

## A LOOK AT "TEACHING IN ENGINEERING EDUCATION" : AS A PROFESSION

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### *Synopsis*

*The job of a technical teacher is considered in the context of the term "Profession". Can technical teaching/ teaching in higher education, be termed as a profession? An attempt is made to find out what exactly is a profession and to answer the question whether technical teaching is a profession.*

*Views of two educationists, Myron Liberman (1956) and Dr. P. M. Sapre (2004) are presented and the main characteristics of a profession are worked out. In the light of this, it is shown that technical teaching cannot be granted the status of a profession.*

*If so, why should we go in a professional status and how this can be done, has been elaborated by citing two examples, one of a NGO— the IGIP i.e. the International Society of Engineering Education (Switzerland) and another of a State Government – State of South Dakota of U.S.A.*

*In conclusion, a question has been posed whether, we in India, operating in the field of Engineering Education, should go in for a professional status and if so how? The author had tried to answer this question.*

### **1. Introduction**

Is teaching a profession in the sense Medicine, Law and Chartered Accountancy & Company Secretary is considered to be? For a job to be called a profession, one who claims to belong to this profession has to fulfil three conditions (i) acquire minimum prescribed knowledge and skills in the concerned field, (ii) Complete pedagogical training and (iii) practice that under a senior colleague for a prescribed period. It is only then, he should be considered eligible to

register himself as a member of that professional body. Do we teachers fulfil these conditions? A student who gets his PhD or M.E to day, is appointed a university teacher the very next day. By acquiring the M.E or Ph. D, does he get any idea about the teaching profession, teaching and learning or curriculum development and its delivery, management of a class or evaluation of students? No, not at all. So how can we expect him to discharge his duty as a professional teacher?. There is always a complaint

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about lowering of standards and quality of Higher Education while no such complaints are made by the society about the law or the medicine. Hence, one has to seriously ask a question what a profession is and why teaching is not considered a profession.

It may be made clear here, that University teacher means any teacher- a Lecturer, Assistant Professor, a Reader or a Professor teaching in an affiliated college or University or, a teacher in Engineering Education institution.

## 2. What is meant by a profession?

Drawing on the early work of Myron Lieberman (1956), a profession in the context of university teaching, may be defined as having the following characteristic

- (a) *Offering a unique, definite, and essential social service. For teaching, this service is the facilitation of learning, though, how that is accomplished and what teachers (as well as parents and community members) believe needs to be learned, may vary, based on the beliefs, needs, and practices of each community and each individual.*
- (b) *An emphasis upon intellectual techniques in performing its service. While health and legal professions (for example) may use physical techniques in varying degrees, they also require complex intellectual operations, as does teaching.*
- (c) *A long period of specialized training. Just how long training is needed is debated within every profession.*
- (d) *A broad range of autonomy for both the individual practitioner and the occupational group as a whole. While this has arguably been reached within many full professions, it still is a primary point of contention between teachers and their governing bodies (which are state and local Boards of Education in the United States).*
- (e) *An acceptance by the practitioners of broad personal responsibility for judgments made and acts performed within the scope of professional autonomy. This is another tricky issue within education because the results of more humanistic teaching are often long-term, where the most important outcomes of teaching (such as the development of the learner's lifelong curiosity to learn) are often immeasurable as well as being influenced by many others than simply the teachers.*
- (f) *An organizational emphasis upon the service to be rendered, rather than economic gain for the occupational group. This is what distinguishes many professions from businesses that serve people, though it does not refer to personal motivations of any individual professional.*
- (g) *A comprehensive self-governing organization of practitioners. While teaching now has an untold number of national and local organizations to support its development, they are seldom self-governing of teaching itself (even if they govern their own*



organization), especially within the public domains of education.

- (h) *A code of ethics which has been clarified and interpreted at its ambiguous points by concrete cases. Returning to the NEA code of ethics, coming from an alternative education perspective, I find that statement is as vague and ambiguous as it can be. While both traditional and alternative educators might agree with the statement, what they're agreeing to would refer to quite different (and sometimes opposite) means and ends for education.*

This is what Liberman said in 1956. As the time passes on, conditions change. Sharing of experiences and discussion lead to modifications to our thinking and our ideas get refined. Let us see what a profession is considered by us in our times.

### 3. Another View on Profession.

Professor P. M. Sapre, Professor Emeritus, U.S.A. delivered a few lectures in 2004 at what is now known as NITTTR Bhopal (earlier known as TTTI Bhopal). One of his lectures was on teaching as a profession where he spells out his ideas on Teaching as profession at higher Education level. His ideas are elaborated below:—

- i. "Profess" in the word "Profession" implies that one professes i.e. he declares faith in something with basic conviction, commitment and set values as a result of continued and exhaustive pursuit in the particular field of knowledge
- ii. In a profession, service to the

society has to be given preference to the personal gain or profit. This, however, does not mean that services offered, are to be free.

- iii. In a profession, a practitioner enjoys autonomy in his professional matters; he has freedom to make decisions on his professional matters.
- iv. For every profession, it is necessary that it has an organisation whose main function is to preserve itself by self regulation without any pressure from any outside agency. The organisation tries to develop a sense of community feeling amongst its members, evolves a code of conduct for the members and builds up its own work culture. Another important task is to enrol the members strictly on the basis of the prescribed conditions laid down by it and maintain a register of the members, issue certificates to members, without such a certificate one is not allowed to practice this profession. Another important task it has to perform is to upgrade and extend the frontiers of the knowledge and skills pertaining to this profession.

### 4. Conditions necessary for a Profession

So, in conclusion, we can say that for a job/occupation to be granted the status of profession, conditions to be fulfilled will be -

- (a) A member must have acquired necessary special knowledge and skills required to practice



that profession;

- (b) must have undergone training and education of that field of activity;
- (c) must have practised that profession as a trainee under the guidance of an expert.

On fulfilling these conditions, he should get recognised by the concerned professional body and registered as its member which issues him/her a certificate to practise that profession. It is only with such a certificate, one is allowed to undertake to practice that profession. For this the professional organisation must have obtained necessary authority from the Government.

- (d) A professional organisation.

Against these conditions of a profession, if we test Medicine, Law, Chartered Accountancy or the Company secretary, the answer will be a big YES. What about Teaching?

### **5. Is teaching a Profession?**

A teacher has necessary knowledge base, his M. E. or PhD; condition-

(a) O. K. - Any training in pedagogy or in teaching and learning; instructional design and implementation, class management or evaluation of students, condition

(b) No, No, No. - Practice as a trainee -condition

(c) no. And the last condition

(d) any organisation who admits members and recognises him/her as a qualified teacher on the basis of the conditions laid down above No, No, No.

Technical teaching fulfils only one condition out of four. Then how can teaching be considered a profession? We are sorry to say that teaching at higher education, today, does not qualify itself for the professional status. It may at most be considered as a semi-profession..

### **6. Why we should go in for a profession?**

Why should we go in for the professional status? Why not be contented with the present status, i.e. a semi-profession.?

6.1 With only 6% of our population going in for Higher Education, we have on an approximate basis 10 lakhs of teachers in higher education. A majority of these have hardly any training for the teaching profession. And we know what quality of education we have today. But imagine, the scenario, when all these are properly trained? It will definitely make a difference to the quality of education. Hence the need for professionalisation .

6.2 Being a member of a profession, brings in a status and self esteem, which Doctors and Advocates enjoy, but the teachers do not; a few teachers may earn popularity and command respect from the students by dint of some professional characteristics they develop on their own..

6.3 A profession inculcates a sense of service to the society and helps develop a sense of commitment, whereas an occupation may not.

6.4 A Professional is also committed



to professional development, both individually and collectively.

Hence, we should go in for a full professional status and not be satisfied with the present semi-professional status.

### **7. Can teaching acquire the professional status and how?**

Professional status has been acquired and even been lost. When we became independent, Accountancy and Management were not considered as professions: but now, they are. Similarly teaching which partially fulfils some conditions, can try to fulfil the remaining conditions and acquire the professional status. Attempts are being made in Europe where teaching is on its way to acquire the professional status.

7.1 Efforts are on in Europe to elevate teaching in engineering to a professional status. The IGIP—International Society for Engineering Education—now based in Switzerland, has taken steps in this direction

The IGIP Register “ING-PAED” lists qualified engineering teachers with required education, training and experience and meeting the minimum standard laid down by IGIP. Those registered also have the right to be called “European Engineering Educators” and use the title “ING-PAED IGIP”. The IGIP formula for the title is;

Engineering Qualification

+

Engineering Education  
Qualification

+

Practical work/Experience in  
Engineering Education

7.2 It will be of interest to note that the Legislature of the State of South Dakota of U.S.A. declared teaching to be a profession. To quote the Govt Resolution— “It is declared to be in the interest of the state that the profession (teaching) be recognized and that the profession accept its responsibilities in the development and promotion of standards of ethics, conduct, performance, preparation, and practices. For the purpose of §§ 13-43-16 to 13-43-30, inclusive, the teaching profession includes those persons certificated by the secretary of the Department of Education as classroom teachers, administrators, and other education specialists employed in public, federal, and private schools.”

Thus, we have two examples; one where a private professional body and in the other a State Government of USA has tried to elevate teaching to a full professional level.

### ***Are these not enough to take off***

7.3. It will be interesting to note that MHRD, Govt of India, has made Induction Course mandatory for all have instructed all the four NITTTRs to start this work. With this, the second condition i.e. ( b ) will be met with. But what about the (c) and the ( d ) conditions? And also the contents of the Induction Course. This is a rather half-hearted measure. MHRD should decide to elevate teaching to its full professional status and take all

necessary steps in that direction.

## 8. Conclusion

What is done by the IGIP in respect of the Engineering Teachers is equally applicable to teachers of higher education. We wonder, when our Policy makers, Planners and Administrators

wake up to the necessity of elevating higher education teaching to a professional status, The earlier they realise, the better. After all we have before us, our national dream of "Developed India by 2020" and hence, this matter needs be considered with all urgency and speed.



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(Contd. from Page No. 3)

## General Apathy:

I am sorry to mention that it is observed that there is general apathy of the all concerned with engineering education—the institutions, the principals, the readers towards Quality, Quality journals and payment of subscriptions. This has been general observation of all those working in the field for enhancement of quality and excellence. People are happy to follow the routine and sameness and not ready to respond to anything other than this. We would welcome any reaction from our subscribers and readers, even if means criticism of our journal. But they have no time and no mind even for this.

If so, what will happen to our dream of *Developed India by 2020*? This situation is very dampening; but instead of getting disheartened, it is very necessary that we work with more zeal and enthusiasm and put in our effort vigorously and more forcefully. And I and my colleagues and determined to do this.

## About my colleagues

All our colleagues associated with

the journals or the foundation, are very able, competent, dedicated and devoted and proved their expertise in their long professional careers. As such, I have no doubt that we shall continue our march on the path of Quality and Excellence with added courage, commitment and confidence.

## And Beyond :

After completing the journey so far, what next? We have always to be in search of wider horizons and higher peaks to conquer. Hence, our next destination on this un-ending path of Quality and Excellence, will be to make our Journal, an e-Journal; and, not only this, but to elevate it to international level so that it becomes an International Journal on Engineering Education. This we plan to do by July 2007 when we will be publishing our 81<sup>st</sup> issue i.e. volume XXI No 1.

We seek the blessings of each and every one of you and your cooperation, collaboration and active involvement in our efforts.

