

CONNECTIVITY BETWEEN TEACHING AND RESEARCH TOWARDS QUALITY ENHANCEMENT IN HIGHER EDUCATION INSTITUTIONS

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ABSTRACT:

The arrangement between research teachings has been alive and European institutions surviving more than 500 years and many things have changed but eternal themes of teaching and research in one combination or another continue. The researcher always convert the research knowledge to constructive teaching ability and convert the methodology towards academic activities inclusion of inductive teaching methodology.

Purpose of the study: This study aimed at describing teacher's perception of research activity with integration towards teaching. The study focusing on the quality of teaching which influence by research work by teacher. Researchers and academic teachers are at the front line of teaching scientific methods for the society.

Methodology: The present study mainly based on the primary data as well as secondary data. This study belongs to descriptive in nature with holistic approach towards teaching and research. The primary data was collected through well-defined questionnaire and administered statistical tools with SPSS.

Findings: The study found that research decision have moderate influence on teaching and research engagement always influence on teaching activity. Also found that teaching integration with research influences on research decisions with more relevant research activities.

Research Implication: The connectivity between teaching and research is always crucial and inevitable for the enhancement of teaching and performance of teacher and institution. This relationships very complex in nature due to several factors and availability of resources. The individual and institution has to build pathway for teaching learning and research must go hand in hand.

Originality of the Study: According to this study the connection between research and teaching is mediating through new model "LETTERE model" this model opens up a way of seeing the clear parallelism between research and teaching. This new model enhance the connection between research and teaching and creates new design for right kind of research for the enhancement of performance.

Keywords: LETTERE, Performance, Teaching, Research, Knowledge.

INTRODUCTION

The compatibility between the teaching and research is always debatable due to drastic integration of technology. The several education institutions very much interested to conduct research in different disciplines. The researcher always convert the research knowledge to constructive teaching ability and convert the methodology towards academic activities inclusion of inductive teaching methodology. Classroom teaching would enhanced by the integration with scientific papers for academic activities. This study aimed at describing teacher's perception of research activity with integration towards teaching. The study focusing on the quality of teaching which influence by research work by teacher. Researchers and academic teachers are at the front line of teaching scientific methods for the society. The purpose of research is gather information for advanced knowledge and the objective of teaching is create, build and enhance the ability to perform. The active researchers creates strong potential teachers and potential teachers inspires to engage research with great enthusiastic.

Healey's matrix model

A widely cited model by Mick Healey structures the connection between research and teaching along two dimensions: the extent to which students act as participants or audience members, and the degree of emphasis placed on the research process or its products. This creates four distinct approaches:

1. **Research-informed (Student as Audience, Content-focused):** The most common model, where the instructor updates course content with the latest research findings in the field. The student's role is primarily to absorb this information.
2. **Research-oriented (Student as Audience, Process-focused):** Here, the instructor emphasizes the methods and processes of research. For example, students learn about the data sources or methodologies that experts use to investigate research questions in their field.
3. **Research-based (Student as Participant, Process-focused):** This approach centers on inquiry-based learning, where students actively engage in the research process. Examples include students completing a small-scale research project, conducting their own investigations, or tackling complex, realistic problems in groups.
4. **Research-tutored (Student as Participant, Content-focused):** This model involves students actively and critically engaging with existing research, such as by discussing research papers, critiquing studies, or debating competing theories. It moves students beyond passive reading to active critical evaluation.

Visser-Wijnveen's knowledge model

Building upon Healey's work, G.J. Visser-Wijnveen developed a "knowledge model" that distinguishes between knowledge reproduction (learning what is already known) and knowledge production (creating new knowledge). It combines this with the research product/process dimension to produce six distinct variants:

1. **Transmission of research products:** Using existing research results or artifacts to introduce a topic to students.
2. **Transmission of research processes:** Teaching the research skills and methods relevant to the discipline.

3. **Knowledge reproduction based on products:** Students work with existing research, such as through debates or critical evaluations.
4. **Knowledge reproduction based on processes:** Students engage in structured inquiry- or problem-based learning to replicate known findings.
5. **Knowledge production focused on products:** Students produce and share research outcomes with the academic community, such as by presenting at conferences.
6. **Knowledge production focused on processes:** Students actively participate in research that contributes new knowledge to the field, like undergraduate research projects.

Institutional and historical models

Beyond pedagogical frameworks, some models describe the connection between research and teaching at a broader, institutional level.

1. **The Humboldtian Model:** In the 19th century, Wilhelm von Humboldt established a model where research is inseparable from teaching. The university's core purpose is to advance knowledge, and students participate in this process by learning from research-active faculty who serve as guides and companions on their own research journeys.
2. **The Newmanian Model:** A contemporary of Humboldt, John Henry Newman argued that the core function of a university is to disseminate existing knowledge, not to advance it. This model views teaching and research as distinct functions, with the faculty's role being to provide moral and intellectual education rather than to focus on discovery.
3. **The Nexus Model:** More recently, terms like the "research-teaching nexus" have been used to acknowledge the complex, interdependent relationship between the two activities. It recognizes that in modern universities, funding, policy, and institutional culture can either promote or hinder the integration of research and teaching.

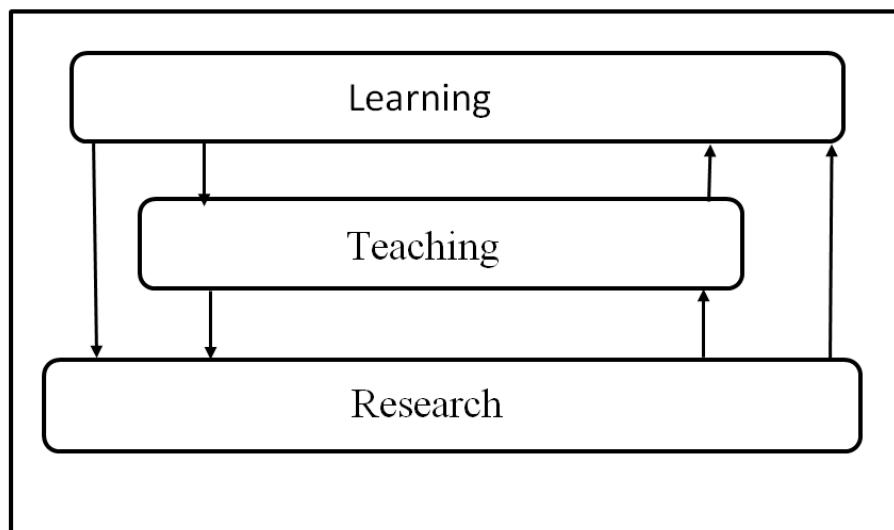
Selecting the right model

The choice of model depends on the subject matter, educational level, and institutional context.

1. **Undergraduate education** may use a blend of approaches, moving students from critical engagement with research (research-tutored) to active participation (research-based) as they progress through their degree.
2. **Graduate education** naturally relies more heavily on research-based and research-led approaches, as the goal is to train students to become new producers of knowledge.
3. **Research-intensive universities** often promote research-based and research-led models to justify their strong research focus and attract high-caliber students.

No single model is considered superior, and a successful approach often involves using a combination of methods tailored to specific learning objectives

LETERE Model



This **LETERE model** means the researcher always convert the research knowledge to constructive teaching ability and convert the methodology towards academic activities inclusion of inductive teaching methodology. Classroom teaching would enhanced by the integration with scientific papers for academic activities.

LITERATURE REVIEW

There are some crucial models which create connection between teaching and research and learning few articles focused on TERELE model that means Teaching-research-learning model to understand the connectivity between teaching and learning¹. This debate raised from the mid nineteenth century². However several European institutions surviving more than 500 years and many things have changed but eternal themes of teaching and research in one combination or another continue³. The arrangement between research teachings has been alive⁴. Few authors argued that knowledge have to be deduced from authoritative writings and these were primary sources of knowledge. This is fundamental belief from 500 years in the academic world⁵. The main teacher tasks to follow the research done on the specific subject and integrate to knowledge with pedagogical perspective⁶. The education means implementation of concepts through research instead of focusing on present condition. This creates formation of core curriculum for further teaching⁷. According to several authors universities described its function such as system of knowledge and ideas which will be fresh blood for the university research activities⁸.

Research Gap :

Objectives: -

1. To understand the holistic research teaching models.
2. To examine the association of demographic variables on research.
3. To investigate the relationship between research decision with teaching and research
4. To investigate the influence of research decision on teacher performance.

Hypothesis for the study

Hypothesis 1

H_0 : There is no significant association of demographic variable on research activity.

H₁: There is a significant association of demographic variable on research activity.

Hypothesis 2

H₀: There is no significant relationship between research decision and teaching.

H₁: There is a significant relationship between research decision and teaching.

Hypothesis 3

H₀: There is no significant influence of research decision on teacher performance.

H₁: There is a significant influence of research decision on teacher performance

Research methodology

The present study mainly based on the primary data as well as secondary data. This study belongs to descriptive in nature with holistic approach towards teaching and research. The primary data was collected through well-defined questionnaire and administered descriptive analysis, chi-square test, correlation analysis and regression models statistical tools with SPSS.

Table 1.0 Descriptive statistics

Statement	Mean	SD
Availability of resources for research in your institution	1.7755	0.71119
What kind institutional support do you receive for the research	1.8980	0.91370
What are your main research interests or areas of the specialization	2.0612	0.68589
The purpose of the research activity	1.9592	0.90723
How do you choose your research topics	2.4694	1.22014
What challenges do you face in conducting or publishing research	1.4490	0.61128
How do you integrate your research into your teaching	1.7551	1.14028
How much your research influenced your teaching	2.7755	1.00032
Do you think research enhances your effectiveness as a teacher	1.2245	0.50829
Have your teaching experience ever influenced your research direction	1.4694	0.57802

(Source: Primary data)

Descriptive analysis shows the central tendency of each construct of this study. "Availability of resources for research in your institution" mean 1.775 and SD 0.711 which indicates instructions are optimum equipped for research work. "The kind institutional support do you receive for the research" mean 1.898 and SD 0.913 which indicates they will get moral support for research. "The main research interests or areas of the specialization" mean 2.061 and SD 0.685 which evidenced that based on area of specialization they will conduct research. "The purpose of the research activity" majority belongs to passionate about the research activity the Mean 1.9592 SD 0.90. The faculties choose the research topics based on continues reading Mean 2.469 SD 1.22.

Table 1.1 Chi-Square Tests with Symmetric Measures

IV- DV	Pearson Chi-Square value	df	Phi value	Asymp. Sig. (2-sided)
Gender- Research decision	31.449 ^a	10	0.566	0.000
Age- Research decision	27.830 ^a	30	0.533	0.579
Designation-- Research decision	53.391 ^a	40	0.738	0.046

(Source: Primary data)

The chi-square test evidenced that research always associate with the gender. The Pearson Chi-square value 31.449 and coefficient value 0.566 (greater than 0.20 less than 1.00) which indicates strong association between gender and research decision. In this study male members are very passionate about research with mean value 1.8065 and female members mean value 2.222. In the second case age is also very much associated with the research decision with chi square value 27.830 and coefficient 0.533 which indicates strong association. Every stage of teaching life they are very much passionate about research. The designation also associated with the research decision with chi square value 53.391 and coefficient value 0.738 which is strong association than any other variable. There is a significant association of demographic variable on research activity.

Table 1.2 Correlation analysis

IV-DV	Pearson Correlation	Sig. (2-tailed)	N
Research decision – Research Influence teaching	0.311	0.002	98
Research decision - Teaching Influence research	0.241	0.017	98

(Source: Primary data)

The correlation analysis represented that there is moderate relationship between research decision and influence on teaching. r value 0.311 with p value 0.002. In another case research decision have moderate relationship with teaching influence on research. R value 0.241 and P value 0.017 which is less than 0.050. There is a significant relationship between research decision and teaching.

Table 1.3 Regression Model

Model	DV	IV	β	T sat	R^2	F sat	P value
1	Research Influence teaching	Research decision	0.311	5.416	0.096	10.244	0.002
2	Teaching Influence research	Research decision	0.241	3.729	0.058	5.942	0.017

(Source: Primary data)

The above regression analysis model represented that the influence of research decision on teaching. The beta identified that 0.311 which means 31 percent of the total variance in the

research decision explain by research influence on teaching. F value 10.244 which significance with 0.002. This result indicated that the research decision has moderate influence on teaching. in the second model The beta identified that 0.241 which means 24 percent of the total variance in the research decision Explained by teaching with research. F Value 5.942 Which is significance with 0.017 this result indicated that research decision has moderate influence on teaching with research. There is a significant influence of research decision on teacher performance.

FINDINGS

1. The present study found that institutions are generally equipped with some supportive kind for research. Faculties find only moral support for research from institutions which helps them to stay motivated and engage in research work.
2. Most of the faculties conduct research on their specific specialisation align with the areas what they teach. The study found that faculty members are very passionate about the research with a view of an important activity for their professional growth.
3. The study found faculties decide their research topic based on continues reading on specific area. This will help those to academic engagement which help them to identify the new area for research.
4. The study found that research decision have moderate influence on teaching and research engagement always influence on teaching activity. Also found that teaching integration with research influences on research decisions with more relevant research activities.

SUGGESTIONS:

1. Enhance Institutional Support: Institutions should provide not only moral support but also adequate research resources, funding, and infrastructure to encourage faculty research activities.
2. Encourage Research-Teaching Integration: Faculty should be supported to integrate research with teaching, as this improves both research outcomes and teaching quality.
3. Promote Continuous Learning: Institutions can organize seminars, workshops, and access to journals to help faculty stay updated in their specialization areas, which will guide them in choosing relevant research topics.
4. Foster Passion for Research: Recognize and reward faculty research achievements to maintain motivation and passion for scholarly activities.
5. Support Collaborative Research: Encourage interdisciplinary and collaborative research projects to broaden research perspectives and produce more meaningful outcomes.
6. Monitor and Evaluate Research Impact: Establish mechanisms to assess how research influences teaching and vice versa, to ensure that research activities are aligned with academic growth and institutional goals.

CONCLUSION:

The study concludes that institutions provide basic support for research, but faculty primarily rely on moral support to stay motivated and engaged. Faculty tend to conduct research in their areas of specialization, aligning it with their teaching, and show strong passion for research as a vital part of their professional growth. Continuous reading and academic

engagement help faculty choose relevant research topics and explore new areas of study. Overall, research decisions moderately influence teaching, while integrating teaching with research further guides research activities, highlighting a reciprocal relationship that enhances both teaching and scholarly performance.

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