

Educating Graduate Students for Academic Excellence: Challenges, Opportunities, Proposed Solution

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ABSTRACT-Graduate Students need to be shaped up to meet current industry trends which is the desirable outcome for an enriched and quality learning experience in order to achieve Academic Excellence. The graduate students of universities are facing many challenges today for the obtainment of quality education. Present tutoring system is deficient in many areas such as Relevance, Impact, skill development, obsolete education practices etc. Many government and public-private sector initiatives have certainly brought in opportunities to bridge these gaps. But the need of the hour is reforming academic framework and complete education system to foster effective learning experience for students. Some Challenges, opportunities and proposed solutions have been discussed on this subject in the research paper.

Key words: Academic Excellence, Shiksha Abhiyan, Interdisciplinary, Multi-disciplinary, Centre of Excellence, Standardization

I. Introduction

Academic Excellence is foundation for quality education for graduates and mainstay of Research & Development. For financially viable expansion promotion of application-oriented and compound education with expert human resource is of utmost importance [1]. This requires high quality of learning experience. Graduate students need to upgrade themselves according to the global market; hence it becomes significant to attain rich learning experience in order to induce viable, competent, flexible, self reliant and salable skills. Reforming the existing education systems is the present need as graduates in universities face many challenges which are obstacle to attain value based education experience. Workshops, Seminars etc aid academic quality [2]. There is requirement to drift away from the traditional tutoring system to an integrated curriculum framework as well as cultivating sensitivity in collaborative effort. The progressive nature of Academic Excellence should be observed at Organization or University level. Industry-oriented and Research study has become an integral part in education today. Perception of all stakeholders including Teachers, Graduate students, Employees, Community and Professional bodies is critical to fineness in academic framework [3]. Restructuring education is the need of the time. Education bodies are responsible for creation of a knowledge based society. Prioritization of reforming Academic standards is critical [4]. Academic reforms provide greater flexibility and choice. Strengthening of research activity in Universities by enforcing linkage between teaching and research is imperative. In that interest, various opportunities have been incentivized by government and public –private education bodies.

Academic excellence intersects business practices, intellectual contributions and teaching which are pillar of strength of any education system [5].

The research paper discusses challenges, opportunities and proposed solution for educating graduates for attainment of Academic Excellence in sections second, third and fourth respectively. The next section concludes the research work followed by the section on Future Scope.

II. Challenges faced by Graduate Students

1. Relevance-Impact Dynamics

Kerns[5] explains Relevance with respect to learner's sensitivity of usefulness of content and practice of communicating educational experience in the real world environment. He further describes Impact in terms of learner's estimation of application of learning experience in practice. Correct education practice with quality teaching supported by intellectual contribution is the foundation of Academic Excellence. Relevance and Impact are the parameters to assess educational experience of the graduate students in the learning environment. The dynamics can have four outcomes. The first outcome can be Relevance but Lacks impact which is when the content and process of delivery of contents is useful to the learner but the learner is unable to further transfer learning into demonstrative output. The second outcome is lack of applicability of learning to the real world and the content is also irrelevant i.e Lacking both Relevance and Impact. Another outcome is when the learner's experience is not much relevant but the transfer of learning to real world was practiced by the learner. Last outcome is when the Learner's experience is useful and also finds implementation. The challenge faced by the students is to gain relevant learning experience and then transfer of relevant learning into Impactful practice.

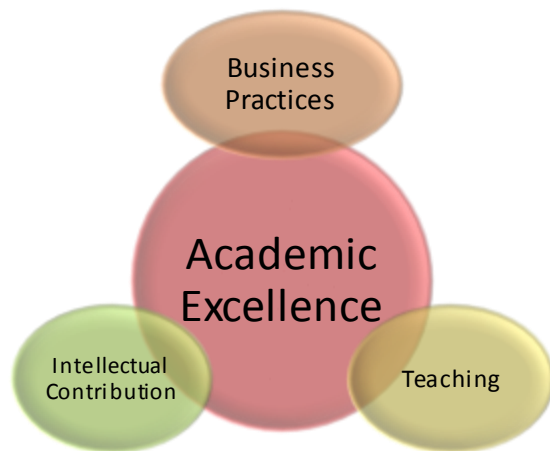


Figure.1. Pillars of Academic Excellence [5]

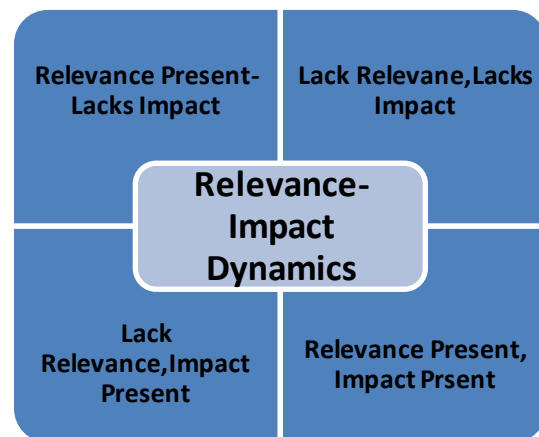


Figure. 2. Relevance-Impact Dynamics [5]

2. Inefficient Fidelity Learning Model

Information is not Implementation, concluded by Liang et.al[6] in his research work of assessing the fidelity theory of learning with actual implementation. The fidelity theory proposed by the author was based on attaining clear learning target substantiated with evidence. The success of a learning model depends on course content, content delivery, and frequency of content delivered and effectiveness of the content in terms of interactive influence on the learner in the education environment. The challenge is that the Learning model adopted by educational institutes lack in the quality of these critical factors. It posts a bigger challenge if such a Learning model also fails in implementation. Academic excellence is reliant on achieving fertile education experience to learner's so that they disseminate it in the form of demonstrative deliverables. Lack of Formative

instruction practices and adoption of stereotype learning pedagogies by educational institutes post a negative effect on learning experience and directly impact Student performance.

3. Vertical Integration of Education practice

Lynch et.al[7] commented that vertical integration of educational practices is not consonance to the industry needs of research and innovation. The issue is not the vertical characteristic but the conventional aspects of monolithic, hierarchy and centralization. The challenge is to align core competencies with value added proficiency. Vertical integration falls short in meeting global trends and affect student competency globally. This is a potential bottleneck for student seeking higher education or job opportunities.

4. Lack of Integrated curriculum Structure

Academic Excellence is centered on effectiveness of catering to advancing needs of a progressive education system. For this purpose, the curriculum should be structured in a way that it integrates managerial, communication and technical skill components. Smith[8] also suggested an MTC model on these lines culminating qualitative skills with quantitative skill, soft skills with hard skills and creative thinking with critical thinking. The concern is the curriculum structure is not able to adhere with today's research driven, social, historical and political framework.

Puri et.al[9] also highlighted the significance of blended and integrated curriculum. He devised a COMCORE program that analyses the readiness of students to compete with the students going through an integrated curriculum in comparison to its counterpart.

5. Inadequate Infrastructure and Resources

Resource constraints make it difficult to meet the goals of rich education experience. Many education institutes especially private sector lacks adequate infrastructure. Minimum standards of regulations such as supervision, monitoring, certification, guidance etc are also not been met by Education bodies[10]. This poses a potential bottleneck on quality research and innovation learning environment. Student-Faculty ratio as standardized by govt. regulatory bodies of education is not being met as there is acute faculty shortage in universities. Teaching pedagogies and assessment system is age old and needs revitalization and reformation.

6. Low rate of Faculty Development and Research Initiatives

For a progressive and productive educational institutes quality teaching plays a pivotal role. But quality teaching has taken a backseat especially by management of the private sector education institutions. Faculty needs to upgrade in terms of modern teaching pedagogies such as ICT form of teaching, so that its beneficiaries get a fruitful learning. Management is generally more inclined in marketing and branding and scarcely invests in Faculty. Refresher courses, ICT skills, symposia, conferences, seminars are some of the faculty development program which needs to be offered to faculty which shall help promote sharing of advance knowledge, skills and innovation. Equipping faculty with adequate latest tools and resources helps to inculcate research acumen in them. Failure in doing so, will impact quality teaching and therefore quality learning since student learning is the product of what goes in classroom and campus [10].

III. Opportunities for Graduate Students

1. Rashtriya Uchchar Shiksha Abhiyan (RUSA)

RUSA is a centrally sponsored government scheme which was introduced in 2013 with a prime focus on quality learning environment in state universities [10]. Their objective is to attain access, equity and quality in education in universities for graduate students through planned development. The scheme foster creation of new academic institutes and expansion of already existing academic

institutes so that they are self reliant in terms of delivering quality education, Research and innovation, professional management and societal benefit. RUSA is based on performance based funding and incentivizing fighting fit institutions. It shall promote equity based development of institutions and improvement in teaching-learning quality and research by providing autonomy to Universities. This would certainly pave way for academic excellence for learners.

2. Centre of Excellence, Sponsorships, Scholarships etc

Many universities are promoting Centre of Excellence thus providing a platform for leveraging innovative ideas of students to a wider audience. Research and education bodies are tying up with academic institutions so that campuses are equipped with resources such as setting up Research labs, Incubator Chamber, academic affiliations etc. Research projects by students are funded and sponsored by government at national level and private and semi-private bodies both at national and international level. Students with higher grades are entitled for scholarships under various flagship schemes thus giving them opportunity of growth.

3. Open source Educational Resources

Education institutes are inclined to foster a learning environment of openness. Campus today are equipped with latest technologies and open source educational resources wherein students have access of Wifi, digital library etc to name a few. E- Learning courses for students are promoted to great extent. These facilities help student nurture their talent thus providing a platform for academic growth.

V. Proposed Solution

1. Standardization of Program Structure

Universities may design course/program structure in consonance with the standards laid down by Government Educational bodies and boards like UGC etc. Standardized Program structure supports some level of fairness by ensuring all students have access to a strategic and same curriculum which has been found satisfactory by representatives of their educational communities. The current system of curriculum adoption with highly invested and influential incumbents will support continuation of quality education and risk management during change. Standardized curriculum has the potential to encompass wide variety of formative educational instructional practices.

2. Teaching Training

Teacher Training plays a very vital role because students deserve a quality learning environment for their educational and professional growth. Mentoring and coaching from Teacher training academies such as NTTTR are critical to the successful development of a quality teacher. Induction programs create prospects for novice teachers to learn from best practices which reflects on their teaching methodology. Ongoing professional development keeps educators modern on novel research on student behavior on learning; up-and-coming technology for classroom, new curriculum resources, in the form of adoption of ICT based learning etc. The best practice is continuing, pragmatic, mutual, and associated to and derived from working with students and understanding their psychology and bent of mind.

3. Cross discipline learning model of interdisciplinary and Multidisciplinary research and study

The cross disciplinary learning model interdisciplinary and Multidisciplinary research and study capitalizes on blending vertical and network integration for a more elastic and hybrid approach. The aim is to make student Industry ready through its expansive and function oriented approach, provide a platform for nurturing Research interest other than core functional area are , enlarging

student's sensitivity and view through multi-disciplinary learning environment [11].

The learning model is centered on students having flexibility to choose a course across disciplines. For example, a student pursuing Bachelors of Arts in Economics can opt a course other than Economics but maybe a course in Social Science such as Political Science. So based on the research and academic interest of a student, he/she has a privilege and liberty of planning and designing individual's own degree. Now students have an opportunity for choice based learning. This could certainly provide a bench for cutting edge research and innovation fostering academic excellence in students. So the entire structure is divided into 3 parts which is domain specific and compulsory courses termed as **Core Functional Course**, **Supporting Functional course** which is although related to Core Functional course but is choice based. Last of all is **Domain Independent course** which is opted by student as per interest. This model may set a benchmark for holistic development of a student.

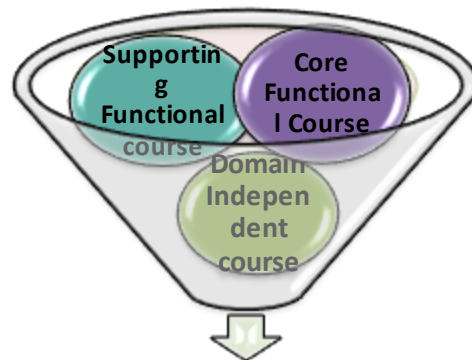


Figure. 3. Cross disciplinary academic framework

4. Setting up Centre for Research and Innovation

Research and Teaching for educators always go hand in – hand. Research should be promoted to a greater level at university level both by Faculty and Research scholars working under their guidance. For that matter best possible research environment should be ensured by the Universities in the form of infrastructural, technological and financial support. An autonomous Centre of Research and Innovation can be set up at university level that focus on only research and scholarly activities. For this Government funding schemes and private-public partnerships can be useful.

VI. Conclusion

A holistic learning environment is the most important deliverable of any academic framework for educating graduate students. Academic excellence can be achieved through manifesting innovation and research acumen in both students and faculty besides establishing quality learning environment. The state of art is that there are various challenges faced by graduate students of universities which include degree of Relevance-Impact, Inefficient Fidelity Learning Model, Vertical Integration of Education practice, Lack of Integrated curriculum Structure and Low rate of Faculty Development and Research Initiatives. But schemes like RUSA, scholarship and sponsorship schemes have given an opportunity to nurture young minds. Infrastructural and Technological support such as setting up of Smart classrooms, Centre of excellence and Open source education resources can be looked up as good source for cutting-edge research and innovation besides attaining academics brilliance. Capitalizing on these opportunities by Standardization of Course curriculum, Effective teacher training and adopting cross discipline learning model of interdisciplinary and Multidisciplinary research and study can be solution to the challenges faced by students in a learning environment.

VII. Future Scope

Network integration can be done in course structure. The proposed solutions can be evaluated on the relevance and impact corresponding to perspective of the learner as well as educators. Industry connect and academic collaborations can be the direction for future work. Certification systems can be promoted. Corporate and Research education can be enthused in curriculum such that graduating students are industry ready. Skill development can be an important aspect of Learning, hence the existing education system can be upgraded to facilitate skill development for learners and educationists for a better learning experience to achieve academic excellence.

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IX. References

- [1] H.Cai, Y.li, "Notice of Retraction The analysis and research on young teacher's engineering continuing education in the local engineering colleges,"IEEE-International Conference on Education and Information Technology ,vol.2,17-19th September,2010.
- [2] Anderson-Rowland ,Mc Cartney, Reyes, "Academic excellence for minority engineering students,"IEEE- Proceedings of Frontiers in Education Conference,vol.1,1-4th November,1995.
- [3] Shanableh, M. Omar, B. Younes, S. Barakat, " Perception on effective engineering,"IEEE- Annual Frontiers in Education Conference,vol.3,3-5th November,2003.
- [4] L. Szentirmai, L. Radács, "Improvement of academic and research standards of higher engineering education in light of bologna process" , IEEE- International Conference on Emerging eLearning Technologies & Applications,pp 381-387,8-9th November,2012.
- [5] Charles D. Kerns, " Striving for academic excellence in business education: An integrated framework," The business Renaissance Quarterly: Enhancing the quality of life at work.
- [6] X. Liang,Linda Collins, Sharon Kruse, Lisa Lenhart, " Information is not implementation: Fidelity to a statewide professional development plan", Academy of Educational Leadership Journal, Vol. 19, No. 3, 2015.
- [7] Robert Poter Lynch, Ian Somerville, " The shift from vertical to networked integration, part 1", NCBI, May,1996.
- [8] Lola B. Smith, C. Steven, Rik Berry, Darla Hunt, " An integrated IT curriculum model for advancing education in information technologies, learning, and performance", Information Technology, Learning, and Performance Journal, vol.22,no. 3,2007.
- [9] Yash R. Puri,Brenda Jocums, Saira Latif, " Enhancing business education using an integrated curriculum: The impact on student learning", Journal of the Academy of Business Education, Spring 2010.
- [10] Gudipati Vijayudu, " Higher Education and Skill Development for Faster Economic Growth", International Journal in Management and Social Science, vol. 4, issue. 5, May 2016.
- [11] Geet Sandhu, " Reforming Engineering Education for Innovation Research and Development to achieve Academic excellence, International Journal of Engineering Development and Research, vol. 4, issue. 2, 2016.