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Research and Academic Development

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Abstract
Research Education is the backbone of a nation. So, education should be acquired from the cradle to the grave. Higher education occupies at the apex of educational pyramid in the formal process of education. Generally it comprises of three stages- a) Graduate b) Postgraduate c) M.Phil, Research or Ph.D. degree in the present age of Globalization. Since Higher Education Institutions educate and train decision makers, they play a key role in building more academic societies and creating new paradigms. As educational institutions, they have the mission to promote development through both research and teaching, disseminating new knowledge and insight to their students and building their capabilities. Higher Education Institutions have a special responsibility to provide leadership on education for academic development.
Academic development is a vision of education that seeks to balance human and economic wellbeing with cultural traditions and respect for the earth's natural resources. Its aim at enabling everyone to acquire the values, competencies, skills and knowledge necessary to contribute to building a more academic society. This implies revising teaching content to respond to global and local challenges
Keywords: *Globalization, Research and Development, investment*

Introduction

Research plans should contain as much detail as is necessary to define the tasks involved. For isolated tasks the plan may simply be an entry in a notebook or a form. A more detailed plan will be necessary for larger, more complex tasks or when time and cost constraints are to be closely controlled, or when high risk or significant investments depend on the outcome of the work. If there is significant doubt as to whether the work can be completed successfully by a single route, then alternative plans should be defined.

Research and Development Research is a scientific investigation aimed at discovering and applying new facts, techniques and natural laws. At its heart is inquiry into the unknown, addressing questions not previously asked. Research is done by a wide range of organisations: universities and colleges; government agencies; industry and contract organisations. Research projects vary widely in content and also in style, from open ended exploration of concepts to working towards specific targets. Development in an industrial context is the work done to finalise the specification of a new project or new manufacturing process. It uses many of the methods of scientific inquiry, and may generate much new knowledge, but its aim is to create practicable economic solutions. The combined term Research and Development can be seen as the work in an industrial or government context concentrating on finding new or

improved processes, products etc., and also on ways of introducing such innovations

Meaning of research

"Research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue". It consists of three steps: Pose a question, collect data to answer the question, and present an answer to the question.
.....Creswell

Meaning of Educational research

Educational researchers have come to the consensus that educational research must be conducted in a rigorous and systematic way ,although what this implies is often debated. There are a variety of disciplines which are each present to some degree in educational research.
.....Wikipedia

Academic Development

Academic Development and Life-Long Learning Centre aims to provide the general public with a possibility to use the university resources and expertise in professional and personal development, improvement of qualifications, acquisition of new professional skills.

"As Chancellors, Presidents, Rectors, Deans and Leaders of Higher Education Institutions and; related organizations, we acknowledge the responsibility that we bear in the international pursuit, of academic development. On the occasion of the United Nations Conference on Academic Development, held in Rio de Janeiro from 20-22 June 2012, we agree to support the following actions:

i. Teach Academic development concepts, ensuring that they form a part of the core curriculum across all disciplines so that future higher education graduates develop skills necessary to enter academic development workforces.

ii. Encourage research on Academic development issues, to improve scientific understanding.

iii. Green our campuses by: i) reducing the environmental footprint through energy, water and material resource efficiencies in our buildings and facilities; ii) adopting academic procurement practices in our supply chains and catering services; iii) providing academic mobility options for students and faculty;

iv. adopting effective programmes for waste minimization, recycling and reuse, and encouraging more academic lifestyles.

v. Support sustainability efforts in the communities in which we re

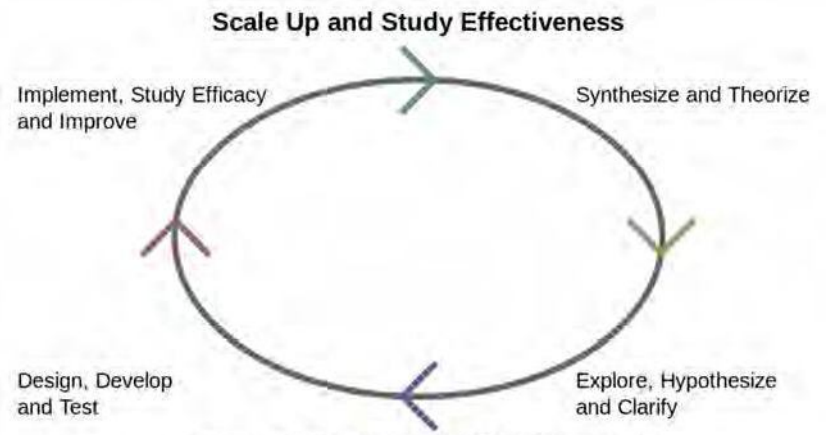
vi. Research councils and funding agencies are increasingly recognizing the need to uncover new conceptual and practical spaces for research. In recent years, they have directed resources and attention to interdisciplinary and recognize it as a new source of insight to advance human understandings of the sustainability challenge. These funding sources are encouraging academics to go beyond their discipline boundaries and seek partnerships with colleagues who have similar interests but differing methodologies and perspectives. The result is an emergent research landscapes with potential for alternative academic frameworks and new sustainability pathways in the areas such as academic consumption; wildlife and water conservation;

reducing poverty; community development; transition towns; academic business development; ecological resilience; academic food and change management for sustainability.

Need of Education and Research on Academic Development

The overall aim of research and education is to empower citizens to make our education system academic especially in higher education so that we don't focus only on economic development but also in bringing positive social and environmental change. Unplanned development with only economic benefits in mind is resulting in form of global problems like pollution, poverty, climate change, energy crisis, gender equality, rising gap in rich and poor, world peace etc. These problems could be addressed if sufficient time and energy is spent on education and research on academic issues especially in higher education. UNESCO proposed that the vision of education for academic development is a world where everyone has the opportunity to benefit from quality education and learn the values, behavior and lifestyles required for a academic future and for positive societal transformation.

Research and Development (**R&D**), is a general term for activities in connection with corporate or governmental innovation. R&D is a component of Innovation and is situated at the front end of the Innovation lifecycle. Innovation builds on R&D and includes commercialization phases. The activities that are classified as R&D differ from company to company, but there are two primary models, with an R&D department being either staffed by engineers and tasked with directly developing new products, or staffed with industrial scientists and tasked with applied research in scientific or technological fields which may facilitate future product development. In either case, R&D differs from the vast majority of corporate activities in that it is not often intended to yield immediate profit, and generally carries greater risk and an uncertain return on investment.



Cycle of Research and Development

Research Activities in Many Fields

In the current situation and with the present demands upon universities, research has to be responsive to different social needs. To respond to this; requirement, sustainability questions have already been | integrated into research activities in many fields, such as economics, construction and environmental engineering. For example, life cycle assessment methods are now widely applied in waste management.

Overall, approximately 50 per cent of a universities have launched general courses link the academic development and almost all universities have begun to ac the need for curriculum reorientation in line with The creation of improved education systems to ad academic development is increasingly under discussion and the foe recent publications and Conferences have been on the exploration of academic development could mean for education systems, and on res to develop theory and evaluation methods that support the aims of academic development.

A variety of activities have taken place, from holding workshop conferences, seminars and exhibitions, to establishing associations, research projects, ecological field trips, and web sites. For quality development in research activities the universities should:

i. Encourage tax incentives in creating capacities research across the country and encourage industry with similar benefits to collaborate with institutions.

ii. Encourage institutions to have centers of Relevance in Excellence in key areas of science and technology.

Promote healthy organization climate and culture within the educational institution which inturn favors quality education and encourages academic excellence.

Quality research

The quality research process should have the following criteria in minimum:

1) Student achievement
2) Student support and guidance
3) Resources of information technology, library etc.,
4) Evaluation and development of research

Providing facilities to posses a constant quality and standard of research education

Criteria for Quality of Research

There are essentially two categories of performance indicators in research:- quantitative- referring the number of publications and qualitative which refers to the importance of the research publication and its impact. Both these dimensions are important since they are complementary to each other. Ultimately, the performance index should enable organization to go through the continuous improvement cycle.

A survey of literature shows that there are 4 main criteria used in the evaluation of the quality of research:

i. Subjective evaluation (peer review)
ii. Number of publications
iii. Research productivity
iv. Citations

Subjective Evaluation

Peer review is the most widely used method to judge the quality of research in

a variety of contexts including research funding applications, articles submitted for publication and job applicant's selection. The criteria used may include the factors of the significant and original contribution to the knowledge, the extent to which the research fits into an overall program/framework of research, or is concerned with certain priority areas, or the social, economic or technological merit of the research in terms of discovery and innovations.

Research Productivity

Research contribution in terms of innovations and new discovery becomes an important criterion for assessing the quality of research. It could be in terms of technological breakthrough, basic science research findings, for industrial applications and productivity as well as methodological innovations. Nobel laureates in an Institution are a feather on the cap for the Institution's innovation index.

Research Income is another important measure of research productivity. It not only facilitates the conduct of the research and building and maintaining the infrastructure facilities, but also help the young researchers to find their research career and development.

Measurement of Quality or Excellence

Measurement of quality or excellence in research should:

- Be fair, equitable and recognize diversity
- It must have the confidence of the public as well as the stakeholders
- It must be established with reference to social and economic objectives
- Research output measures to be emphasized
- May include peer review of reputation and creativity
- The research training performance reflect the quality of students, their experience, publications and skills.

Establishment of Board for Research Standards

The idea is to set up a Board of Research Standards (BRS) on the lines of Board of Indian Standards (BIS), existing for ISI certification of products. It appears that there is an urgent need to ensure quality of Indian research publications for improving the ratings of Indian research and scientists. The Board may be entrusted with the following tasks:

- Approval of Theses submitted by the scholars for the award of M.Phil./Ph.D. It is a fact that there is no uniformity in the submission and evaluation norms for the award of research degrees. Nor is there University in the criteria for the award of the Degrees, in terms of language, number of adjudicators, course work, dissertation, etc. Though the UGC has now promulgated Minimum Standards for the award of Research Degrees, one has to go a long way in this effort. It is also to be realized that they are only minimum standards. There must be an attempt to lay down ideal standards also, so that there will be a continuous effort to improve upon the quality.
- Listing of Journals, subject-wise, in the order of their rating/standing (by considering citations/ impact factors) to enable faculty to aim for higher standards from time to time.
- Sorting out the issues relating to copyright.

- Helping in the process of patenting. It may be
- better to create separate 'cell' for this purpose. As at present, there is no much awareness about patenting among HEIs, as also Faculty.
- Maintaining a Bank of Theses/Research publications for the guidance of current and future research.
- Ranking/Grading of Theses on the basis of their quality may also be a good idea. For this purpose, the Board needs to develop a pool of Experts in each of the disciplines.
- Developing Benchmarks for evaluating the performance of a HEI. The system of compiling manuals/models will be of great help. Conducting awareness/orientation programmes for developing quality consciousness among the Faculty and research scholars.
- Acting as an Agency for monitoring and evaluating the progress of Research Scholars/ Teachers receiving Fellowships of the Government of India.
- Facilitating/ regulating the flow of international students/scholars for encouraging international collaboration among Indian institutions.
- Keeping in view of the fact that Indian colleges and Universities being reduced is the status of mere 'teaching shops'; attempt may be made by this Board to fix ideal proportions for allocation of facilities and time of the faculty between teaching and research.

The new challenge that cur country is facing a beginning of the twenty first century is telecom a developed society by the year 2020, which requin that not only a vibrant economy driven by knowledge but also a new society where development progressing with social and environmental concerns.

Several principles of academic development are embedded in India's education policy. It is perhaps the only country where the highest court has mandated environmental education at all levels of forma education, which includes a compulsory undergraduate course. Education and research for academic development has the potential to meet India's development needs and bring this change and our Universities can play a very important role if the concentrate on finding new, innovative academic solutions for our problems.

Conclusion

When the parameters and the methodology are in place for assessing the quality of research, we can compare ourselves with others, thereby identifying strengths and weaknesses and learn how to improve the quality. We also find a way forward to adopt or adapt best practices from other institutions/ organizations to gain momentum in the quality race in research.

References

1. EURACHEM/CITAC Guide CG2 Internet Edition 1.0 - 1998
2. Khan Z N (2008). "Higher Education and Academic Development: *Quality vs Quantity", 2nd* International Conference on Assessing Quality in Higher Education,.
3. Research in Higher Education Institutions for Sustainable Development

A.S.Zadgaonkar and P K Naik

4..Sharma, Nidhi and Others, "Role of Higher Education and Academic Development in India".

5..Government of India (1986) "National Policy 0" Education. Ministry of Human Resource Development.

6..Government of India (1992) "National Policy or Education. Ministry of Human Resource Development, Programme of Action.

7..Thorat, Sukhadeo (2007) Higher Education in India- Emerging Issues Related to Expansion, Inclusiveness, and Quality and 11th Plan, J.P. Naik Memorial Lecture, Zakii Husain Centre for Educational Studies Jawaharlal Nehru University, Delhi.