

Industry Expectations from Academia: An Indian Saga of Push-Pull Failure

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ABSTRACT

Industry and academia are expected to share a mutually enriching relationship where the output of one is input to other and vice versa. Industry not only provides placement opportunities but also acts as a friend, philosopher and guide to academia and finally industry depends on academia for solutions, training, ideas and innovations. Industry is expected to partner with academia right from the inception of the course, during the course delivery and also at quality check stage as recruiter and employer. Although there are great expectations from this relationship, somehow the results are not encouraging. There are complaints from both sides; lack of communication and cooperation is perceived to be the main reason. There is third angle to this and that is an accreditation agency. These agencies also capture this relationship; set criteria, monitors progress and measures outcomes. Everything seems to be perfectly in sync on paper but the same cannot be said to be working on ground as we are far away from the education ecosystem that has quality embedded into it. The paper is based on “FALTSO Model” conceived by researchers and is the culmination of three parallel researches with three different sets of questions to each of these stakeholders. The paper claims that both industry and accreditation agencies have failed either to pull or push the excellence but both have potential to transform the outcomes of the HE sector.

Keywords: FALTSO Model, III, OBE, Expectation Gap.

INTRODUCTION

Industry and academia are expected to share a mutually enriching relationship where the output of one is input to other and vice versa. Industry not only provides placement opportunities but also acts as a friend, philosopher and guide to academia and finally industry depends on academia for solutions, training, ideas and innovations. Industry is expected to partner with academia right from the inception of the course, during the course delivery and also at quality check stage as recruiter and employer. Strictly speaking academia comprises of people, activities, and institutions that are connected with education especially in colleges and universities. Although there are great expectations from this relationship, somehow the results are not encouraging. There are complaints from both sides; lack of communication and cooperation is perceived to be the main reason. There is third angle to this and that is an accreditation agency. These agencies also capture this relationship; set criteria, monitors progress and measures outcomes. Everything seems to be perfectly in sync on

paper but the same cannot be said to be working on ground as we are far away from the education ecosystem that has quality embedded into it. The role of the accreditation agency is expected to pull up the quality and how do they ensure this is a thing to explore. The outcome based education is the in thing now and the same is accepted by the accreditation agencies in India i.e. NBA and NAAC. Similarly the expectations from industry put pressure on academia to push their performance up.

STUDY OF EXISTING LITERATURE

Alphin *et al.* [1] suggested that the Global accreditation model would provide the momentum for a knowledge-oriented global community that provides access to students in developing countries, as well as traditional and non-traditional learners. The paper observe key forces shaping the revolution and globalization of higher education, international entities taking a global approach to quality assurance and accreditation, and key concepts in development and implementation of quality assurance at the global level.

Alva *et al.* [3] discusses opportunities, changes and challenges related to financing, equity of conditions at access into and during the course of studies, and career choice and advancement. The authors suggested strategies (including accreditation/reaccreditation) needed for fine tuning higher education to make it compatible with the needs of both the corporate world and the civil society. The paper analyses Global/local realities and expectations as a part of (human) development challenges and goals. The broader goal in this paper is to balance the objectives of knowledge-growth and knowledge-utilization that takes into accounts both the text and context of higher education.

This paper by Sinha *et al.* [5] identifies the noteworthy role played by various statutory bodies constituted and expanded by the Indian Government for the purpose of quality assurance and attainment of sustainable excellence in the Indian Higher Education (HE) system. Without accreditation, HE institutions have no legal entity to call themselves a University and award 'Degrees' which are not treated as valid for academic/employment purposes. This paper also highlights existing key issues of the accreditation process and vital points that need to be incorporated to generate insights about the future of accreditation.

Gandhi M.M. [7] attempts to develop an overview of approaches to quality by higher educational institutions around the world, in general, and in India, in particular. This paper highlights very recent initiatives in India pertaining to the mandatory assessment and accreditation with specific and analytical references and overview from the pending.

Wanous, John P. [8] -Monitored perceptions of organizational and job characteristics as individuals joined new organizations, a transition in status from outsider to newcomer to insider.

THE HIGHER EDUCATION (HE) MODEL

The Higher Education (HE) model emerging out of the above discussion and used in the current research is summarized as follows:

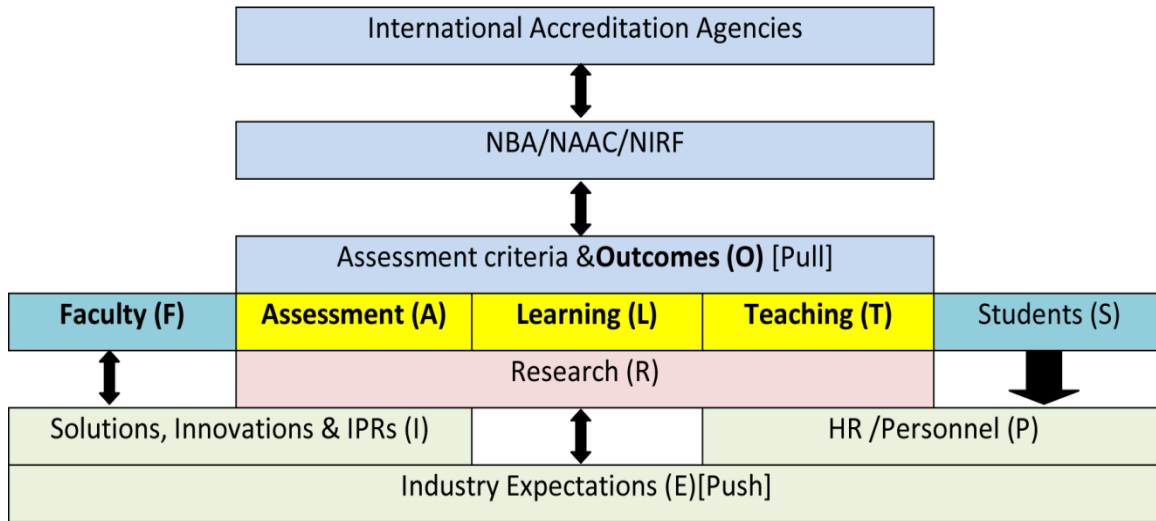


Fig. 1: HE Education Model as Perceived by the Researchers

This model referred above is based on observations of researchers and has following context.

- **International Accreditation Agencies:** Academic excellence Models from different parts of world like US, UK, UAE, Asia, and Australia were identified and a list of twenty two Academic Excellence Models was studied and coded using the letter ‘M’ and were represented by codes ranging from M1 to M22 as presented in Exhibit A-1. Most of these models are conceived and implemented by accreditation agencies of respective countries like NAAC and NBA of India. It is being observed that there is convergence on many criteria and divergence on very few criteria.
- **Assessment criteria & Outcomes (O):** Here the researchers have considered the NBA and NAAC models to check out how they perceive the industry expectation and capture these expectations in assessment, marking and grading. The input-process-output framework of NBA has its focus on outcome-based perspectives and criteria.
 - **Faculty (F):** Faculty is one of the key inputs and pillar of any HE institute. Faculty is expected to build up its unique expertise through teaching, research, extension and consultancy. Faculty members are also expected to be in consonance with the Vision, Mission & Objectives of institute (VMOs) and also with Graduate Attributes, Course Outcomes, Program Outcomes and Program education Outcomes.
 - **Students (S):** The standard and excellence of the program has its basis in the student intake and therefore one of the major concerns before institute is its student intake and intake process. This acts as the basic raw material in system. In most of the technical education institutes, capability and orientation of the students is a cause of concern.
 - **Assessment (A):** Assessment here refers to assessment of institution, program, and course and off course students. Quantitative assessment of qualitative outcomes is the real challenge. The efforts of the whole education process is right now revolves around the assessment tools, frequency and results. Marks have assumed more importance than learning. In most of the cases the assessment tools need to be tuned with the program

outcomes. Assessor is expected to have the knowledge and ability to follow Bloom's Taxonomy.

- *Teaching (T)*: The teacher or faculty member is expected to teach so that student learns. Mapping of course objectives with other objectives need to be ensured by Teacher. Pedagogy and Assessment should be innovative enough to bring in the interest and curiosity on the part of learner to learn that subject/course.
- *Learning (L)*: Learning is a process that contributes to attitude refinement, aptitude reorientation, Skill enhancement and knowledge repository. Role and capacity of the student is the key factor in learning. Learning is expected to bring in overall development of students.
- **Research (R)**: Research is the most debated process involving all stakeholders. Every teacher is expected to undertake research to add to the existing body of knowledge. Research insights are expected to be forwarded to industry for making commercially viable products and services and also brought back to class room to improve the learning experience of the students. Research is an important parameter which links academia to industry and has high weight in ranking.
- **Industry Expectations (E)**: Industry being one of the stakeholders has expectation from both the faculty and students. The expectations from students are clearer and easily identifiable but the expectations from faculty in terms of business solutions, IPRs and training are not that clear.
 - *Solutions, Innovations & IPRs (I)*: Industry expects academia to constantly engage in to research and development activities so that they get solutions and way outs to their current business / technical problems. Innovation by faculty or through students is also expected from faculty members
 - *HR/Personnel (P)*: Employable human resource is the need of the industry and the industry expects the HE institutes to supply them the “ready to deploy” manpower. Thus the expectation is on right attitude, right skills and right knowledge base.

Thus the basic model is a “FALTSO Model” but if the students don't perform (and the S becomes silent) the model becomes “FALTO Model”. If both faculty and students do not perform up to expectations the model truncates to “ALTO Model”. Most of the Indian HE institutes are operating as “ALTO Model”. The model assumes that research in most of the technical education institutions is superficial and lacks the thoroughness. It also assumes that Research if any should be carried only after the basic “FALTSO Model” is working effectively.

RESEARCH QUESTIONS, METHODS AND FINDINGS

The current study is the culmination of three researches targeting three different sets of questions. Since the researchers belong to B schools, management education perspective is adopted throughout the paper. However the respondents from technical education are referred to for all statistical data.

Question Set A – Industry Related Questions

- Who represents Industry?
- How industry conveys its expectations?

- Have one observed changes in these expectations over a period of time? Or are these expectations static?
- What are the expectations of Industry from faculty members and students?

Research Method followed: The existing literatures and survey reports were scanned to arrive at the industry expectation in terms of Attitudes, Skills and knowledge from newly hired management graduates. In order to cross check the industry expectations, the recruitment advertisements, one to one talks & feedbacks from recruiters, validation from Training and placement Officers was carried. The researchers moved ahead with the hypothesis that there is no significant difference between the industry expectations for newly hired engineer and a newly hired management graduate.

Findings

A1. There are multiple researches carried out on the topic Industry expectations from academia in India. A qualitative research on these researches has revealed that the industry expectations fall in three subsets viz. Attitude, Skills and Knowledge. There exists a GAP between, what industry expects and what is actually available in the prospective candidate

Table 1: Results of Qualitative Research on Industry Expectation-Reality Gaps

<i>Attitude</i>	<i>GAP</i>	<i>Skills</i>	<i>GAP</i>	<i>Knowledge</i>	<i>GAP</i>
Commitment to job	Very High	Listening Skills	Very High	Understanding Organizational processes	Very High
Self-discipline	Very High	Team Work	Very High	Understanding Consumer	High
Self-Starter	Very High	Conflict management	Very High	Understanding competition	High
Creativity	High	Analytical Skills	High	Understanding environment	High
Ethical Behavior	Moderate	Selling Skills	Moderate		
Willingness to learn	Moderate	Project mgmt. Skills	Moderate		
		Computation Skills	Moderate		

A2. The hypothesis that there is no significant difference between the expectations for management fresher and engineering fresher is statistically accepted.

A3. The industry accepted that the routine channel to convey their expectation i.e. through Training & Placement Officer (TPO) at the time of recruitment drive (Pre-placement talk) or by HR personnel as a part of interactive session during the semester is not effective. But they also claimed that their job is to sensitize only and academia need to take it further such that the industry expectations are realized.

A4. Surprisingly, the industry expectations have not changed over the years. Industry responses reveal that the changes over the years were in the domain of computing Skills and in understanding environment.

Question Set B – Academia related questions

- Who represents Academia?
- How academia receives expectations from industry?
- Who is responsible for recording, understanding and implementing the industry expectations?
- What should be the focal point of response - faculty members, students, Board of governance (BOG) or systems?
- How academia reacts to the NBA/NAAC/NIRF criteria and parameters?
- Have they understood the concept of Outcome Based system and can act upon it?

Research Method followed: A questionnaire was floated to faculty members to know the answers to above questions and to gauge their level of understanding of GA, POs, PEOs and COs. An effort was also made to check if they can map and ensure their understanding of objectives leading to attainment of outcomes. The cross check was initiated as pilot study revealed that only select steering committee members are aware of these concept and are in position to use them in their teaching, learning and assessment. Pilot Study also suggested that majority of the faculty is grossly ignorant about the OBE concept.

Findings

B1. Industry Institute Interaction cell (III) if available is thought responsible for recording, understanding industry expectations. If III is not functioning, the whole responsibility lies with the TPO. Implementation is joint responsibility of both TPO and faculty members. Academia accepted that they are not comfortable and proactive enough to cater to industry expectations on training and consultancy.

B2. Academia prompted that the level of proactively from industry is below average and the efforts being made are not sustained.

B3. Academia accepted that making the academia-industry relationship is a function of faculty outcomes in terms of research, training and consultancy.

B4. Academia accepted that the accreditation process is not treated as a process at their institute but it is treated as an event. This leads to sub optimum objective of scoring more criteria wise rather than bringing the subtle changes in the process itself. The system orientation is still missing and it still is quantitative number game with minimum qualitative impact.

B5. Academia accepted that there is an urgent need to go beyond “Reports-Indemnity-Photographs” (RIP) regime. Exercise for the sake of exercise is not going to yield much meaningful in long run.

B6. Academia was vertically divided on the issue of linking accreditation and Rankings to academic excellence. Accreditation process is expected to be a top down process and most of them were

unclear about their role. They also commented that the prime responsibility of quality enhancement through accreditation rests with the BOG.

B7. Most of the faculty members are ignorant about the outcome based system and hence resort to copying the COs, POs and PEOs from the NBA website or websites of premium institutes.

This creates the mismatch between their Vision, Mission and Objectives (VMOs) and other Outcomes and GAs too. The NAAC process is not yet fully outcome based.

B8. The results of the paired t-test make us accept the hypothesis that there is no significant difference between the ability of faculty from accredited institutions and non-accredited institution to draft, understand and attain the various outcomes. This raises serious doubts on the process of percolation of key accreditation concepts down to the last link.

Question Set C– Accreditation agency related questions]

- How industry expectations from academia are captured in NBA/NAAC parameters?
- Are the parameters and criteria set for capturing Industry expectation adequate?
- Is Outcome Based system really working in Indian HE sector?

Research Method followed: NBA and NAAC assessment modules for Management schools were scanned to know about the ways to capture industry expectations. A comparison with other international systems of accreditation was done to check the suitability and convergence of assessment parameters and metrics. The focus Group interviews of 15 NBA steering Committee/NAAC-IQAC members were conducted to know about the adequacy of these parameters. The questions were also asked to ascertain the effectivity of the OBE system in Indian context.

Findings

C1. Exhibit 1 talks about the importance the process of accreditation (Management Schools) lays on industry collaboration. Clearly we can see that III as being discussed in this paper are treated as non-vital but research and development is certainly treated vital.

Table 2: Frequency Occurrence of Different Criteria Factors in Different Models

<i>Sr. No.</i>	<i>Criteria Factors</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Cumulative Percentage</i>	<i>Classification</i>
1	Research, Development & International Efforts	24	45.28%	45.28%	66.00% Vital
2	Technical and vocational education and training programme	6	11.32%	56.60%	
3	Quality of process, product and service	5	9.43%	66.04%	
4	Interaction between Educational Institution and Industry	3	5.66%	71.70%	19.00% Essential

<i>Sr. No.</i>	<i>Criteria Factors</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Cumulative Percentage</i>	<i>Classification</i>
5	Recruiter review	3	5.66%	77.36%	15.00% Desirable
6	Innovations and Best Practices	2	3.77%	81.13%	
7	Technology Resources	2	3.77%	84.91%	
8	Ability to Think	1	1.89%	86.79%	
9	Career and Alumni services	1	1.89%	88.68%	
10	Graduate Employability	1	1.89%	90.57%	
11	Incoming and outgoing exchange students	1	1.89%	92.45%	
12	Industry income innovation	1	1.89%	94.34%	
13	Operations Focus	1	1.89%	96.23%	
14	Production of Quality Work	1	1.89%	98.11%	
15	Skill in Communication	1	1.89%	100.00%	
	Total	53	100.00%		

C2. The parameters and criteria set for capturing Industry expectation are considered adequate but the feedback mechanism guiding the effort was seen too difficult target in light of the poor cooperation from industry.

C3. The outcome based system is not yet deep rooted in HE sector. A lot need to be done before one comment on it. It is too premature to conclude any thing as there was no uniform trend obtained from the focus group respondents.

CONCLUDING REMARKS

Quality of Education depends on the effectiveness and adequacy of the Teaching and Learning Process. The value of current assessments like NBA, NAAC is undeniable. Although there are many benefits of accreditation, faculty and society at large has not acknowledged it yet. Research can prove to be an important link between industry and academia, but both push and pull need to go beyond decorative data and mere academic research. In its interaction with the academia, industry's expected time frames are immediate, and investment is directed towards efforts that promise result-oriented solutions. The costing frames are typically guided by a reluctance to invest in technology R&D which has either long term or unclear outcomes.

Vision and Mission statements are mostly afterthoughts coming out of positive reasoning and institutes need to with and for a purpose in tune with India's socio-economic considerations. Outcome based education is a nice thing but what decided the fate of outcomes is the orientation and objectives of the promoters and owners. Accreditation agency's role is seen more as critical & compulsory rather than being supportive. To exert push or pull one needs to be continuously engaged with the institute. This needs handholding and the resource base available at disposal is just inadequate. Clustering of institutes may be the solution. Thus in short both industry and accreditation agencies have failed either to pull or push the excellence but both have potential to

transform the outcomes of the HE sector. Looking at the life beyond RIP is just a small step towards a mutually respecting and mutually rewarding win-win-win relationship.

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ANNEXURE & EXHIBITS A-1: List of Selected Academic Excellence Models

<i>Model No.</i>	<i>Name of Academic Excellence Models</i>
M1	NBA-National Board of Accreditation
M2	NAAC-National Assessment and Accreditation Council
M3	Ramakrishna Bajaj Award
M4	European Quality Award
M5	Australian Quality Award
M6	ARWU-Academic Ranking of World Universities
M7	ABET-Accreditation Board for Engineering & Technology
M8	QS (Quacquarelli Symonds) Rankings for - WORLD UINVERSITY
M9	QS (Quacquarelli Symonds) Rankings for - ASIAN UINVERSITY
M10	QS (Quacquarelli Symonds) Rankings for – LATIN AMERICAN UINVERSITY
M11	QS (Quacquarelli Symonds) STARS
M12	HEEACT-Higher Education Evaluation and Accreditation Council of Taiwan
M13	THE-Times Higher Education Rankings
M14	Wisconsin’s Model Academic Standards
M15	The Institution of Engineers, Singapore Engineering Accreditation Board
M16	CRISIL Business School Grading
M17	The University of Montreal
M18	Commission for Academic Accreditation, Ministry of Higher Education and Scientific Research, United Arab Emirates
M19	Engineers Australia Accreditation Board-Accreditation Management System Education Programs At The Level Of Professional Engineer
M20	AACSB-The Association to Advance Collegiate Schools of Business
M21	EQUIS-European Quality Improvement System
M22	AMBA-The Association of MBAs

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