Inspecting the Answerability in Engineering Education

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ABSTRACT

Growing commercialization of Education in India has given rise to worries pertaining to the fact there is a lack of realization of responsibility shared by various educational institutes and the government while playing their part in imparting education. There exists a common belief that students in higher education aresolely responsible for the educational outcomes they receive which give the Education Institutes an easy escape from the responsibilities they have towards these students. This prevalence can be seen in a large number of engineering institutes which have sidelined all the regulatory norms and are still functioning, not in the true sense. These institutes have degraded the quality of knowledge and skills required by young students to function as professionals. The paper discusses how can these institutes be brought on track and made accountable for every action they undertake by discussing the concept of Accountability from scratch.It also dives into the existing knowledgeand discusses the concept of answerability in its true sense with all the stakeholders involved, and also attempts to chalk down the various roles these stakeholders have in thedissemination of knowledge. Also, the importance and need of an accountable Higher Education System with respect to Engineering Colleges have been discussed.

KEYWORDS: Accountability; Higher Education System; Stakeholders.

INTRODUCTION

The education system has continuously evolved with the passing years. Growing commercialization of Education in India has given rise to worries pertaining to the fact there is a lack of realization of responsibility shared by various educational institutes and the government while playing their part in imparting education (Bhattacharya et al, 2017). There exists a common belief that students in higher education are solely responsible for the educational outcomes they receive which give the Education Institutes an easy escape from the responsibilities they have towards these students. This prevalence can be seen in a large number of engineering institutes which have sidelined all the regulatory norms and are still functioning, not in the true sense. These institutes have degraded the quality of knowledge and skills required by young students to function as professionals.

In order to bring this education system on track what is needed is a framework which distributes the responsibility of educating young engineers in amanner that makes them not only employable but also highly competitive when launched in the professional realm. But some questions like what is this responsibility exactly? What is the need to have an accountable framework? What is the education system we are talking about and who all are in it? In other words, who are the stakeholders of this responsibility? What are the different roles and responsibilities these stakeholders have?An extensive review of theliterature has helped in answering these important questions and understand the concept of accountability and its importance in higher education.

The Emerging Need of Answerability

Accountability as a broad concept implies, that to what extent, parts of the education system, other than the students, consider themselves responsible for the learning outcomes of students. It also implies that how seriously this responsibility is understood and fulfilled in the best possible way by the various stakeholders. The entry of the student in the education system marks the initiation of the role played by the education system to mold that student for both short and long runs. The answer is that the education system consists of the various stakeholders who share the responsibility of the overall development of the students enrolled. There have been two perspectives on the concept of accountability (Poulson, 1998):

Firstly, the perspective that believes that accountability is a moral obligation internally felt by the people belonging to the various parts of the educational system. In other words, Self-Regulationemphasizing deliberate actions to fulfill one's responsibility.Secondly, the perspective that believes that accountability is something which imposed by external forces on the educational institute byways of Documentation, timely inspections and assessments etc. According to the No Child Left Behind (NCLB) Policy of USA, there are seven levels of accountability,they are (Ordu&Ordu, 2012): (1)The State (2)The School System (3)The School (4)Principal (5)Teachers (6)Parents (7)Students.

 These stakeholders are involved in two ways:

Intrinsic Stakeholders

They have a direct involvement in the education system and at some point have interacted with the students in some way. This interaction can be happening daily or occasionally or in some cases never but they work inside the boundaries of the schools and are the most immediate pillars of support for the students. These include the Teachers, the Principal, the Administrating Staff.
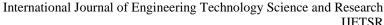
Extrinsic Stakeholders

They have indirect involvement in the education system and have no interaction with the students in any way. They stay outside the schools' boundaries but still do contribute and participate in the future building of the students. These stakeholders are interested in broader implications of education in the society, by attempting to give students a strong base for better future opportunities, which ultimately becomes a part of nation-building. These include Parents, Community, and the Government agencies.

All of these intrinsic and extrinsic stakeholders interact with each other in order to facilitate smooth functioning of the education system and these interactions also time and again serve as a reminder of the responsibility each of these stakeholders have against each other.

Criterion of an Accountable System in Higher Education

An accountable system is necessary to keep acontinuous focus on higher education improvement.The major concern is that a lot has been talked about making the school system accountable, but the need to make the higher education system accountable is something which has been completely ignored. Just because students entering the college are supposed to be mature enough to bear their own responsibility does not leave the system unanswerable to the student outcomes. Accountability is supposedly a mutual relationship where both the ends are responsible to each other and also support each others' growth. Therefore, higher education institutions in general and engineering institutes to be specific, need to realize the responsibility they have in shaping up the careers of the students and making these students industry ready. Proper guidelines need to be laid down that ensure that each part of this system works in a responsible direction.

Growing privatization and commercialization has already harmed the higher educational system. The most affected being the Engineering Colleges. Increase in the number of institutions offering engineering courseshas to lead to a surge in the number of engineering graduates. Not all these institutions provide up to the mark training and knowledge to the students thus leaving a whole lot of engineering graduates unemployed or underpaid. Moreover, the aspect of educational outcomes needs to be understood broadly in order to attempt to assess how accountable the institution or the system is? This implies not limiting to academics but also considering the behavioral quotient of students. The biggest agenda of the education

system has always been promoting overall development of a student. Therefore, it is not reasonable to measure the effect of the educational system by simply looking at the grades. The educational institution, of course, has a bigger role to play than that. Educational outcomes or grades measure only the academic aspect and a major chunk of other attributes remain unaddressed.

As stated earlier, accountability is a mutual relationship, although major beneficiary is the student what also needs to be kept in focus is the development of the other stakeholders also in the whole process. The whole idea of accountability is to avoid stagnation, with respect to the growth of the institution, personal growth of the stakeholders like the teachers, the principal, and the students.

Building Accountability in an Educational Institute

A sound accountable system can be built by taking into consideration some measures that make the various stakeholders sensitive towards their roles and promote a cohesive working environment. These measures can be chalked out as:

Setting up broader Education Goals

Setting up education goals which are more than mere good gradesof students. This includes setting up of goals for the long run also. Preparing the students for their near future in the industry so that they get better opportunities needs to be kept in mind to produce engineers that function at par.

Continuous Professional Development

It is important for those engaged in teaching learning to continuously update their knowledge base. Engage in researching literature to be aware of latest developments in their own fields and also in education. This ongoing process imparts confidence and integrity and supports the educational goals. In the two-way system of accountability, this notion empowers the givers of education and help in their own professional development.

Promoting transparency through technology

Use of available technology for credible reporting. Employing standardized instruments in order to assess performance on specific areas. Being well versed with the online portals to make communication more transparent and smooth. This helps the education providers to be directly in touch with the parents thus eliminating any confusion.
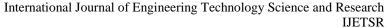
Shared Accountability

It is not just the teachers who hold a responsibility or the principal who can be held responsible. This responsibility stretches out to the realm of the school boundaries to the government agencies, parents and the administrative authorities also. All of them have a different role to play. All the time they had an impression of a minimal role to play but now they should be made aware of the importance of their functions and what could be the impact of not doing their duty seriously.

Feedback Mechanism

Power of feedback is not an unknown concept to the professionals in education. Most of the systems in the name of measuring feedback measure the aspects that can be measured easily. A paradigm shift is needed to measuring what is important to measure from measuring what is easy to measure. Another focus should be on collecting the feedback in its pure sense, without any external influence and also taking this feedback seriously and working in order to overcome the flaws indicated. A thought to be always kept in the back of the mind is the fact that no students are the same. They have different academic and psychological needs.

Passionate professional involvement

An intact accountability framework has always worked as a motivator for the different professionals involved to push themselves beyond the boundaries of what is expected out of them.

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THE FRAMEWORK OF ROLES

All of the parts of the education system mentioned earlier have specific roles to play.Edmonton 2005explained about the ways these roles need to be carried out as to who is accountable to whom can be understood in the unique manner. These roles and patterns have been described as:

Role of the Students

The basic role a student has to play is to assimilate all the knowledge being made available to them. To make maximum out of the teaching-learning experiences taking place around them. Sharing these experiences with others and learning from their peer experiences can also be considered as their obligation. Another bigger vision is to learn and use this learning to help build a more responsive community of learners.

Role of the Parents

 Parents have torealize their responsibility towards providing their children education. They also should keep themselves aware of all that is going in with the child's education. Parents tend to reduce their involvement in the child's education when they step into higher education. They should time and again take interest and demand transparency of the system.

Role of Teachers

Teachers are the most effective supportof the entireteaching-learning process. *The Australian School Improvement and Accountability Framework* has laid guidelines for teachers they need to follow in order to make them more responsive towards their work. It lays emphasis on 'quality teaching and purposeful pedagogy'; constructing a learning environment which is safe, caring and inclusive; functioning as an effective leader who encourages others to operate collaboratively and share skills; working in accordance with financial legislation and policies for strategic deployment of school resources; and lastly building effective relationships with all the other stakeholders.

Role of the Principal

The biggest role played by the Principal is to lead the teachers towards the set educational goals. It is the Principal's responsibility to ensure that the institution runs on sound pedagogical practices. Another important role is to chalk out the institute's vision and aims and plan the resources needed to accomplish them.
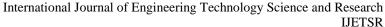
Role of the Community

The Community should realize the importance of higher education system and the contribution they can make towards the development of the whole community. The community timely needs to express what they expect from the education system and participate in development of the school. To be sensitive towards the social and economic factors that affect a student's achievement.

Role of the Government Agencies

They form the biggest and most effective external stakeholders. Their role is to provide sufficient and timely funding support to the education partners. To lay down effective and strict rules and policies so that this funding is used in the most responsible manner. Another important role which lacks attention in the Indian Education System is that the Government Agencies need to be more sensitive towards the needs and problems faced by the people directly involved in education dissemination. This need is majorly in terms of the reputation that needs to be assigned to this professional realm. Including them in decision making and respecting their profession because of their important roles can make a huge difference in this regard.

Conclusion

The need of the hour is to develop and put intopractice a framework which clearly identifies the roles and expectations from an individual working in the educational sector and not only the individual alone but also the institutions offering higher education. In turn, this will strengthen the professional bonds between the different parts of the education system. Not only this when effective regulations are imposed smooth functioning automatically happens. The hold on engineering colleges functioning can be tightened by following the accountability framework thereby producing efficient and quality workforce. Attention needs to

be given towards a sensitive feedback mechanism to continuously work on the flaws and fill in the gaps. The effect of this framework should be assessed by measuring not only the cognitive or conceptual learning that took place in the engineering students but also the noncognitive aspects of the educational outcomes. If taken in this sense it can be said to be a holistic approach towards making the system more accountable and also making the students more adaptive, sensation seeking and performing in accordance with the standards expected out of them.

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