

## Impact of Teaching Methods in Teaching Entrepreneurship to Engineering Graduates



### Education

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### ABSTRACT

*Entrepreneurship is an area where the teaching community has to play a vital role As the European Commission (2008) pointed out there is a need for more interactive learning approaches where the teacher acts rather as a moderator than a traditional lecturer; where multi-disciplinary approaches to entrepreneurship teaching are adopted and where, among others, specific business skills and knowledge of how to start a company and run it are successfully transmitted. This paper is an attempt to know the better way of teaching entrepreneurship to engineering students who are future for inventions of new market with new products. It also asses the present teaching methods followed in teaching entrepreneurship and an attempt has made to give a teaching criteria which is made out from students feed back to teach entrepreneurship where students are encouraged to learn in order to put it into practice which is the final aim.*

### I. Introduction:

Teaching is a contract between teacher and student with distinct obligations and if the contract meets the career goals of the student than the task of the teacher in performing the contract is fruit full. Teaching entrepreneurship to engineering students is insisting the entrepreneurial skills into student which requires effective teaching methods. Ohisson in a seminal paper divided the discussion how to find effective tutoring principles into four

- Cognitive diagnosis(how to infer the students cognitive state)
- Subject matter analysis(how to represent subject matter to be delivered)
- Teaching tactics(what is the set of instructional actions to choose from)
- Teaching strategies (what is the most adequate teaching method regarding previous question)

By using these principle the teaching methods used teaching entrepreneurship has been examined in this paper.

Entrepreneurship aimed at sustainable economic development has received a great attention. Entrepreneurship which focuses on social causes is different from entrepreneurship which builds solution and look for problem. Teaching entrepreneurship is different as we have to make the engineering graduate to think technically first and then we have to insist entrepreneurial thought into him.

Engineering is finding solution to problem technically or solving the technical problems. Engineering has to bring new technology and new products and services to solve the societal needs and to meet the market requirement. It has to enhance the levels of technology in consideration with good to the society along with introducing new products and technology which improves employment and revenue to make the country stable to face the global

economic crisis. India is a fast developing country with growing social problems and economical problems which created an emergency to teach entrepreneurship so has to create employment and involve people in meeting the needs and revenue generation.

### II. Introducing entrepreneurship development to engineering students

In India million engineering graduates are struggling to get

placed in an extremely challenging market. Andhra Pradesh is one among the state which is having more than 600 engineering colleges which are producing approximately 1.5 lacks of engineering graduates every year. To convert engineers into entrepreneurs SR group of institutions has introduced entrepreneurship development as a course with an aim of developing entrepreneurial thought among the graduates as a part of it has established a Centre for Entrepreneurship Development.

#### 1.1Center for Entrepreneurship Development aims and objectives

It aims at encouraging graduates to engage in entrepreneurial mind set activities and encourages them to chose entrepreneurship as their career along with bringing out the entrepreneurial skills among them in this process it is conducting weekly innovative challenge, workshops and business idea contests.

#### 1.2Course of entrepreneurship development

A course entrepreneurship development has been introduced into curriculum which introduces entrepreneurship concept along with developing business plan, raising the capital, production and operations management, marketing and legal legislations in order to make them know basic issues to set up an entrepreneurship.

### III. Teaching methods used to teach entrepreneurship with reference to SR Institutions

Different teaching methods are used to insist entrepreneurial mind set to engineering students in SR institutions this study aims at the impact and proportion of use of teaching methods in teaching entrepreneurship.

#### 2.1 Different teaching methods are used to teach entrepreneurship in SR Institutions

**2.1(a) Classroom teaching:** it is a traditional approach where students listen to the teacher by taking the notes where content is covered rather than listening it covers the curriculum and it is a teacher centered approach which gives a less thought to the student in learning. Students were given a questionnaire and asked them their opinion 68%of them says it gives them theoretical knowledge and 12% said it will help to write the exam 9% said it will help them to know more new things and 11% said it will not help them in practical implementation

**2.1(b) case study:** a case study is taken and students are asked to make decision. This will help the students to know

multiple solutions to a single problem, when students were asked about this method 72% opined that it gives opportunity to analyze the decision of different people which makes them to think deeply to identify best solution, 19% said it will give real time experience and 9% said it will help them to understand the concept.

**2.1(c) business plan:** writing a business plan to the engineering students has been a problem. 12% of students said it is a clear picture of what they are going to do and 59% of students opined that it is difficult for them to estimate the financial requirement and 17% viewed that it is not necessary to give a preplan and 12% said it brings out entrepreneurial skills.

**2.1(d) workshops:** 81% of them have opined that workshops will give them practical experience and 13% has said it will add to the existing theoretical knowledge and 6% said it will help them to update the entrepreneurial skills

**2.1(e) guest lectures:** 72% has said that guest lectures will give the known information in different ways and 28% said it will increase knowledge

**2.1(f) assignments:** 51% of them said that they can express themselves as entrepreneurs and 23% of them had said that it will improve their confidence and 19% said that it will explore their ability and 6% of them said it will help to score marks.

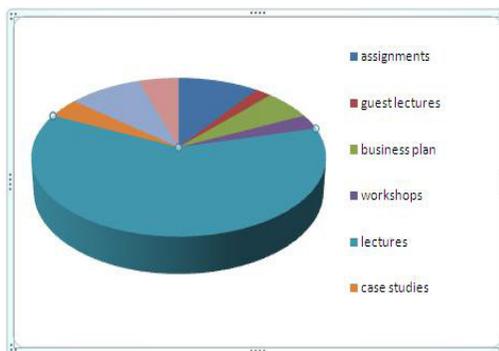
**2.1(g) success full entrepreneur's role play:** students have taken part very actively and 81% of them had said that they have learned new things about entrepreneurship and 16% has said that it provided inspiration and motivation and 3% said that it was practical experience.

**2.1(h) business plan contests:** weekly innovative idea contest has been held at SR institutions and 63% of them said that it will make them to think newly and 21% said that it will help to express their ideas and make them to improve the ideas and 16% said that it will make them to assess the competition and helps them to learn about the environment.

**IV. Percentage of teaching entrepreneurship methods used by faculty at SR Institutions**

**Table 1**

Sl.No	Teaching method	Percentage of usage in teaching
1	Lecture	61%
2	Case studies	4%
3	Business plan	6%
4	Work shops	3%
5	Guest lectures	2%
6	assignments	10%
7	Successful entrepreneurs role play	9%
8	Business plan contests	5%



**Figure 1 Diagram representing teaching methods used in the academic year 2012-13 in percentages**

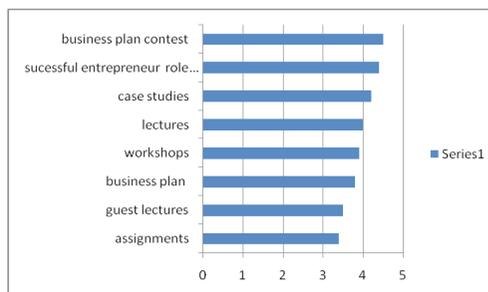
**V. Students ranking for teaching methods used**

The following observations are made from the feedback of students collected through a constructive questionnaire

- Out of the respondent's idea generation contests which has topped the ranking table with 4.5 average was rated high and opined that it will help them to generate an idea and develop it in the contest along with sharing many new ideas of others.
- Successful entrepreneur role play was ranked next with an opinion that it motivates, gives real time experience of starting up a venture and developing it by overcoming the real time problems which the entrepreneurs has faced
- Case studies was ranked next with an opinion that it will improve their problem solving skills along with decision making ability based on SWOT analysis and impact of the decision made which gives them practical experience by suggesting solutions to the problems.
- Class room teaching was ranked next and opined that it gives them a strong theoretical knowledge of the subject
- Business plan, workshops, guest lectures and assignments has followed the ranking table with similar opinion that it improves their knowledge

**Table 2 ranking of teaching methods**

Sl.no	Teaching method	Ranking
1	Idea generation contests	4.5
2	Successful entrepreneur role playing	4.3
3	Case studies	4.2
4	lecture	4.0
5	Business plan	3.9
6	Work shops	3.8
7	Guests lectures	3.5
8	Assignments	3.2



**Figure 2 Diagram representing students preferred teaching methods in ranking**

## VI. Conclusion

Teaching Entrepreneurship for engineering students is a challenge as their state of mind set is towards employment rather than an entrepreneur. The assumption of risk is high among these people when asked them to think about entrepreneurship. More ever most of them are with a mindset that they can be paid high if they join organization as employee rather than of earning less by starting up a venture. Moreover they are also in a state that joining a job doesn't require investment where as entrepreneurship does. After receiving the feedback it is suggested to teach entrepreneurship development to the students by using the teaching methods which make them to understand the concept along with providing them experience. Teaching methods which expose them towards financial and emotional risk has to be used in high proportion (teaching tactics and teaching strategies) such as role plays, business plan and case studies. Teacher centered approach like class room lectures which give theoretical concept has to be minimized (subject matter) as the students opined that lectures are covering over 64%of teaching methodology which is being used is not so necessary.

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