

**The Role of Competency Framework in Improving Quality Research Output in
Distance Education: Lesson Derived from Practice**
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Abstract

Research is an endeavor for improving theory and practices in different sectors. Researches are conducted following different approaches based on the kinds of research. The type of research, the purpose of the research, characteristics of the research participants, the scope of the research and the level of scientific rigor are among the factors that affect a research endeavor (Lodico, M ., Spaulding, D . and Voetgile, K. 2006: 5).

What so ever the case, conducting research requires relevant knowledge, skills and attitudinal dispositions. In this paper, I investigated and described the role of identifying the relevant competency framework towards facilitating the production of quality research in education. I took the practical experience of developing a research competency framework for the Ethiopian Civil Service University(ECSU). In my report, I summarized the steps and procedures followed towards the production, validation of competencies identified in knowledge skills and attitude aspects and sign of the research competency framework. I also highlighted the role of the competency framework in facilitating research practices in the university in general and in the Institute of Distance and Continuing Education in particular.

Key words: Research competency framework, Quality of research output, Distance education research, Research management practice

I. Introduction

1.1 Research and Higher Education in Ethiopia

Higher education in Ethiopia is about 70 years old. It is marked with the opening of the Haileilassie I University College in 1962 and it became Addis Ababa University in 1972. There were three institutions who give college level courses prior to the establishment of the AAU and the Asmara universities almost at the same time. Research undertakings have been in the education system of Ethiopian since the emergence of modern higher education in the country. Research practices did not develop in a pace the education expansion did. Focus to research was very less.

Even the education and training policy of Ethiopia 1994 did not describe the role of research in the system as it described roles of education and training except mentioning that research need to have relation with education training (p5). Such unconscious misrepresentation might have had a negative influence in the practice. In the perception of the researcher, the key roles research play in development of human beings in every aspect need to be acknowledge.

Recently the growth and Transformation Plan (GTP) of the country seems to give better attention to research undertaking. It identified the role of research in the education system and the sectors beyond. According to the GTP document, research practices in higher

education institutes are expected to support the effort towards technology transfer (2010: 86). This obviously implies the interest of the government in facilitating the development of science and technology education in the country. This also goes with the policy of the government that dictates the ratio of student in higher education institutions into science and technology and social sciences to be 70/30 (Ibid 2010: 87).

1.2 Role of Research in Ethiopia

Observation indicates that the role of research in Ethiopia is characterized as a practice to meet only two purposes. The first purpose is the role of research in the education system especially in higher education. The second purpose is the role of research in fostering innovation and developments in the social, economic and political and cultural activities.

The role of research in the education system of Ethiopia has some important features. Firstly, it is a universal practice that university education involves learning of research methodology. This has been a practice since the introduction of modern higher education in the education system of the country. Furthermore, in line with the improvements in the level of the education and the increasing number of areas of disciplines, the study of research methodologies has improved from time to time. However, a very essential characteristic of research in the education system of Ethiopian is mainly limited to academic practice. This has been true despite the fact that policy and strategy documents often claim that the research practices in the education system of the country are required to be linked to the activities in industries.

The GTP document specifically identifies the role of technology centered research endeavor in higher education institutions of the country (GTP 2010: 67). These have the ultimate purpose of crating linkage between the higher education institutions and the industry in different sectors. This is based on the basic assumption that education institutions, especially higher learning institutions need to demonstrate that they are the power house, transformation and overall human and environmental sustainable development.

1.3 Status of Research Ethiopia

Review of the status of research in Ethiopia indicates the minimal attention it has been given. Three important indicators can be identified for this. First, it is quite often observed that there is a lower level of understanding of concepts and theories of research among students and practitioners. Students' research practices through their term papers and final year these are often labeled as poor in their quality. The rigor of research undertakings, the depth of research analysis, and the practices of creating appropriate designs are drawbacks often identified. Second, the small number of research outputs in Ethiopian academic and industrial practices can also be considered as the other indicators of the status of research in the country. The Number of journal, proceedings, conference papers, published and disseminated are small in number. The effort to avail research outputs using different forms of electronic and digital media is also one area of failure. Third, the number of research outputs that have practical relation and impact in different walks of lives of the society is again found to be

insignificant. The plan to make research undertakings create link with the industry should be a reaction towards these drawbacks (GTP 20 10:67).

1.4 Research in Ethiopian Civil Service University (ECSU)

The Ethiopian Civil Service University is one of the public universities in the country. It was established first in 1995. The legislation on the reestablishment of the Ethiopian civil service university 2007 clearly stipulated that the University is expected to further its contribution in producing educated and trained human power that facilitate the provision of effective civil service in the country and realize of establishing accountable public sector.

There are four core businesses identified in implementing business process reengineering in the university. These are education, training, research and consultancy. The education core process mainly includes facilitating the teaching learning process enrolling students in the regular, continuing and distance programs in different disciplines for bachelor, masters and doctoral degrees. There are more than eight institutes and twenty departments that enroll students.

The role of research in the Ethiopian civil service university even after the introduction of the business process reengineering is very limited. Hear says show that there are different reason for this. One of the main reasons for limited practice of research activities in ECSU is structural problem. The university has a coordination office of research activities. According to some comments, coordinating research undertakings from varying areas of disciplines not only impossible for a handful of coordination office staff but also unrealistic. The second reason for limited research practice in the university is lack of professional commitment among the appropriate staff of the university. Many associate this with the lack of experiences and minimal role of senior staff. Some however, relate this fact with the high level of turnover of senior staff of the university. These can be parties who can greatly affect research practices in the University in leading and coaching research practices of junior staff members. The lower level of support and incentives in undertaking research is also considered as another factor that contributed to limited research practice in the university. Practitioners often claim that the financial and material support from the research fund source of the university is often meager to produce quality output. The most influencing factor that many identify is ineffective management of research practices. This is often associated with small number of staff in research and publication coordination office, contentious turnover of staff of the office and centralized management of the research practice of the university.

Despite the facts mentioned above there have been different initiatives recently towards addressing the problems mentioned above. One of these is introducing the research competency framework.

1.5 Competency Framework

1.5.1 Competence vs. Competency

According to Whiddett and Hollyforde (2005:12) when competence is related to ability based on the work or job outputs, competency is related to ability on behavioral dispositions. They further underlined that while competence shows the current result/achievement based on an identified evidence in a piece of work competency shows the possible future achievements to come based on analyzing the behavioral disposition one demonstrates. Therefore, this encourages responsible parties to give a better emphasis in developing competency of practitioners than their competence.

Identifying competencies is often done reviewing first the core values of the institutions. Based on the core values, professional competencies are identified. These indicate the areas in which the practitioners' specific competencies are categorized into. The core behavioral competencies are the specific areas of capability of a researcher that can be identified and monitored. Discussions below describe the three issues.

1.5.2 Core Values

These are words or phrases that show the guiding principles of the missions of an institution towards its strategic objectives. Obviously, the strategic missions of institutions are achieved through proper implementation of their core businesses. In the case of ECSU, one of the core businesses of the university is Research. Therefore, the core values of the university are also the guiding principles for the research activities in the university.

1.5.3 Professional Competencies

Professional competencies indicate the capacities and capabilities achieved in research endeavor. These specifically cover the competencies that the activity of research requires as a set of skills from anyone who undertake research. There are 12 professional competences identified using FGD in this study. While the first four are in relation to behavioral/attitudinal disposition, there are three professional competencies related to skills and five professional competences to knowledge.

1.5.4 Core Behavioral Competencies

Core behavioral competencies are specific indicators of knowledge, skills and attitudinal dispositions that are required from individual practitioners in the research endeavor at the Ethiopian Civil Service University.

1.5.5 Framework

Literature on designing research competency framework is limited. As a result, I have accessed only handful of literature discussing how competency frameworks are produced. This report is produced cognizant of this fact.

Competency framework identified job related behavioral dispositions of individuals at work place. This is under the domains of knowledge, skills and attitude/behaviors one demonstrate on his/her duties and responsibilities. This implies that the appraisal of an individual based on the output of the work that he/she undertake cannot be a complete indicator of success in the future. For success to be guaranteed in the future the behavioral dispositions of an individual in assuming his/her duties and responsibilities need to be given attention.

1.5.6 Research Competencies

Different kinds of research have different scope. As a result, the procedures of conducting research vary in different settings and contexts. However, a basic interpretation from the widely known definition of (Kaol 1984:10) is that research requires objective and systematic implementation of methods so as to find out answer for a given legitimate question.

Conducting productive research and answering legitimate questions as stated above require competence of practitioners.

1.5.7 Research Competency Framework

A research competency framework is a framework that stipulates the basic professional and core behavioral competencies required from a research practitioners in order to achieve the objectives of research undertaking with quality.

Research works are often ranked based on different criteria. One of the most widely used criteria is the level of the journal in which the research work is published fulfilling the essential criteria. Another of course more subjective means of ranking research outputs is the extent to which it addresses the problem it investigated and brought about change in the given context. Researchers however can be ranked based on the competencies they have.

The research competency framework developed by the Ethiopian Civil Service University is a document aspiring to find out the needed competencies from research practitioners who engage in helping the university achieve its objectives.

The production of the research competency framework has undergone different relevant stages.

1.5.8 Implication of Research Competency Framework in Distance Education

Grew and Calvert 1998:3 identified distance and open education as strategies for meeting learning developing needs in the time to come. As a result, they urge that proper attention need to be given for this strategies. One aspect of providing attention could be reviewing the study of research practice in distance and open education system. The very first question however need to be is there any means of leading the research practice in distance and open education system. The use of research competency framework as a tool of identifying the role and status of research practitioners in distance education could be the one.

The Ethiopian civil service university is taking the role of research competency framework in guiding research practices in the university in general and in distance and continuing education program in particular.

1.6 Research Questions

This report is aimed at compiling the findings of the process of developing a research competency framework in support of an external consultant called National School of Government International (NSGI); UK based public consultancy firm. The basic questions addressed in this report are:

1. What are the areas of competencies for a researcher in the context of ECSU
2. What are the role of research competency framework in producing an effective research output in ECSU in general and in the institute of distance and continuing education programs in particular.

II. Methodology

2.1 Research Procedure

This report communicates the practical steps and procedures taken in a project of producing a research competency framework for ECSU. First, a consultant was employed from the UK National School of Government International (NSGI). Following that, a team of professionals was formed from the staff of ECSU. Then, concepts and issues on competency framework were made clear. After that, the team collected information from target participants as discussed below. Based on the analysis of the data the competency framework is developed incorporating the professional competencies and the core behavioral competencies.

Predominantly qualitative analysis was employed in order to guide the process of data collection for developing the research competency framework reported here.

2.2 Data

There were two sets of data collected for this project. The first one was the responses of the target groups who participated in the focus group discussion and second one was the responses of the top management of the University (the academic vice president) for the interview.

2.3 Data source

The data for this project was collected from 10 directors of institutes, centres and offices and 8 academic staff who are engaged in research. Purposive sampling was employed in order to identify the research participants. Top management members were also selected for the interview. Only the academic vice president of the university was interviewed. Therefore, the total number of participants was 19.

2.4 Data Collection Methods

There were two sets of data collection methods employed in this undertaking. The first one was FGD. 18 Participants were divided into two groups based on academic responsibility that they assume at the time of the investigation. The first team was composed of directors of institutes, centers and offices. These are academic staffs of the university who are assuming the directorship positions in addition to their limited load on teaching and research. The second group of participants were academic staff of institutes of the university who are solely involved in teaching courses and research. The second method of data collection employed was interview. Interview was held with academic vice president of the university. Sets of open ended questions were forwarded and responses on the president were recorded.

2.5 Data Analysis Tool

In this research, qualitative analysis is employed as a chief method. Participants of the FGD groups were asked to identify the relevant research competencies that a researcher requires so as to produce a descent research output. They were also guided to label the competencies into knowledge, skills and attitude. In the analysis, the researcher focused on identifying those competencies presented in the given categories. Tables were prepared to sort out the competencies which were agreed upon by the members of the groups involved in the FGD.

Simple descriptive analysis was employed in order to analyze the data collected from the academic vice president of the university using interview. The relevant responses were discussed in light of the research questions.

A simple quantitative analysis was also employed in order to describe the data concerning the bio data of the respondents. Frequencies and percentages were computed and the result is summarized in a table.

2.6 Procedure of Data Analysis

First the bio data of the respondents were analyzed presenting the data in a table. Then after, the analysis of the data obtained using the FGD was conducted. In this case tables that show the competencies in their categories were prepared. From these the competencies and their descriptors were identified. Finally the analysis of the data obtained using interview was done using description.

III. Results and Discussion

3.1 Results

3.1.1 Bio-data of Respondents

In this part the analysis of the data collected is presented. Tables are followed by discussions to show the result of the analysis.

All of the participants of the study underlined that a competency framework is a relevant document in order to guide research endeavor in the university. First and for most, it

encourages the researcher to undertake relevant inventory of self so as to be an effective researcher. In addition to this, research projects can be managed effectively, especially, in the aspects of contracting researchers who have the behavioral quality that a research project requires.

Table 1: Bio-data of the Respondents

SN	Item		F	%
1	Gender	Male	17	94.4
		Female	1	5.6
		Total	18	100
2	Academic Qualification	BA/B SC/MD	0	0
		MA/MSC/Mphil/MBA	12	66.7
		PhD	6	33.3
		Total	18	100
3	Total year of work experience	0-5	0	0
		6-10	2	11.1
		11-15	5	27.8
		16-20	6	33.3
		Above 20	5	27.8
		Total	18	100
4	Year of work experience in higher education institutions	0-5	5	27.8
		6-10	6	33.3
		11-15	3	16.7
		16-20	4	22.2
		Above 20	0	0
		Total	18	100
5	Number of research undertakings published	none	3	16.7
		1-5	9	50
		6-10	4	22.2
		11-15	0	0
		16-20	0	0
		Above 20	2	11.1
		Total	18	100
6	Years from first publication	none	3	16.7
		1-5	10	55.6
		6-10	1	5.
		11-15	2	11.1

	16-20	2	11.1
	Above 20	0	0
	Total		100

Table one presents the bio-data of the participants of the study. While almost all of the participants are male, there was only one female participant. One third of the participants have PhD. And the rest of the participants were second degree holders.

33. 3 percent of the participants have a total of work experience that last form 16-20 years. The same number of participants stated that they have been working in higher education institutions in years that range from 6-10.

Some interesting finding is there between the participants experience in producing research outputs. While half (50 percent) of the participants have 1-5 research outputs, the next larger number of respondents were those who have had 6-10 research outputs so far. Exceptionally there were two participants who produced more than 20 research outputs so far.

Finally, majority of the respondents mentioned that it has been 1-5 years since they published their first work.

The FGD also inquired participants to identify the competencies that they think are quite relevant in accordance with the knowledge, skills and attitude domains of Bloom. Tables 2-4 presented that information. The most important step, however, according to Whiddett and Hollyforde (2005) is to group these identified competencies in to descriptive levels of discussion such as core values, professional competencies and core behavioral competencies.

3.1.2 Competency Levels

Description of competency levels depends on analysis of three stages. The first one is the core values considered to guide research activities. The second stage of competencies description focused on professional competencies required in the specific area. Finally, core behavioral competencies are identified. These are specific set of competencies under each professional competency that are described using essential indicators that enable measuring and managing.

3.1.3 Core Values

These are words or phrases that show the guiding principles of the missions of the Ethiopian Civil Service University towards its strategic objectives. Obviously, the strategic missions of the university are achieved through proper implementation of its core businesses. One of the core businesses of the university is research. Therefore, the core values of the university, listed below are also the guiding principles for the research activities in the university. This is also to imply that research undertaking need to consider these values together with the widely acclaimed research ethics which are also touched up on in the behavioral/attitudinal aspect of core behavioral competences identified.

- x Customer focused
- x Continuous learning
- x Commitment
- x Welcoming diversity
- x Attention to the disadvantaged

3.1.4 Professional Competencies

The professional competencies indicate areas of capacities and capabilities required in the research endeavor. These specifically cover the competencies that the activity of research requires as a set of skills from anyone who is involved. There are 12 professional competences identified from the FGD. While the first four are in relation to behavioral/attitudinal disposition, there are three professional competencies showing skills and five professional competences showing knowledge level competencies of professionals.

Professional competence area 1: Show understanding of concepts, instruments and procedures

1. Knowhow of the subject matter
2. Knowhow of design and problem identification
3. Knowhow of the principles of research
4. Knowhow of the methodology
5. Knowhow in organizing literature review

Professional competence area 2: Apply professional skills that are insure efficient research output

1. Pre-Research Skills
2. Research production skills
3. Research After-math skills

Professional competence area 3: Develop behavioral dispositions required in research project.

1. Commitment
2. Team work
3. Ethics
4. Proactive nature

3.1.5 Core Behavioral Competencies

Core behavioral competencies are specific knowledge, skills and attitudinal dispositions that are required from individual practitioners in order to produce a quality research output in the context of the Ethiopian Civil Service University. The core behavioral competencies present indicators of the professional competencies.

Table 2: The List of Knowledge-Related Core Behavioral Competencies Identified

SN	Indicators of knowledge related core competencies
1	Qualification
2	Know ethical procedure
3	Identify key areas of research strand
4	Know writers in the field
5	Know recent literature
6	Know the knowledge gap in the field
7	know how to design research problems
8	know Philosophical orientations in the discipline
9	know about conceptual frameworks developed so far
10	know the principles in conducting research
11	know types of research
12	know methods of investigation
13	know tools for data gathering
14	know techniques of sampling
15	know techniques for data analysis
16	know tools for data analysis
17	know how to do interpretations
18	know how to draw conclusions
19	know how to include sources for/against in the literature
20	Know standard citation and referencing formats

Table 3: The List of Skill-related Core Competencies Identified

SN	Indicators of skills related core behavioral competencies
1	Problem identification skills
2	Instrument designing skills
3	Planning & execution skills
4	Proposal writing skills

5	Critical reviewing skills
6	Probing skills
7	Listening skills
8	Persuasion skills
9	Note taking/Note making skills
10	Problem solving skills
11	ICT and multimedia skills
12	Hypothesis formulation skills
13	Data classification skills
14	Data presentation skills
15	Data analysis skills
16	Policy analysis skills
17	Data synthesizing skills
18	Data interpretation skills
19	Paraphrasing & quoting skills
20	Citation and referencing skills
21	Writing skills
22	Presentation skills (oral and written)
23	Reflection skills
24	Organizing and compiling skills
25	Editing skills
26	Dissemination skills
27	Socio-marketing skills
28	Documentation skills

Table 4: The List of Attitude-related Core Behavioral Competencies

SN	Indicators of attitude related core behavioral competencies
1	Delivery -to deliver result
2	Quality – concern for quality
3	Professionalism- care for profession
4	Collaboration-
5	Openness
6	Sharing
7	Appreciative inquiry
8	Interdisciplinary perspective
9	Originality
10	Confidential
11	Honesty
12	Sensitive to issues-
13	Efficiency- at most effort and rigor

3.1.6 Interview Results

Interview was held with the academic vice president of the university and the following results are found.

Purpose of research in the university is mainly identified by the respondents as a way and means of supporting changes and improvements in practices in the civil service sector. According to the respondent, this depends on analysis of the need in the sector. More specifically research undertakings are expected to contribute in three aspects. These are in improving practices, clarifying policy implications and creating industry linkage. Therefore, it is the mission of the university to guide research undertaking towards these objectives using a framework.

Issues in the civil service sector at federal and regional levels are the priority areas to get focus in the research undertaking. However, specialized sectors such as urban development are also given attention. It is also underlined that improving capacity of sector wide organs require focused programs, considers global changes, focus on knowledge creation and improving efficiency in services provision. These can be realized through improving the scientific practice of research and researching.

The respondent rated the research undertakings in the university as it is at a good start. The university is publishing journals and organizing conferences. There is also improved interest among the academic staff of the university to participate in research undertaking. The number of local staff who are publishing on journals is increasing form time to time.

The respondent also mentioned that practices such as, strongly institutionalizing the research undertakings, establishing stronger coordinating body and working towards industry linkage are areas that improvements are mainly required. In order to realize this, organizing a research institute which has full time researchers, organizing student research undertakings and staff development, create and sustain forum of experience sharing and communication of research undertakings. The respondent finally underlined that as this is not the matter of choice but must strategically leading research activity with the help of documents such as research competency framework is the essential steps that need to be taken.

3.2 Discussion

The analysis of the bio data indicated that the groups of respondents are relatively representative of practitioners of different groups. It involved people with different level of educational background, academic work experience, number of publications produced etc. As a result, the responses collected and analyzed better representative data that show the real situation in the context of ECSU.

One needs to be bear in mind that the professional competence produced is for the position of a researcher. As a result it cannot be referred to other levels of academic positions such as junior researcher or principal researcher.

The following list presents the competencies identified for this specific level of academic rank, there are three competency areas identified in this project. These are

- x **Competency area 1:** Demonstrate knowledge of classical and contemporary issues in the subject matter, research ethical issues and data collection analysis and interpretation issues
- x **Competency area 2:** Operate on manual and digital tools of data collection analysis and interpretation,
- x **Competency area 3-** Produce, communicate, document and market research proposals and reports
- x **Competency area 4-** Manage the planning, execution, monitoring, evaluation and reporting activities in research projects
- x **Competency area 5:** Demonstrate professionalism in handling research undertakings, concerns for quality and focus on purposes of research projects

There are a total of 61 core behavioral competencies that can indicate the above competency areas. These can be sees from the perspective of professional competency 1, 28 under professional competency 2 and 13 under professional competency 3.

It can be referred that the core behavioral competencies can be identified as indicators of the professional competences identified in the three categories above. One can collect about the core behavioral competencies and measure the achievements in the professional competencies. In this way it contributes to the proper management of the research practices and quality.

IV. Conclusion

One can see the role of research competency framework of the Ethiopian civil service university. It is made of guiding core values, critically identified professional competencies and core behavioral indicators that indicate the relevant qualities of researchers required in the context of the Ethiopian Civil Service University.

Perhaps the most important implication of this report is if the research competency framework produced has a contribution towards improving research practices concerning distance education in ECSU. The plausible response to this concern is that, yes the framework has a key role in facilitating research and development undertaking concerning distance and continuing education issues in the university. Furthermore, to indicate the contribution of the framework in this specific area some important efforts were exerted. Among these:

1. Leaders and practitioners from the institute of distance and continuing education were involved in the process of data collection
2. The same group of people were involved on a training session that aimed at communicating and consolidating the final version of the document before sign off
3. The human resource office of the university is communicated to consult the framework when employing staff for the institute of distance and continuing education

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