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Research-Teaching Nexus (RTN): The Epistemological Missing Link in Ethiopian Higher Education Institutions (HEIs).

Markos Mezmur

Abstract

In view of the central nature of Research and Teaching in higher education, and the almost universal assumption that Research benefits Teaching, and the importance of scholarship, it is perhaps surprising how the issue of Research-Teaching Nexus (RTN) remains a neglected matter in the academic arena of the Ethiopian higher education system.

RTN is a matter which has recently attracted a considerable amount of attention, particularly from those who are of the opinion that we need to value the link between Research and Teaching to offer high quality learning experiences to students. This paper is, thus, an attempt made to assess the nature of the relationship between Teaching and Research in the Ethiopian higher education settings. Also, study of existing literature on the issue is made to provide ways of establishing productive links between Research and Teaching and highlight the connection that it has to learning.

Evidences on RTN in the Ethiopian HEIs are extremely scarce. Results from the handful of earlier studies, however, ascertained that Research and Teaching has never come to a close touch in Ethiopian higher education institutions. Thus, with the aim of increasing circumstances in which Teaching and Research have occasions to meet, universities need to work towards the improvement of the nexus between Research and Teaching. This would ultimately help institutions and their staff to provide the best possible learning experiences for their students.

The paper is organized into four sections. The first section of the paper presents introduction and the justification for the importance of Research -Teaching Nexus (RTN). Following this a general overview of an Ethiopian Higher Education Landscape is presented. The second section reviews literature on the “how” of linking Teaching with Research. Review of evidences from earlier studies and discussions are made in the third section of the paper. Conclusion and recommendations are presented in the final section of the paper.

Introduction

The tripartite mission of a university is to pursue teaching, research and community service. While these three mandates are inextricably woven, the focus of this study is on Research-Teaching Nexus (RTN). Before starting to talk about the “how” of establishing the nexus, let me take the liberty of considering “the why” we need to do so.

There is basically a tacit assumption that research informs teaching and, perhaps to a lesser extent that teaching informs research in higher education institutions. However, the challenge facing most universities is how to establish a productive nexus between research and teaching to enhance the quality and effectiveness of their teachings.

Despite the universal espoused belief in the benefits of RTN in higher education institutions, the precise characteristics of the relationship between teaching and research are not well understood. In this regard, the narrow conceptions of the possible links of RTN and the complexity of the issues associated with measuring both dimensions are what made the precise characteristics of the RTN far from clear (Hitchcock & Huges, 1995).

However, the close link between Research and Teaching is called upon to make institutions the right educational centers. In this regard, UNESCO (1998) underscored the need to link teaching and research to ensure the effectiveness of higher education institutions to develop indigenous knowledge.

The Ethiopian Higher Education Landscape

Although Ethiopia has a 1,700 year tradition of elite education linked to the Ethiopian Orthodox Church, secular higher education started only in 1950. The University College of Addis Ababa was established in the said year (World Bank, 2003).

Though with a wastage rate approaching 40%, higher education institutions of our country achieved a considerable success of maintaining international standards in the 1960s (Wagaw, 1990 as cited in World Bank, 2003).

The motto to search and research has been there in the early secular higher education institutions of the country. Since their inception, the Faculty Council in those universities has encouraged research. The universities stipulated broader aims of research, such as, generating knowledge to make teaching more relevant, integrating theory with practice, evaluating and upgrading curricula, and addressing societal needs (Habtamu, 2003: 322 as cited in Asgedom, 2005).

Parallel with faculty staff, research institutes in the early universities had their own research staff with a 1:3 ratio of responsibilities: 25% teaching and 75% research. The faculty staffs, on the other hand, are responsible for exactly the reverse ratio. This actually remains a tradition of scholarship in current universities of the country. However, whether or not they have meaningful correspondence to teaching and research remains a matter of exploration (Asgedom, 2005).

According to Habte (1973b: 16 as cited in Asgedom, 2005) the major objectives of these research institutes were to:

- Develop continuously teaching materials, especially in the Social Sciences, Law, History and Geography;
- Apply research in Agriculture, Education, Public Health and Biology;
- Develop innovative teaching methods;
- Develop better testing devices (aptitude tests, objective tests, etc);
- Build up research infrastructure;
- Study one's own culture by collection and preservation of Ethiopian archives, art music and historical artifacts;
- Advance Pan-African research in collaboration with the UN and OAU (now AU).

None-the-less, at the dusk of the 20th century, the country found itself with a higher education system that was regimented in its management, conservative in its intellectual orientation, limited in its autonomy and short of experienced doctorates in its staff profile to mention a few. Concerned about declining educational quality, weak in its research

output, and poor connection with the intellectual currents of the international higher education community, awareness of the need for reform began to grow (WB, 2003).

Thus, the felt need to reform the higher education system called for a concerted effort of those involved in the sector. The country's current ambitious effort to revisit the education system is a response to the said existing challenges. This critical national need by the government of the day is indeed indispensable for the renaissance of the quality and relevance of the education that would direct the future of the country.

In this regard, the oversight agency, HERQA (Higher Education Relevance and Quality Agency), was established to monitor both the relevance and quality of the academic programmes as per the 2003 FDRE (the Federal Democratic Republic of Ethiopia) Higher Education Proclamation; a series of Academic Development and Resource Centers (ADRCs) which are under formation also seem a blessing to shore up quality in Ethiopian higher education classrooms. Also, the incorporation of ICTs (Information and Communication Technologies) into instruction as a vehicle for accessing the global network of information will add greater efficiency and depth to the learning process.

Strategies to Link Teaching with Research

Reviewing the body of literature to evidence the value placed on teaching and research, the link between research and teaching, and the connection it has to knowledge and understanding is not self-evident. Instead, it relies on a synergistic and inter-active environment of scholarships. Boyer's (1990, 1994) investigation of the relationship between teaching and research has been seminal in developing the notion of scholarship as the complementary and interactive learning environment by which learning is able to bridge the gaps that have opened up between teaching and research.

As institutions differ, they need to develop their own conception and understanding of how they conceive and seek to deliver research-teaching relations. Especially, institutional missions and resources are what greatly matter in determining the extent of their focus. Thus, institutions should set mission for improvement of the nexus between research and teaching (Jenkins, et al, 2003, p.89).

In order to recognize, evaluate and reward Research-Teaching Nexus (RTN), academic staff members and managers need definitions, models and strategies. In this regard, three distinct approaches to linking teaching and research are found in the higher education literature. The potential synergies between teaching and research in these approaches are explained while recognizing the distinctions among them. However, it is proposed that these approaches are interwoven into one model in a creative and scholarly ways.

The first of these is a traditional approach, often known as Research-led Teaching (or research-informed, or research based teaching) in which academics share their own disciplinary research with students, and teach them disciplinary research methods. This approach obviously enhances students' learning, including the development of graduate attributes, and lead to increased student enrolments and completions in graduate research programmes.

A related but perhaps less common approach is Inquiry-based Learning, whereby academics actively involve their undergraduate students in carrying out disciplinary research. This approach is widely practiced in North America, where it is known as 'undergraduate research', and increasingly adopted elsewhere. Like Research led Teaching, this approach can enhance student learning, including the development of graduate attributes, and lead to increased student enrolments and completions in graduate research programmes. Since presentations and publications with undergraduate students as coauthors can result, this approach can also lead to increased learning productivity.

A third approach, Research on Teaching and Learning, is one element of the Scholarship of Teaching and Learning (SoTL) paradigm developed by Boyer and the Carnegie Foundation. In this approach – which is also known as 'pedagogical research' or 'action research' – academics themselves (involving students when possible) engage in applied research on teaching and learning in their disciplines. Research outputs such as articles in discipline-specific teaching journals often ensue. In addition to bringing about all the outcomes mentioned in relation to the previous two approaches, this approach also contributes directly to enhanced teaching effectiveness.

Strategies of Linking Teaching with Research in the Curriculum

Effective curriculum design and assessment strategies are central to successfully linking teaching and research in higher education. The curriculum provides a blue print for student learning across years and contexts (Stark & Lattuca, 1996). It is the organizing framework that allows academic staff to determine how they will facilitate and assess students' learning in relation to the goals, beliefs, values, traditions, and philosophies of their particular discipline. High quality curriculum design is characterized by alignment of learning objectives, instructional activities and student assessment and feedback.

At an individual level, thinking in terms of RTN, literature in the area indicates three principal suggestions for faculty staff members to be offered:

- Develop a personal pedagogical approach or philosophy that optimizes the relationship between teaching and research;
- Give attention to documenting the ways in which your personal research program and your wider academic scholarship is used in your teaching and in the design of curriculum;
- Take a leadership within your departments in exploring and implementing strategies for bringing undergraduate students closer to the research interests of the department and the university overall.

Other suggestions for consciously embedding the RTN in academic career include:

- Drawing on contemporary research findings and research questions in your planning of student activities;
- Being explicit with your students about the ways in which you see research and their learning to be interwoven, being explicit about what you are trying to achieve and what you want them to achieve;
- Developing inquiry-based or research-based approach to students learning, including ways to involve students in small-scale research projects (these are commonplace in some disciplines of course);
- Looking for opportunities to publish descriptions of the ways in which you utilize RTN for the benefit of other academics;

- Locating teaching and learning in the context of the development of knowledge in the field;
- Developing inquiry-based or research-oriented exercises and projects for students;
- Allowing students to analyze raw data (this may include analysis of own data);
- Develop class exercises that might lead to publication. This may include literature review or new analysis of the existing data.

Discussion on Review of Evidences from Earlier Studies

Evidences of RTN in Ethiopian Higher Education Institutions are extremely scarce. The dearth of researches in the area indicates that it has been a neglected area of scholarship in the academic realm. Results of the handful of studies carried out thus far, however, are reviewed and presented herein below.

The dire evidences, in the area, ascertained that faculty staff members in both the public and private institutions of higher learning shy away from researching: the forefront challenge for institutions in their effort to revitalize indigenous knowledge the country has built in its long years of history in traditional higher education institutions. This, in turn, is attributed to the very unsatisfactory state of research in the academic institutions. In most cases, this holds true, as research is seen as a peripheral aspect of learning (Syoun, 1998; Zulfa, 2000; Tadesse, 2000 as cited in Atnafu, 2005).

Such academic research into the nexus, however, has tended to concentrate on the performance of academics as researchers and their effectiveness as teachers (Feldman, 1987; Brew & Boud, 1995a). This is what is called conventional measures of research productivity (e.g. number of publications) and of teaching effectiveness (e.g. student evaluation). A meta-analysis by Hattie & Marsh (1996) confirmed the findings of the original studies – that there tends to be a near zero correlation between such measures. Overall, the higher education research literature suggests that the teaching-research nexus cannot easily be quantified or demonstrated (Brew & Boud, 1995b; Coal drake & Stedman, 1999; Hattie & Marsh, 1996; Moses, 1990; Smeby, 1998).

In his paper on linking higher education with agricultural research, Belay (2006) shed new light on program of studies which were found to be unable to respond to the labor market requirements and current rural realities due to lack of relevance of the curricula which are no longer able to produce graduates who could deal with the wider problems of rural development.

However, research is a major driver of curriculum development, in terms of new knowledge creation leading to new courses, new units and the redevelopment of existing ones. In this regard, more than the individual teacher's research interests being brought into the curriculum: a course team, department, school and faculty are involved in regenerating the curriculum in light of new knowledge produced from research.

The study covered the following types of agricultural institutions of higher learning which offer training programs at different levels: Alemaya University (now Haromaya University), Debre Zeit Junior College of Agriculture, Awassa College of Agriculture (now under Hawassa University), Wondogenet College of Forestry (now under Hawassa University), Faculty of Veterinary Medicine of Addis Ababa University and Faculty of Dry Land Agriculture and Natural Resources of Mekele University as well as Agricultural Technical and Vocational Education and Training (ATVET) schools.

The findings of the study attested the surging number of students in Agricultural Higher Education Institutions (AHEIs) in the face of insufficient resources, have brought about a decline in the quality of education. In this regard, shortage of qualified and experienced instructors, lack of teaching materials which are pertinent to the agricultural situations of Ethiopia coupled with insufficient attention to research/knowledge creation and practical training have made the situation worse (Ibid).

Given the aforementioned state of affairs, the study pointed out some of the fundamental challenges in curricular, teaching and research regards. It is, therefore, incumbent upon these institutions to implement curricular reform measures, adopt student-centered creative learning strategies, and introduce more practical elements into study programs. This will enable institutions to produce graduates equipped with the knowledge, skills,

values and attitudes required for promoting sustainable development all of which seem to require effective synergy of research with teaching.

Atnafu (2005) studied research culture among private and public higher learning institutions in Addis Ababa. In his study, it was indicated that with few exceptions, lecturers in both private and public higher education institutions do not engage themselves in researching. Similar circumstances in many of our universities warrant the conclusion that research and teaching has never come to a close touch in the Ethiopian higher education setting. However, research is a power house of knowledge and is responsible for broadening and deepening knowledge. Without academic research, change in curriculum development, evaluation, teaching methods, learning process, strategies for assessment and the like are unthinkable (Neary, 2002). Testing the existing policy, theory, pedagogical practice and exploration of difficulties and problematic areas are all possible through research (Hitchcock & Hughes, 1995).

Mathewes (2004), on the other hand, studied the role of research in promoting Quality of the Education in private higher education institutions setting in Addis Ababa. In this descriptive and analytical study, data were collected from four private higher education institutions through interviews and surveys. Also, in the study documents were consulted so as to substantiate the primary data.

In his study, it was indicated that the primary aims or missions of higher education institutions are teaching and research. These aims are often boldly stated in college & university catalogues as well as in strategic documents. However, the mission of conducting research is, all too often, marginalized in practice as faculty become preoccupied with teaching and administrative matters. And such marginalization of research can be regarded as a serious problem that can severely affect the quality of education in institutions of higher learning (Mathewes, 2004). Results of his survey also revealed that research, in private higher education institutions, is in a very unsatisfactory state. Most of the manifestations of thriving research culture that should characterize institutions of higher learning such as talks or public lectures, research grants, research seminars, research groups & publications of journals are not seen in many of the private

HEIs with the exception of St. Mary's and Unity University Colleges. Besides, although the proclamation of higher education issued in 2003 stipulates that faculty staff members should devote 25% of their time to research, the study revealed that in the current state of affairs, academic staffs in PHEIs devote either none of their time or only 10% of their time to research.

Conclusion

The ideas of 'scholarship of teaching' in the Ethiopian higher education institutions of undergraduate programs seem to require considerable elaboration to nurture the culture of research in universities. The discussions surrounding this aspect of scholarship will help formulate and develop a shared language. This language would be an important intermediary in implementing the nexus in ways that suit specific institutional culture. With this intention universities need to work towards the improvement of the nexus between Research and Teaching. This would ultimately help institutions and their staff to provide the best possible learning experiences for their students.

To this end, it is axiomatic that the twin core activities of the university, teaching and research must be the cornerstone of policy development and direction within universities. We are a university only because we are engaged in teaching and research. The nexus between teaching and research is often cited, but rarely well defined. Our research activities will both inform and enrich our curriculum and our teaching approach. This can only be achieved when there is strong linkage between research and teaching in the university. We will define and identify the relationships between research and teaching, particularly as they inform and affect teaching. In this regard, it seems imperative to incorporate aspects of Teaching Research Nexus (TRN) in universities quality enhancement procedures such as instructors' course planning questionnaire, instructors' assessment methods questionnaire and students' evaluation of their teachers.

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