8 per cent, rated their advisors capacity in this area as high and very high. The same is true for use of research tools. However, the positive reaction of students on capacity of their advisors declines on research and the use of research tools when compared to subject matter knowledge. As revealed in the above table, the relatively highest mean value (3.87) was recorded by subject matter knowledge, followed by research knowledge (3.35) and use of research tools and software (3.30). These findings imply that though there are limitations in subject matter knowledge of advisors and teachers in both higher institutions, there exist a significant gap in the research capacity of advisors and teachers.

- **Degree of commitment**

One of the common key ingredient for work performance, in which advising thesis papers is one, is the commitment of key actors engaging in the field. This study has attempted to measure student's assessment of their advisors in regard to the degree of commitment in the process of advising.

As indicated in able 5.5, a significant number of student respondents in ECSU (28.57 per cent) and in AAU (38.07 per cent) have rated the degree of commitment of their respective advisors as low and very low. The mean value of the commitment was found to be slightly below than medium level both in ECSU (2.99) and AAU (2.92). These results revealed that though

there exist minor difference in regard to commitment where ECSU performs slightly better than AAU—both higher institutions came out to be inadequate in this regard.

Table 5.5: Student's assessment on advisor's commitment in ECSU and AAU

Degree	ECSU		AAU		Total	
	percen tage	Cum. percentage	percen tage	Cum. percentage	percen tage	Cum. percentage
very low (1)	15.91	15.91	16.92	16.92	16.43	16.43
Low (2)	12.66	28.57	21.15	38.07	17.06	33.49
Medium(3)	39.29	67.86	28.70	66.77	33.80	67.29
High (4)	21.10	88.96	19.64	86.40	20.34	87.64
Very high (5)	11.04	100.00	13.60	100.00	12.36	100.00
Total	100.00		100.00		100.00	
Mean	2.99		2.92		2.95	

The Role of Student

Student's assessment on self-academic capacity

The role of student in the successful completion of thesis is irreplaceable. This study has looked in to variables aim to measure student's role in their thesis writing. The following table presents students prior knowledge on a range of issues (that can determine their successful completion of thesis writing).

The significant percentage of students (45 percent) in both sample higher institutions regarded their prior knowledge on subject matter of their thesis topic as low and very low. Likewise, the majority of students (51 per cent) have rated their prior knowledge on research as low and very low. On average, the mean value of prior knowledge on subject matter and on research were found to be 2.63 and 2.41, respectively, which are far below medium level. These data reveals that a significant majority of graduate students in both sample higher education institutions lack key sets of knowledge and skills (relevant for thesis writing effectiveness) before they engage in thesis writing.

Table 5.6: Student's prior knowledge on subject matter and on research

Degree	ECSU and AAU					
	Subject mater	Cum. average	Research method	Cum. average	total	Cum. average
Very low (1)	22.12	22.12	25.39	25.39	23.74	23.74
Low (2)	22.89	45.01	26.48	51.87	24.67	48.41
Medium(3)	31.64	76.65	32.55	84.42	32.10	80.51
High (4)	16.74	93.39	13.08	97.51	14.93	95.44
Very high (5)	6.61	100.00	2.49	100.00	4.56	100.00
Total	100.00		100.00		100.00	
Mean	2.63		2.41		2.52	

Student's attitude towards thesis writing

Another key factor affecting thesis writing effectiveness is students' levels of constructive attitude towards the issue in general—the level of knowledge and skill they believe they get in the process of thesis writing in particular.

Table 5.7: Student's belief on knowledge and skill gained in the process of thesis writing in ECSU and AAU

Degree	ECSU		AAU		Total	
	Percentage	Cum. percentage	Percentage	Cum. percentage	Percentage	Cum. percentage
Very low (1)	27.1	27.1	24.1	24.1	25.5	25.5
Low (2)	29.1	56.2	24.9	49.0	26.9	52.3
Medium(3)	33.8	90.0	28.4	77.4	30.9	83.2
High (4)	5.4	95.3	16.6	94.0	11.4	94.6
Very high (5)	4.7	100.0	6.0	100.0	5.4	100.0
Total	100		100.0			
Mean	2.31		2.56		2.44	

As indicated in the above table, the majority of student respondents in ECSU, 56.2 per cent, and in AAU, 49 percent, on average, 52.3 percent— have had low and very low level of belief that they can gain new knowledge and skill in the process of writing process. It is only a relatively small percentage of the student respondents in both universities (16.8 per cent) that believe they will enhance their knowledge and skill in the process of thesis writing. The level of belief of students in AAU (when compared to ERCSU) in regard to the benefit of thesis writing was found to be slightly more constructive as the mean value of ECSU is 2.31 while AAU is 2.56. However, generally speaking, the attitude of students in both universities (total mean value= 2.44) towards thesis as a source of opportunity to enhance and gain new knowledge can be said very minimal, far below medium level.

Knowledge and skills gained in the process of thesis writing

One of the key purposes for the introduction of thesis research in graduate degree programs is to create a practical opportunity to deepen students' understanding on their field of study as well as on scientific research. The following table depicts the responses of students on the degree of knowledge gained in the process of thesis writing.

As indicated in Table 5.8, the mean values of knowledge gain on subject matter, on research method, on research in general, and the use of statistical tools were found to be 3.19, 3.17, 3.16, and 3.19, respectively, all of which are slightly higher than the average value. This data therefore indicates that there is strong evidence that graduate student gain knowledge and skill in the process of thesis writing. It also reveals that the level of learning in terms of skills gained in academic writing (mean value=2.78) as well as learning on data and facts (Mean value=2.78) is found to be very modest. Therefore, it is fair to say that the knowledge and skill gain in the process of thesis writing lacks comprehensiveness.

Table 5.8: Average degree of knowledge gain in the process of thesis writing in ECSU and AAU

Items	ECSU	AAU	Total
	Mean	Mean	Mean
Knowledge gain (Subject matter)	3.17	3.21	3.19
Knowledge gain (Research method)	3.16	3.18	3.17
Knowledge gain (Research writing)	2.78	2.78	2.78
Knowledge gain (Research in general)	3.21	3.12	3.16
Knowledge gain (facts, data)	2.74	2.81	2.78
Knowledge gain (Stat. tools)	3.21	3.17	3.19
Total	3.04	3.05	3.04

In addition, as shown in above table, the degree of knowledge and skill gain attributed to the thesis writing, measured across a range of parameters, has shown no significant difference between the two sample higher institutions, ECSU and AAU. The relatively lower rates were registered in regard to knowledge gain in research writing and sensitivity to data and facts—both in the case of ECSU and AAU.

Thesis management

Effective management of thesis in schools and universities is also one of the critical factors for effective thesis writing. There are several mechanisms useful to undertake effective management of thesis writing, including effective topic allocation mechanism, monitoring of advisors, implementation of complaint handling, and the discipline to lead by fixed schedules, which is necessary to manage educational programs. The following table shows the degree of responses of graduate degree students on these issues.

Table 5.9: Level of effectiveness of management practices in thesis writing in ECSU and AAU (in percentage)

Degree	ECSU and AAU					
	Topic allocation	Monitoring advisors	Complaint handling	Led by schedule	Total	Cum. percentage
Very low (1)	17.5	24.5	24.1	5.03	17.7	17.7
Low (2)	19.9	30.9	30.9	15.5	24.2	41.94
Medium(3)	41	29.3	30.3	25.5	31.5	73.43
High (4)	13.9	10.2	9.94	28.4	15.7	89.12
Very high (5)	7.73	5.12	4.73	25.6	10.9	100
Total	100	100	100	100	100	
Mean	2.74	2.41	2.4	3.54	2.78	

On the range of management practices, the mean value of schedule (i.e. the degree to which departments and colleges manage thesis writing based on fixed schedule), which is 3.54, was found to be the highest when compared to other items; and followed by mean value of topic allocation (i.e. to what extent departments and colleges allocate thesis topic among advisors based on specialization), which was found to be 2.74. The relatively lower rates (as shown in the mean value) were registered in the case of monitoring and follow up on advisors as well as in handling complaint of, which was found to be 2.41 and 2.4, respectively. These data revealed

that, except on the use of fixed schedule to manage the progress and completion of thesis (which is found relatively moderate), the overall management of thesis writing in sample higher education had suffered from significant limitation and can be said highly ineffective.

Table 5.10: Students' assessment of adviser load in ECSU and AAU

Degree	ECSU		AAU		Total	
	Number (share)	Cum. percentage	Number (share)	Cum. percentage	Number (share)	Cum. percentage
Yes (1)	221 (71.8%)	71.8 %	87 (25.7%)	25.7%	308 (47.7%)	47.7%
No (0)	87 (28.2%)	100%	251 (74.3%)	100%	338 (52.3%)	100%
Total	308		338		646	
<u>Mean</u>	<u>0.72</u>		<u>0.26</u>		<u>0.48</u>	

As seen in the above table, the majority of student respondents in ECSU, 71.8 per cent, believe that their advisor load is very high—whereas only 25.7 percent of respondents in AAU has the same reaction. On the contrary, the majority of respondents in AAU, 74.3 percent identified with the fact that advisor load is manageable. This data revealed that advisors in ECSU (when compared to AAU) have shouldered a significant amount of load of advisee.

Feedback

Feedback is the major means to guide and enhance thesis of students and so occupies a central position in the advisor and advisee relationship. The following table depicts the mode of communication used to provide feedback for student's thesis.

Table 5.11: Mode of feedback for thesis in ECSU and AAU

Mode of Feedback communication	ECSU		AAU		Total	
	Number (share)	Cum. percentage	Number (share)	Cum. percentage	Number (share)	Cum. percentage
Verbal (1)	74 (24.42%)	24.42 %	88 (26.59%)	26.59%	162 (25.55%)	25.55%
Written (2)	191 (63.04%)	87.46%	219 (66.16%)	92.75%	410 (64.67%)	90.22%
Face-to-face (3)	38 (12.54 %)	100.00	24 (7.25%)	100.00%	62 (9.78%)	100.00%
Total	303		331		634	
<u>Mean</u>	<u>1.9</u>		<u>1.81</u>		<u>1.84</u>	

As indicated in the above table, written feedback is the dominant mode of communication between advisor and advisee in the process of thesis writing in both higher institutions (63.04 per cent in ECSU and 66.16 per cent in AAU); followed by verbal communication (24.42 per cent in ECSU and 25.55 per cent in AAU) and face-to-face communication (12.5 per cent in ECSU and 7.25 per cent in AAU). From these figures, it can be learned that communicating feedback

through face-to-face, which is essential to clearly communicate feedback, clarify ambiguities and discuss expected changes, is very minimal in both institutions.

Table 5.12: Degree of feedback received from advisors in ECSU and AAU

Degree	ECSU and AAU				
	Face-to-face	Verbal	Written	Total	Cum. Percentage
Very low (1)	29.3 %	25.6%	24.8%	26.6%	26.6%
Low (2)	32.2 %	24.7%	24.8%	27.3%	53.9%
Medium(3)	27.6%	27.9%	29.6%	28.4%	82.3%
High (4)	7.2%	13.2%	12.3%	10.9%	93.1%
Very high (5)	3.7%	8.5%	8.6%	6.9%	100.0%
Total	100.0%	100.0%	100.0%	100.0%	
Mean	2.24	2.54	2.55	2.44	

The degree of feedback communicated in these three modes of communication, as indicated in the above table, is largely minimal. The level of face-to-face feedback is rated as low and very low by 61.5 per cent, as medium by 27.6 per cent, and high and very high by 10.9 per cent. Similarly, the level of verbal feedback is rated as low and very low by 50.3 per cent, as medium by 27.9 per cent and high and very high as 21.7 per cent. In regard to written feedback, student respondents provide similar rate with previous mode of communication.

Table 5.13: Average frequency of received feedback by each mode of communication in ECSU and AAU

Mode of feedback	ECSU	AAU	Total
	Mean	Mean	Mean
Verbal	2.78	2.33	2.54
Written	2.64	2.47	2.55
Face-to-face	2.35	2.13	2.24
Total	2.59	2.31	2.44

As indicated in the above table, the degree of feedback given to students in ECSU when compared to AAU is relatively higher in all three modes of communications. However, in both of these institutions the degree of feedback given to students is below average. In total as indicated by the mean value of each type of mode of communication, which is below average (2.24 in the case of face-to-face feedback, 2.54 in the case of verbal feedback, and 2.55 in the case of written feedback)—the level of feedback given to graduate students is far from being adequate.

Table 5.14: Degree of feedback quality in ECSU and AAU

Degree	ECSU and AAU					
	Timeliness	Detail	Comprehensiveness	constructiveness	total	Cum. average
Very low (1)	26.1	24.3	23.9	25.2	25.5	25.5
Low (2)	30.8	30.0	31.5	30.7	30.0	55.5
Medium(3)	30.3	32.4	30.4	29.4	30.2	85.7
High (4)	8.8	8.4	8.8	9.4	9.2	94.9
Very high (5)	4.1	4.9	5.4	5.3	5.1	100.0
Total	100	100	100	100	100	
Mean	<u>2.34</u>	<u>2.40</u>	<u>2.40</u>	<u>2.39</u>	<u>2.38</u>	

When it comes to enhancing students' thesis quality, it is not only the amount and frequency of feedback that matters but also its quality. As indicated by the above table, the majority of students have given lower rates for feedback across a series of quality criteria. The timeliness of feedback is rated as low and very low by 56.9 per cent; the level of detail of feedback received was rated as low and very low by 56.9 per cent; in terms of comprehensiveness, 55.4 per cent; and on constructiveness by 55.9 per cent. The mean value of all quality criteria, employed in this study, came out to be far below average (timeliness, 2.34; detail, 2.40; comprehensiveness, 2.40; constructiveness, 2.39; total, 2.38). These figures imply that advisors' feedback for students' thesis have suffered a lot in terms of quality—and therefore significant improvements are imperative in this particular area to enhance the timeliness, degree of detail, comprehensiveness, and constructiveness of feedback.

Research ethics and plagiarism

Research ethics is one of the most missing ingredients in Ethiopian higher education. In this study, students' perception on plagiarism and unethical research conduct is assessed. The following table depicts the student's rate on departments' effort to address the issue of plagiarism and unethical research practice.

Table 5.15: Mean value of efforts to forestall plagiarism in ECSU and AAU

Mode of feedback	ECSU	AAU	Total
	Mean	Mean	Mean
Awareness creation	2.86	2.91	2.89
Corrective measures taken	3.02	3.21	3.12
Overall effort of Dept. to address Plagiarism	2.77	3.11	2.95
Total	<u>2.88</u>	<u>3.08</u>	<u>2.99</u>

The mean value awareness creation is found to be 2.89. In regard to mean values of corrective measures, they are found to be 3.12, which is average. The overall effort of departments in both universities in addressing plagiarism is also found to be average (mean value=2.95). When these figures are assessed all together; we can learn that the overall performance rated in addressing unethical research conduct and plagiarism is average—and therefore attention should be given to the issue.

As seen in the above table, there exists a minor difference between ECSU and AAU in all items employed to measure efforts addressing plagiarism. ECSU and AAU has performed a mean value of 2.86 and 2.91 in awareness creation respectively, 3.02 and 3.21 in corrective measures taken, and 2.77 and 3.11 in overall effort. In all these three items of plagiarism and unethical research conduct, ECSU has performed slightly lower than AAU—though both achieved average performance in all these items.

Access to key resources for thesis research

The provision of key facilities and resources is believed to be essential for effective thesis writing process. In this regard, the availability and access to resources for thesis writing in both ECSU and AAU, according to student respondents, have been good in general.

The following table shows that significant amount of high rates (high and very high) were given to access to reference books (52.1 %), published research papers (45%), digital access to journal articles (44.1), and research analytical software (23.9%). On the other hand, lower rates (low and very low) were observed in the case of research analytical software (38.9%), published research papers (26.9%), reference books (22.4%), and digital access to journal articles (22%). These ratings revealed that though the overall provision of resources relevant to research and thesis writing is good—the availability and access of some key resources such as research analytical software are in significant deficit. It is also imperative that access to reference books, digital access to journal articles and published research works also have a significant room for further improvement.

Table 5.16: Students' access to key resources for thesis writing in ECSU and AAU

Degree	ECSU and AAU					
	Access to Reference book	Published research papers	Digital access	Research analytical software	Total	Cum. Percentage
Very low (1)	6.1	8.4	9.6	12.5	9.2	9.2
Low (2)	16.3	18.5	12.4	26.4	18.4	27.5
Medium(3)	25.5	28.0	34.0	37.3	31.3	58.8
High (4)	31.4	26.7	28.1	13.9	25.0	83.8
Very high (5)	20.7	18.3	16.0	10.0	16.2	100.0
Total	100.0	100.0	100.0	100.0	100.0	
Mean	3.44	3.28	3.29	2.82	3.21	

There exist significant differences in this regard when comparisons are made between sample institutions: ECSU and AAU. The mean value of access to reference books in AAU is 3.72, slightly closer to 4 (high rate) while in ECSU it is recorded as 3.15 close to medium value. In regard to availability and access to published research papers, the mean value of ECSU came 2.96 whereas AAU was found to be 3.59.

Table 5.17: Mean value of access of students to key resources for thesis writing in ECSU and AAU

Mode of feedback	ECSU	AAU	Total
	Mean	Mean	Mean
Access to reference book	3.15	3.72	3.44
Published research papers	2.96	3.59	3.28
Digital access	3.15	3.40	3.29
Research analytical software	2.76	2.89	2.82
Total	3.00	3.39	3.21

There is also greater difference in terms of digital access to journal articles and research analytical software. There exist minor differences in these categories in ECSU and AAU. In regard to research analytical software, student respondents both in ECSU and AAU have rated this facility as below average (2.76 in ECSU the lowest and 2.89 in AAU the second lowest). This figures implies that though all types of resources should be enhanced in higher education, though focus should be given to the availability, access and training of digital resources and research software.

External support for thesis writing

Graduate students in the process of thesis writing not only rely on internal support from their advisors and departments, but also seek support from external sources, family members, friends, colleagues... etc., due to several factors (including inadequate consultancy support from their advisors).

Table 5.18: Presence of external support (thesis consulting service) for students in ECSU and AAU

Degree	ECSU		AAU		Total	
	Number (share)	Cum. percentage	Number (share)	Cum. percentage	Number (share)	Cum. percentage
Yes (1)	238 (79.60%)	79.60%	258 (76.11%)	76.11%	496 (77.7%)	77.7%
No (0)	61 (20.40%)	100.00%	81 (23.89%)	100.00%	142 (22.3 %)	100.00%
Total	299		339		638	
Mean	0.80		0.76		0.78	

As indicated in the following table, the overwhelming majority of students, 79.6 percent in the ECSU, 76.11 Per cent in AAU), and on average 77.7 percent receives thesis consulting support from external body. This result tells that it is imperative to encourage students not to be limited by consulting service from advisors but also look for other external sources.

As indicated in the following table, efforts were made to identify the type of kinship students have with individuals who provide technical support in thesis writing.

Table 5.19: Student's types of kinship with individuals (providing thesis consulting support) in ECSU and AAU

Degree	ECSU		AAU		Total	
	Number (share)	Cum. percentage	Number (share)	Cum. percentage	Number (share)	Cum. percentage
Family	34 (11.68%)	11.68%	47 (13.70%)	13.70 %	81 (12.78%)	12.78 %
Friend	41 (14.09 %)	25.77%	55 (16.03%)	29.74 %	96 (15.14%)	27.92 %
Colleague	68 (23.37 %)	49.14 %	76 (22.16%)	51.90%	144 (22.71%)	50.63 %
Classmate	148 (50.86%)	100.00%	165 (48.10 %)	100.00%	313 (49.37%)	100.00 %
Total	291 (100.00%)		343 (100.00%)		634 (100.00%)	
Mean	3.13		3.05		3.09	

It was found that in the case of ECSU— family, friend, colleagues, and classmates constitute 11.68 percent, 14.09 percent, 23.37 percent, and 50.86 percent, respectively. The composition of kinship type in ECSU is very similar with that of observed in AAU, 50.63 percent of students receiving thesis consulting support are from classmates. Therefore, it is imperative to devise tools that can enhance collaboration and support among classmates in master's graduate programs.

In regard to the degree of consulting support, the significant majority of respondents in both universities have rated the level of external support as high and above (61.8 per cent in ECSU and 61.5 per cent in AAU). This implies that the degree of importance of external support from classmates, friends and families is substantive. This finding also complements the fact that higher institutions should devise a mechanism to nurture collaborations among classmates.

Table 5.20: Degree of external support in thesis consulting support in ECSU and AAU

Degree	ECSU		AAU		Total	
	Percent age	Cum. percentage	Percentage	Cum. percentage	percentage	Cum. percentage
Very low (1)	7.89	7.89	5.59	5.59	6.68	6.68
Low (2)	10.20	18.09	9.71	15.29	9.94	16.61
Medium(3)	20.07	38.16	23.24	38.53	21.74	38.35
High (4)	40.79	78.95	39.71	78.24	40.22	78.57
Very high (5)	21.05	100.00	21.76	100.00	21.43	100.00
Total	100.00		100.00		100.00	
Mean	3.57		3.62		3.60	

Qualitative Analysis

The purpose of using qualitative method in this study was to explore and identify significant challenges inhibiting thesis writing quality in ECSU and AAU. Qualitative data from semi-structured interview were collected. The qualitative responses from interview were organized in word file. From frequent readings of this transcript generally dealing with problems and challenges facing students and advisors in the process of writing and supervising thesis in ECSU and AAU—16 open codes, some of them are in-vivo codes using direct language of respondents.

And using these 16 codes, the entire transcript was open-coded. Based on grouping of similar open-coded chunk of data and applying critical thinking and intuition of the researcher, 6 categories were developed. Therefore, the findings on problems and challenges inhibiting thesis writing effectiveness were organized in 6 qualitative categories.

Lack of critical inputs for research

One of the key challenges frequently discussed by student participants of interview from ECSU was —the lack of high quality thesis/dissertation guideline. The researcher have also learned from the review of relevant documents that there is no single and university-wide guideline that serves as to guide the contents and standards of thesis across all colleges—though there exist mini guidelines at department and college level. In addition, several participants have also argued, the research and technical competency of a significant number of advisors have limitations—and as a result, the quality of feedback communicated to graduate students is equally limited. According to participants, schools and department doesn't avail essential digital resources as well as analytical software. Teacher participants from ECSU, on the other hand, have also complained the lack of plagiarism checking software at the university level. This account revealed that departments and colleges in ECSU don't have at their disposal one of the important tools to enforce integrity and ethics in the process thesis writing.

Loose monitoring on key actors of thesis writing, advisors and advisee

Department and colleges monitor the progress of thesis research using a number of tools. Interview participants in general have complained that the degree of department monitoring on students and advisors is generally low, especially monitoring on advisors is minimal. Several interviewees have witnessed the fact that there is no mechanism in place to ensure advisors provide the necessary feedback and support to their students. In addition, according to respondents, penalties and administrative measures are not introduced to enforce advisors role when the latter fail to meet minimum requirements. These accounts shows that department and colleges in both sample universities come short in one of the key practice in managing a task, control and monitoring.

Ineffective feedback management system

The provision of feedback and comments occupies a central position in relation between students and advisors. The researcher has learned from the review of documents as well as from the views of participants, departments and colleges doesn't have standards and protocols on feedback, detailing its content, frequency and time of communication, and other important features. In addition, there exist no tools and mechanism in place to document, communicate and utilize feedback and comments of advisors.

The majority of feedback, as indicated in the descriptive analysis of this study as well as on accounts of participants, is communicated using written communications, which, according to several participants, are sometimes not effective to clearly communicate messages and ideas of advisors unto advisees. Participants have identified that the lack of face-to-face feedback sessions limits their opportunity to optimize the comments and feedback of their advisors. According to several participants, the quality of feedback received from the advisors lacks comprehensiveness as well as came short to become constructive. Many advisors, as per the views of participants, focus on the identifying the problems and pitfalls in their work rather than

forwarding tangible solutions for limitations. As per the view of participants, many advisors, due to several reasons, fail to provide adequate and timely feedback to their advisees.

Students have also showed several limitations in regard to addressing and incorporating feedback in their thesis work. Many teachers have complained that students have not acted upon on the majority of comments and feedback forwarded by their advisors—and this at times discourages teachers from providing significant amount of feedback to their students.

‘Research conferences, workshops, and seminars are too little’

Higher education institutions in Ethiopia are highly dominated by the teaching practice—research and its practice are not highly visible. Research activities such as conferences, validation workshops, seminars, and research trainings are essential to serve as a source of transfer of knowledge and skill for university communities, including graduate students; however, these practices are not frequently conducted in sample universities, especially in ECSU. According to many teacher participants, the absence of research conferences, workshops, and seminars, because of the infancy of research practice and culture in higher education, limits the opportunity and exposure of graduates’ degree students. Therefore, strengthening research seminars, conferences, workshops, colloquium...etc could play an indirect positive role to build the research capacity of students—and by implication the quality of their thesis.

Lack of commitment due to lack of Incentive

Lack of adequate incentive is the cry of several advisors. They underlined that the amount of income and incentive they receive in the form of salary as well as advisor fee is significantly small when compared to the intensity of the teaching/advising work they undertake. Therefore, this lack of adequate pay and incentive attached to their work, according to participants of interview, discourages them to effort and invest more time on their job.

Students lack set of critical skills

One of the most visible limitations of graduate students in higher education, including ECSU — is on the English language. Student interviewees’ knowledge and skill in English is highly limited. The majority of respondents have also revealed their limitation in academic writing, another critical skill for successful thesis writing. The researcher have also witnessed that graduates students in both sample institutions have lacked English language as well as academic writing skills which have limited the quality of their thesis paper. These skill deficits have also pushed many students to plagiarise and copy paste the works of others.

7. Conclusion

This study has examined the practices as well as critical success factors of thesis writing in Ethiopian higher education, taking ECSU and AAU as a case. In regard to students’ assessment on the capacity of teachers and advisors, a significant number to teachers and advisors have limitation in mastering research methodology skills as well as the use of data analytical software—though the majority of advisors are equipped with adequate level of subject-matter knowledge. The finding of this study concludes that there exist a significant difference between perception of students on their respective advisors capacity in ECSU and AAU, especially in the area of research knowledge and the application of research software and tools.

In regard to the capacity of students, this study revealed that a significant majority of graduate students in both sample higher education institutions lack key sets of knowledge and skills

(relevant for thesis writing effectiveness) before they engage in thesis writing, including knowledge on subject matter in general as well as selected research topic in particular, and basic knowledge on research method—the mean value of all these attributes were found to be far below medium level.

The finding of this study also revealed that the majority of student respondents in ECSU and AAU have had low and very low level of belief that they can gain new knowledge and skill in the process of thesis writing—this indicates that the existence of limitation in attitude towards thesis writing. The degree of commitment of students, measured by the amount of time allotted, on the writing and completion of thesis, is also found very minimal.

The finding of this study also revealed that students have gained a significant degree of knowledge) in the process and completion of thesis writing in terms of subject matter, research method and research in general. However, the level of learning in terms of skills gained in academic writing was found to be very modest. Therefore, it is fair to say that the knowledge and skill gained in the process of thesis writing lacks comprehensiveness.

The effectiveness of thesis management, measured across several indicators, was also found below average in both sample institutions. Effective topic allocation as per competence, monitoring on advisors, and compliant handling— all came out to be below average. The relatively good thing in regard to thesis management in both sample institutions is found to be the implementation of schedule in managing the progress and completion of thesis project. The overall management of thesis writing in sample higher education had suffered from significant limitation, including the fact that advisors handle too much advisee, beyond their capacity to manage, and therefore can be said highly ineffective.

In regard to feedback, written feedback is the dominant mode of communicating ideas and comments from advisors to advisees in thesis writing in both higher institutions—communicating feedback through face-to-face, which is essential to clearly communicate comments and intents, is very minimal in both institutions. The mean values of the degree of feedback given to advisees is found to be far from being adequate, far below average (2.24 in the case of face-to-face feedback, 2.54 in the case of verbal feedback, and 2.55 in the case of written feedback). In addition, the quality of feedback, measured in terms of timeliness, degree of detail, comprehensiveness, constructiveness—were found to be below average. Students do not only complain about the degree of feedback but also about its quality.

Practices on combating plagiarism and integrity in thesis writing were also found to have significant limitations, including in the area of awareness creation and taking corrective measures.

In regard to performances of both sample universities in availing relevant resources and facilities in thesis writing, measured in terms of access to reference books, published research papers, access to digital resources, access to research analytical software (including plagiarism)—both registered average performance. And in both institutions, students' access to analytical software was found to be below average.

This study also came up with evidence that external support of students in the process of thesis writing were found to be significant. Families and classmates matter in success of their peers in completion of thesis project.

The overall thesis writing and management in public higher education institutions suffer significant limitations, including the absence of guiding documents in research and thesis writing as well as the existence of loose monitoring and evaluation system on the key actors—advisors and students. The management of thesis feedback in general, the guidance, documentation,

utilization, and monitoring were found to be ineffective. Advisors commitment is also inhibited by poor incentive mechanism in place. Students lack key set of critical skills, including English language and writing. Last but not least, the lack of vibrant research culture and practice in both institutions were found to play an inhibiting role for effective thesis writing in higher education institutions.

8. Recommendations

Based on the analysis and findings made in this study, the researcher recommends the following measures to enhance the practice and management of thesis writing and by implication the quality and effectiveness of thesis as well as to address the existing challenges in this area.

- **To prepare and execute guiding documents and protocols.** One of the deficits observed in thesis management in sample universities, especially in ECSU, is the lack of university-wide guiding documents, which not only provides critical guidance on standards and quality but also serve as a vehicle for research knowledge and practices. Therefore, to ensure basic standards and practices on thesis writing across school, departments, and colleges in a university—universities are advised to produce high-quality guidelines. Another important issue related to thesis guidance is the establishment of body that foresees and approves ethical requirements of studies conducted in the university.
- **To launch an effective feedback management system.** Another important deficit in thesis management is the absence of effective feedback management system; as a result, feedback of advisors and examiners are not optimally utilized. ECSU and other universities is therefore should craft feedback management system that enables effective electronic documentation of feedback, enhance utilization (including for administrative purpose), and can easily be accessible for relevant bodies. The feedback management system determines and details the quality of feedback in terms of their content, frequency, timeliness, degree of comprehensiveness, level of detail and other important features—so that advisors can receive and produce thesis feedback that can enhance thesis effectiveness.
- **To provide incentive based on performance.** Inadequate incentive for thesis advice is identified as recurrent challenge inhibiting one of the key ingredients in thesis writing, the motivation of teachers in providing effective feedback and support to students. Another issue related to incentive is the existence of non-discriminatory incentive package that provides equal payment for both best and average performers. Therefore, universities are advised not only provide adequate payment for thesis advisors—but also launch a discriminatory incentive system based on performance, which pays better for advisors who helps the completion of best thesis papers and do vice versa.
- **To strengthen effective monitoring and follow up on advisors and students.** Monitoring and follow up on students and advisors in the process of thesis writing seemed very inadequate. And the monitoring of advisors in providing feedback and guidance to students as they are required seemed—nonexistent. As monitoring and follow up enhances job performance and quality including in thesis writing, universities should pay more attention to the monitoring of student's thesis progress as well as the support and guidance provided by advisors.
- **To enhance students awareness through training.** The degree of awareness of students on thesis writing, its requirements, its bits and pieces seemed very inadequate.

Therefore, departments and schools should engage this awareness gap by providing training.

- **To avail digital and analytical resources.** The resources and support available for research and thesis writing has limitations, especially the availability of digital and analytical resources and software. Universities should pay attention to the development of research resources, including the provision of standard analytical software and versions.
- **To conduct recurrent seminars on research, writing, and methods.** One of the limitation observed in higher education institutions is the lack of adequate research seminars in general and seminars on research, methods, and writing in particular. These academic practices serve as a vehicle for transfer of knowledge and lessons among university communities, including students; and thus can play a positive role in enhancing research practice and quality, including thesis. Therefore, in order to enhance thesis writing quality, universities should also strive to conduct lots of seminars on research and methods on usual basis.

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