Pedagogical Science Practices in Public Higher Education Institutions of Ethiopia: Progresses Made but Challenges Remain, Robsan Margo Egne, Arsi University, Ethiopia

Abstract

In many countries, concerns have been raised about the quality and relevance of higher education. In the policy debates emerging as a consequence of these concerns, a lot of attention has been paid to the applicability and relevance of higher learning institutions in terms of addressing the felt needs of the country under consideration. The contribution of education to the overall development of a nation becomes evident especially through higher education. This is because higher education is considered a key to delivering the knowledge requirements for development. Studies reveal a strong positive correlation between higher education participation rates and levels of development, and that high levels of education are essential for the design and production of new technologies, for enhancing innovative capacities, and for the development of civil society. While the reforms of higher education in advanced economies have received much attention, relatively little is known about the change dynamics in higher education system in developing countries. Therefore, through this paper, I want to contribute to a better understanding of higher education system from the perspective of the type of pedagogy being practiced frequently and its consequences in producing competent graduates for the world of work in low-income countries by presenting the results of a study on higher education system in Africa by taking Ethiopian public higher education system as a case. To this end, selected higher education institutions' officials and instructors were used as sources of data. Questionnaire, interviews, and observations were used as tools of data collection. The collected data were analyzed using mixed methodologies. Findings of the study revealed that despite the offering of on-job pedagogical science trainings in the sample universities, little progress has been made in the universities in terms of the type of pedagogy frequently employed by the instructors in instruction processes. In other words, the findings of the study revealed that most instructors of the sample higher education institutions still predominantly use teacher-centered pedagogy. Recommendations which are assumed to help the instructors' use of active learning are forwarded in the research paper.

Keywords: active learning, higher education, hybrid model, pedagogy, transmission model, transformative approach

Introduction

Background of the Study

In many countries, concerns have been raised about the quality and relevance of higher education. In the policy debates emerging as a consequence of these concerns, a lot of attention has been paid to the applicability and relevance of higher learning institutions in terms of addressing the pressing needs of the country under consideration. International comparative studies of the learning outcomes of students in various parts of the higher education system formed an important driving force for the policy debates. In countries where students scored relatively poorly in these studies, there was in general a feeling that something had to be done

about the poor performance; improving the quality of higher education was seen as one of the core elements in reforms aimed at strengthening the quality and relevance of the country's education system (Egne and Maassen, in press).

The contribution of education to the overall development of a nation becomes evident especially through higher education (Egne, 2014b). This is because higher education is the level at which students are pursuing professional learning in their respective areas of specialization before they enter the world of work (Mergo, 2006). Higher education is considered a key to delivering the knowledge requirements for development (Egne, 2016). Studies reveal a strong positive correlation between higher education participation rates and levels of development, and that high levels of education are essential for the design and production of new technologies, for enhancing innovative capacities, and for the development of civil society (Cloete et al., 2011). The positive impacts of higher learning institutions on economic development and poverty reduction particularly in developing countries is underscored by public figures, such as Kofi Annan, the former Secretary-General of the United Nations, who as quoted in Bloom et al. (2005, p. 4), states:

> *The university must become a primary tool for Africa's development in the new century. Universities can help develop African expertise; they can enhance the analysis of African problems; strengthen domestic institutions; serve as a model environment for the practices of good governance, conflict resolution and respect for human rights, and enable African academics to play an active part in the global community of scholars.*

Despite this fact, enrolment rates in higher education in Sub-Saharan Africa are by far the lowest in the world (Bloom et al., 2005). Studies (Balsvik, 2007; Nkinyangi, 1991; Semela, 2012), also suggest that higher education institutions in Sub-Saharan Africa are characterized by high student unrest. According to Balsvik (2007, pp. 3-4), contrary to experiences in the western world, due to student unrest, regular teaching and studies are often disrupted in African universities for weeks, months, even for years and has become endemic in many places in Africa (Balsvik, 2007; Semela, 2012).

While the reforms of higher education in advanced economies have received much attention, relatively little is known about the change dynamics in higher education system in developing countries. Therefore, through this paper I want to contribute to a better understanding of higher education system from the perspective of the type of pedagogy being practiced frequently and its consequences in producing competent graduates for the world of work in low-income countries by presenting the results of a study on higher education system in Africa by taking Ethiopian public higher education system as a case.

Statement of the Problem

Higher education is a recent phenomenon in Ethiopia. This is because it is not more than 70 years since modern secular higher education had been introduced to the country (Egne, 2015). It can be argued that since the inception of university education in Ethiopia in the early 1950s, the lecture method or the traditional pedagogy has predominantly been used in the higher

education teaching and learning process of the country. However, with the coming to power of the current government in 1991, a new education and training policy, which gives much attention to issues of educational access, relevance, quality, and equality was developed (Egne, 2017). Furthermore, reforms such as education and training policy implementation strategy, Education Sector Development Programs, Continuous Professional Development programs, new school curricula, new modes of instruction and assessment, decentralization of the educational administration, and the use of the vernacular languages of the different ethnic groups as media of instruction until the end of primary education and the likes have been introduced to the education system of the country (Egne, 2015; Mebratu, 2011).

Furthermore, currently, the Ethiopian government is aggressively working hard to implement programs such as 'Transformation and Growth Plan II', Kaizen, BSC, and BPR, amongst others, in order to assist the civil servant of the country to bring real change in the work places. In addition, many public higher education institutions of Ethiopia give much emphasis to the production, transfer, and consumption of innovative knowledge. One could argue that the type of pedagogy being used by Ethiopian higher education institutions' instructors must enhance the implementation of the above reform programs. In other words, the successful implementation of the above intended policy directions requires the application of pedagogical science practice that fosters active engagement of students in the learning process. However, to the best of my knowledge, there is limited study which looked into the degree to which university instructors improved their pedagogical science practices in order to enhance the realization of the above intended reforms. Therefore, this is a curiosity driven study which investigates the extent to which activity-oriented pedagogy is used in the current Ethiopian public higher education institutions.

Research Questions

This study aims at answering the following basic questions:

- Which type of pedagogy is frequently practiced in the Ethiopian public higher education institutions?
- How much progress is made in the Ethiopian public higher education institutions in terms of changing the traditional or teacher-centered mode of lesson delivery into a more interactive mode of lesson delivery?
- What are the challenges that hinder the effective implementation of the activity-oriented pedagogy in the Ethiopian public higher learning institutions?
- What should be done to help the Ethiopian public higher education institutions' instructors to exercise the type of pedagogy that enhances creativity and innovativeness?

Significances of the Study

This study is assumed to have a number of contributions. The results of the study may contribute to the existing body of knowledge with respect to the application of pedagogical science type that fosters higher learning institution students' creativity and innovativeness. In addition, the findings of the study may improve university instructors' knowledge, skills, and

attitudes with regard to how to enhance independent learning in their day-to-day instruction process. By the same token, the results of the study may enhance the production of university graduates who are voracious readers. Furthermore, the results of the study may provide empirical knowledge for policy makers, university leaders, and other relevant stakeholders about activity-oriented pedagogical science practices. Moreover, the findings of the study may serve as springboard for other researchers who want to make further investigations in the area under consideration.

Delimitation of the Study

The scope of this study was restricted to public higher learning institutions of Ethiopia. As a result, the conclusions did not include private as well as religious higher learning institutions found in the country. Moreover, the generalizations made based on the findings of this research did not include the pedagogical science practices exercised by pre-primary, primary and secondary school teachers of the country. The scope of the study was also delimited to identifying the type of pedagogy frequently used by the Ethiopian higher learning institutions' instructors in their day-to-day lesson delivery. As such, it did not focus on the education policies, curricula, assessment techniques as well as the other activities being implemented in the higher education institutions of the country.

Research Methodology

Research Method

The core intention of the study was to explore the degree to which activity-oriented pedagogical science practices were employed by Ethiopian public higher education institutions' instructors. To this end, descriptive survey research method was used in the study. This is because descriptive survey research method enables a researcher to gather huge data within a limited period of time. Drawing on Best and Khan (2001) and Leedy and Ormrod (2005), one of the merits of using descriptive survey research method is to analyze the practices that prevail, beliefs and attitudes held, and processes that are going on. This is because it describes what actually exists such as current conditions, practices, situations or any phenomena.

Subjects of the Study

In this study, instructors and educational officials of the sample universities were considered as sources of data. The basic objective of gathering data from these groups was to cross-check the responses obtained from different angles through triangulation.

Samples and Sampling Techniques

In this research, three public universities i.e., Arsi University, Adama Science and Technology University, and Addis Ababa University were selected as samples purposely. The main reason underlying the selection of these three universities is to get diverse perspectives from the public universities established at different times. Furthermore, the reason underlying the selection of these three universities is the convenience that I got to conduct the study. In other

words, since I decided to use the advantage of proximity, I thought that I could easily get collaboration from the respondents of the three universities. In line with this claim, Williams (2008) suggests that when the research site is convenient for the researcher, it has its own positive effect on the assurance of the quality of the final research findings.

When it comes to the actual sampling technique employed for taking samples, simple random sampling and purposive sampling techniques were used concurrently to select the subjects of the study. As such, simple random sampling was used to select the sample instructors whereas purposive sampling was employed to select the educational officials as well as the instructors who were interviewed. Accordingly, a total of 240 instructors (80 instructors from each university) were taken as samples. In addition, six educational officials (two from each university) were selected as samples. By the same token, six instructors (two from each university) were selected as informants using purposive sampling technique.

Instruments of Data Collection

In this study, questionnaire, interviews, and classroom observations were used as tools for data collection. The items of the questionnaire, interviews, and classroom observations were prepared based on Cummins' (2000) three types of pedagogy. As such, in the closed-ended items of the questionnaire, each of the three types of pedagogy was systematically repeated five times to check the consistency of the respondents' responses. Accordingly, the first, fourth, seventh, tenth, and thirteenth items were framed based on traditional pedagogy, the second, fifth, eighth, eleventh, and fourteenth items were set based on progressive pedagogy, and the third, sixth, ninth, twelfth, and fifteenth items were prepared in line with transformative pedagogy (see Table 1 below).

In addition, the items of the questionnaire were both closed-ended and open-ended. The former were prepared in a Likert-scale with five options (strongly disagree, disagree, undecided, agree, strongly agree) with the intention of obtaining objective responses through ensuring relatively better flexibility in the checking of each item, whereas the latter assumed to give the respondents full freedom to express their feelings.

After preparing the questionnaire, pilot test was undertaken at Ethio-China Technical and Vocational Institute, Addis Ababa. In this regard, the questionnaire was administered to a sample consisting of 20 instructors, randomly selected from the institute. The appropriateness of the items of the questionnaire, i.e., whether they solicit the intended data and the intelligibility of the wording, was judged based on the responses of the respondents and then slight improvements were made accordingly.

The reliability of the items of the questionnaire was calculated using internal consistency method (Cronback, 1951, as cited in Ferguson and Takane, 1989). Accordingly, the reliabilities of the items dealing with the sub-scales traditional pedagogy, progressive pedagogy, and transformative pedagogy were found to be alpha (α) = 0.77, 0.81, and 0.74 respectively. As suggested by Gay (1980), if reliability coefficient is ≥ 0.50, it can be accepted as reliable instrument. Based on this criterion, the items of the questionnaire were found to

have good grounds to be used for collecting the relevant main data for the study. Furthermore, the validity of the items of the questionnaire was improved by soliciting comments from experts in the area of study under consideration.

In general, after checking the reliability and validity of the tools of data collection, the questionnaire was administered to (n=240) sample instructors that were selected from the three sample public higher learning institutions under consideration. However, out of the total instructors, 180 filled out the questionnaire correctly and returned it, i.e., with the response rate of 75%. All of the respondents filled out the paper questionnaire.

To obtain additional information to the data which were provided by the respondents on the questionnaire, semi-structured interviews were used as tools of data collection with six educational officials and six instructors from the same higher education institutions. Furthermore, observation checklist was prepared to make classroom observations in order to assess the type of pedagogy frequently used by most instructors of the sample higher education institutions in their day-to-day teaching activities. To this end, a total of twelve classroom observations were made where the observees taught for a maximum of one-hour lesson.

To sum up, the items of the questionnaire, interviews and classroom observations were designed in a way they complement each other. In other words, the content of the interviews and observation checklist followed that of the questionnaire, and thus were crosschecked with the questionnaire responses. In general, the contents and focuses of the three tools of data collection emphasized the basic research questions raised in the research project.

Methods of Data Analysis

Both quantitative and qualitative approaches were used to analyze the data (Creswell, 2014; Creswell and Plano Clark, 2011). This is because these approaches provide the opportunity to gather, analyse and interpret both quantitative and qualitative data and thereby help the researcher to have an in-depth understanding of the research problem under consideration (Creswell, 2014; Teddlie and Tashakkori, 2009; Yin, 2014). This means that using a combination of qualitative and quantitative research methods enables a researcher to strengthen one method by offsetting the drawbacks of the other (Creswell and Plano Clark, 2011). This in turn, is assumed to increase the validity, reliability and generalizability of the results of the study. On the other hand, according to Johnson and Onwuegbuzie (2004), mixed methods research has drawbacks such as difficulty in mixing qualitative and quantitative data in a logical way, its expensive and time-consuming nature, and difficulty in reconciling conflicting results.

Although there are different types of mixed methods (Johnson and Onwuegbuzie, 2004; Teddlie and Tashakkori, 2009), in this study, a concurrent triangulation design, which enables a researcher to collect and analyse both quantitative and qualitative data simultaneously (Rauscher and Greenfield, 2009), was employed as a core design. This design is used in this research as it enables a researcher to give equal weight to both the qualitative and quantitative

data within a single study as a strategy to cross-check or verify the results of the study (Johnson and Onwuegbuzie, 2004).

The data that were collected using the close-ended items of the questionnaire were analyzed quantitatively. On the other hand, the data which were collected using the open-ended items of the questionnaire, semi-structured interviews, and classroom observations were analyzed using qualitative approach.

Results and Discussions

The data collected using the closed-ended items of the questionnaire were analysed quantitatively. To this end, the five-point scale was reduced to a three-point scale to make the data tabulation process more intelligible in terms of presenting the results in a concise manner. Hence, the values of the alternatives 'fully disagree' and 'disagree' were combined. Similarly, the values of the alternatives 'agree' and 'fully agree' were merged whereas the values of the alternative 'undecided' were treated separately. Therefore, the tabulation, analyses, discussions, and interpretations were made based on the three-point scale table. On the contrary, the data gathered using the open-ended items of the questionnaire, interviews, and classroom observations were analysed qualitatively.

The data gathered via the semi-structured interviews were analysed using thematic approach. In other words, the data analysis process involved transcribing which included constructions from an oral conversation to a written text, coding, and sorting out the frequent issues that emanated from the collected data. In this regard, to maintain anonymity particularly in direct quotations, the informants were substituted by related acronyms and then followed by subsequent numbers. Hence, the six educational officials were represented as EO1, EO2…EO6. Similarly, the instructor informants were substituted by I1, I2…I6.

Survey results

Table 1: Instructors' opinions on the practices of pedagogy in their respect university

S. No	Questionnaire items	Proportion of instructors in each category					
		Disagree		Undecided		Agree	
		N	%	N	%	N	%
1.	I usually use much of the time for presenting the contents of the daily lesson(s) in my teaching practice.	20	11.11	10	5.56	150	83.33
2.	I usually encourage my students to construct their own knowledge in collaboration with me.	120	66.67	14	7.78	46	25.56
3.	I very often encourage my students to analyze and understand the social realities of their own lives and of their communities.	114	63.33	6	3.33	60	33.33
4.	In my lessons, I give much attention to the contents to be learnt than the teaching and learning process.	16	8.89	8	4.44	156	86.67
5.	I usually think that the process of learning is more important than the contents to be learnt.	146	81.11	12	6.67	22	12.22
6.	I often encourage my students to discuss ways in which their social realities might be transformed through different forms of social action.	160	88.89	4	2.22	16	8.89
7.	The core intention in my teaching is to enable students to master the subject matter(s) through memorization.	30	16.67	12	6.67	138	76.67
8.	I usually try to apply collaborative inquiry and the construction of meaning as a core principle in students' academic development.	120	66.67	18	10	42	23.33
9.	I usually encourage my students to create linkage between knowledge, social commitment, and action.	158	87.78	13	7.22	9	5
10.	I often encourage students to easily comply with the expectations of the societal power structure.	40	22.22	14	7.78	126	70
11.	I very often encourage my students to understand the notion that learning should be through practical experience rather than having to absorb facts.	152	84.44	8	4.44	20	11.11
12.	I very often make students to understand the fact that the ultimate goal of instruction should be realizing social change through the promotion of the principles of social justice.	144	80	5	2.78	31	17.22
13.	I often consider teaching as a practice of giving time-tested knowledge to students.	28	15.56	12	6.67	140	77.78

14.	I usually apply cooperative learning in my lessons in order to develop mutual understanding among my students.	162	90	6	3.33	12	6.67
15.	I often encourage my students to learn 'how to learn' so as to make them independent learners.	138	76.67	14	7.78	28	15.56

Note: N = number of respondents

As suggested by Cummins (2000), the basic characteristics of traditional pedagogy is that the teacher's task is to impart subject matter contents to students through formal and structured teaching. Likewise, the majority of the respondents (83.33%) agreed to the fact that they usually use much of the teaching time for presenting the contents of the daily lesson(s) in their teaching practice. In addition, the majority of the respondents (86.67%) confirmed that in their lessons, they give much attention to the contents to be learnt rather than the teaching and learning process.

Similarly, most of the respondents (76.67%) indicated that the core intention in their teaching is to enable students to master the subject matter(s) through memorization. Besides, (70%) of the respondents confirmed that they often encourage students to easily comply with the expectations of the societal power structure rather than producing students who are agents of social changes. Moreover, (77.78%) of the respondents reported that they often consider teaching as a practice of giving time-tested and important knowledge to students. On the basis of these responses, it could be argued that the majority of the instructors are applying traditional pedagogy in their day-to-day instructional practices.

As suggested by Cummins (2000) and Zirkel (2008), progressive pedagogy encourages the construction of knowledge through the collaboration of students and teachers. Nevertheless, the majority of the respondents (66.67%) indicated that they do not usually encourage students to construct their own knowledge in collaboration with their teachers. By the same token, most of the respondents (81.11%) said that they do not usually think that the process of learning is more important than the contents to be learnt.

Furthermore, the majority of the respondents (66.67%) reported that they do not often try to apply collaborative inquiry and the construction of meaning as a core principle in students' academic development. Most of the respondents (84.44%) also asserted that they do not very often encourage their students to understand the notion that learning should be through practical experience rather than having to absorb facts. Moreover, the majority of the respondents (90%) suggested that they usually do not apply cooperative learning in their lessons in order to develop mutual understanding among the students. From the above responses, one can deduce that the majority of the instructors of the three sample universities do not apply progressive pedagogy in their day-to-day instructional practices.

As pinpointed by Nieto and Bode (2010), transformative pedagogy uses collaborative critical inquiry to enable students to analyze and understand the social realities of their own lives and

of their communities. Nonetheless, the majority of the respondents (63.33%) claimed that they do not very often encourage the students to analyze and understand the social realities of their own lives and of their communities. Similarly, most of the respondents (88.89%) said that they do not often encourage students to discuss on ways in which their social realities might be transformed through different forms of social action.

In addition, most of the respondents (87.78%) reported that they do not usually encourage their students to create linkage between knowledge, social commitment, and action. Furthermore, (80%) of the respondents held the opinion that they do not very often make students to understand the fact that the ultimate goal of instruction should be realizing social change through the promotion of the principles of social justice. Lastly, the majority of the respondents (76.67%) assured that they do not often encourage their students to learn 'how to learn' so as to make them independent learners. The above responses are indicative of the fact that the majority of the respondents do not use transformative pedagogy in their day-to-day teaching and learning processes.

Moreover, one of the key questions raised through the open-ended items of the questionnaire was 'Do you think that Ethiopian university instructors significantly changed the way they deliver their lessons following the on-job trainings such as HDP, BSC, BPR, and/or Kaizen? If your answer to the above question is 'No,' could you please describe the major factors that hinder instructors to bring significant changes following their participations in those on-job trainings?'

In response to this question, some of the central points noted by the respondents were:

- Ethiopian teachers usually give due attention to the benefits they get from participating in on-job trainings rather than focusing on the payoffs they get from participating on those professional trainings.
- Most instructors think that there is no merit-based system in the country. As a result, they do not give great attention to professionalism and the training programs that update their professional competences.
- There is a general problem of attitude towards pursuing on-job trainings in the country.
- There is no well-organized and user-friendly pedagogical science handbook for Ethiopian university instructors.
- Except giving intermittent on-job trainings, there is a general lack of organizing and offering well-organized continuous professional development programs in Ethiopian higher education institutions.
- The components of the training packages are usually not designed based on Ethiopian realities. So, what the trainees learn in the packages, in most cases, have no direct relevance to their day-to-day professional practices.
- There is a general lack of attention given to issues related to life-long learning or continuous professional development in Ethiopian higher education institutions. As a result, there is little improvement in this regard.

These responses may show the fact that the Ethiopian higher education institutions do not have a well-organized system through which their academic staff members get relevant and sustainable need-based trainings. Under such circumstances, it is very difficult to expect quality from the education rendered by those institutions. This, in turn, suggests the fact that there are compelling conditions that force public higher education institutions of Ethiopia to offer need-based and well-organized continuous professional development program for their academic staff.

In addition, in response to the question 'what do you suggest to help Ethiopian higher education institutions' instructors frequently apply activity-oriented pedagogy in order to effectively facilitate the learning outcomes of students?' most respondents indicated that:

- The leaders of public higher education institutions must get adequate awareness and must be convinced about the relevance of life-long learning or continuous professional development program.
- The Ethiopian government must press the leaders of public higher education institutions to show real commitments and determinations to implement staff development programs.
- There is a need for strengthening partnership between public and private higher education institutions in order to help them share best experiences and research findings that can improve the existing trend of staff development programs.
- Well-organized and context-based sustainable pedagogical science trainings should be given to public higher education instructors.
- Issues of staff development programs must be given due attention by the Ethiopian Higher Education Relevance and Quality Agency.

These responses imply the fact that a lot of works are needed in order to organize need-based sustainable staff development trainings in the public higher education sector so as to improve the quality of education offered by those institutions. This means that there is a need for giving due attention to both updating and upgrading programs in the public higher education sectors.

Results of Interviews

As noted earlier, in addition to survey, semi-structured interviews were used as tools of data collection. In this regard, data were gathered from both educational officials and instructors. In this respect, in response to the interview question 'Is there a well-organized pedagogical science updating program for teachers to effectively teach their respective course(s) at your university?' One of the interviewees said:

> "*Yes, we have a program called PSIST training at our university. The program is intended to improve the Pedagogical Science knowledge and skills of the instructors."* (EO4).

Similarly, another official who took part in the interview asserted:

> "*Yes, we have HDP at our university. The training is offered for all instructors as a mandatory program in order to help out teachers to get an in-depth understanding about the essence of teaching and learning processes."* (EO1).

From the above responses, one can realize that there is pedagogical science training at the sample higher education institutions. Nevertheless, from the responses of the informants, it is not clear whether or not the training is a regular and well-organized.

Instructors may need support from the entire community of higher education institutions, and especially from educational administrators, to effectively produce citizens who are independent learners and critical thinkers. To do so, in the first place, apart from subject matter knowledge, they must get adequate inputs concerning pedagogical science trainings. In this regard, in response to the interview question 'To what extent do you think that continuous professional development has been materialized in your university's context through pedagogical science and other trainings?', one of the official informants responded:

> "*Although it is difficult to know the degree to which change is brought in a continuous manner, I think the pedagogical science trainings we offer via PSIST program can serve as a good input in terms of improving the teaching competences of our instructors."* (EO3)

By the same token, another official asserted:

> *"We usually deliver pedagogical science trainings for our instructors for limited months in a one-shot fashion. In such context, I think it is difficult to ensure continuous professional development."* (EO2)

The above responses reveal that the current pedagogical science trainings given in the public higher education institutions of the country are a one-time training. As a result, there is no tradition of arranging and offering continuous professional development programs in the public higher learning institutions. Under such condition, it is less likely that the instructors produce students who have inquisitive minds and critical thinkers.

To effectively produce students who have high-order thinking as well as problem-solving skills, there is a need for engaging them in activities that develop their analytic powers. To do so, in the first place, the challenges that hinder the instructors from getting adequate and sustainable life-long learning techniques should be alleviated. Based on this premise, the following interview question was posed to an official: 'What are the challenges that hinder the effective implementation of the activity-oriented pedagogy at your university?' In response to the question, one of the informants noted that:

> *"Most instructors give much attention to upgrading programs because of the benefits they get in relation to improving their level of qualifications. However, when it comes to continuous professional development programs, people give little attention to them because of problems related to attitude." (EO5)*

In response to the same question, another instructor commented that:

> *"Although it is extremely important for instructors to use the activity-oriented pedagogy, due to challenges such as lack of meritocracy, concern and commitment, poor reading habits, lack of reflection, and research cultures, most Ethiopian university instructors mainly use the traditional method of teaching i.e., the lecture method."* (EO6)

To cross-check the responses of the educational officials, similar interview questions were posed to some selected instructors of the sample universities. In this regard, in response to the interview question, 'Which teaching method do you use most of the time?' Lecture method or active learning? Would you please explain why you use the method so often?', one interviewee asserted:

> *"I usually use the lecture method in order to cover the contents of the courses I teach. To apply activity-oriented pedagogy, preconditions such as minimising the contents of the courses, changing the attitudes of students, changing the attitudes of educational officials, and the general public are needed"* (IN3)

In answering the same question, an instructor illustrated:

> *"I think, the core challenge that hinders instructors from frequently using an interactive pedagogy is negative attitude towards the teaching profession. Most instructors often engage in moon light works to subsidize the salary they earn through regular bases."* (IN1)

The above responses indicate the fact that unless the core problems raised above are solved, it is difficult to apply the activity-oriented pedagogy in the day-to-day classroom instructional duties. This, in turn, has a far-reaching implication for the quality of education provided by higher education institutions.

Summaries and Conclusions

The central intention of this study was to investigate the degree to which activity-oriented pedagogical science practices are employed by Ethiopian public higher education institutions' instructors. To this end, the following basic research questions were posed:

- Which type of pedagogy is frequently practiced in the Ethiopian public higher education institutions?
- How much progress is made in the Ethiopian public higher education institutions in terms of changing the traditional or teacher-centered mode of lesson delivery into a more interactive mode of lesson delivery?
- What are the challenges that hinder the effective implementation of the activity-oriented pedagogy in the Ethiopian public higher learning institutions?
- What should be done to help the Ethiopian public higher education institutions' instructors to exercise the type of pedagogy that enhances creativity and innovativeness?

To answer the research questions, the types of pedagogy as suggested by Cummins (2000) i.e., traditional pedagogy, progressive pedagogy, and transformative pedagogy were used as analytical frameworks. In the study, a research design involving descriptive survey research method was used. Furthermore, in the study, data were collected using questionnaire, interviews, and classroom observations. Mixed methods were used to analyze the data.

The findings of the study revealed that most instructors of Ethiopian public universities use traditional pedagogy. In other words, although the instructors are expected to apply the activity-oriented pedagogy, they are found to frequently use the teacher-centered teaching method. In addition, challenges such as attitude, inadequate salary, lack of meritocracy, absence of concern and commitment, lack of continuous professional development programs, poor reading habits and absence of reflection are found to negatively impact teachers' use of the activity-oriented pedagogy most of the time.

On the basis of the above findings, although the Ethiopian government more than ever emphases programs that support the improvement of education quality, it can be concluded that the type of pedagogy very often applied in the public universities is not in a position to realize the intended quality of education. In other words, it can be concluded that there is little progress in terms of improving the type of teaching method that is employed in the higher learning institutions of the country.

Recommendations

Based on the findings of the study, the researcher would like to recommend the following:

- To bring real change, instead of offering a one-shot training, there is a need for delivering a well-organized and sustainable continuous professional development programs in the public higher learning institutions of the country. Besides, the trainings should be offered by pedagogical science specialists.
- There is a need to prepare a need-based as well as user-friendly pedagogical science handbook for instructors that may serve as a quick reference.
- As part of this handbook, it is important to set indicators/parameters against which the success or failure of the application of the art of teaching could be evaluated.
- For the effective implementation of continuous professional development programs in the public higher education institutions, there is a need to raise the awareness as well as commitments of the leaders of the institutions from the perspective of pedagogy as a cross-cutting issue.
- As part of this recommendation, there is a need to establish a full-fledged as well as well-furnished training center in the respective institutions. This center should offer inductive training for novice teachers as well as on-job trainings for the experienced ones with respect to pedagogical science.
- There is also a need to create relevant and sustainable partnership between private and public higher education institutions in order to improve the quality of education through experience sharing and staff as well as students exchange programs.

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