

# An Innovative Experiment in Business Education

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## KEY WORDS:

Simulation, Business  
Education

**Abstract:** It is often said that the students learn more by doing than listening. Therefore, there is a need for inventing creative experiments in which will encourage student participation. This research is focused on developing and implementing an innovative real life simulation experiment for imparting business education.

In this experiment, the participants from different enterprises are given a task of manufacturing and marketing name tags for an international convention. Each enterprise is required to creatively design the product and fix its competitive price. The most creative and economic product is selected by the convention committee.

It is concluded that this innovative experiment helps in learning various skills required for business such as : Communication skills, Presentation skills, Analytical skills, Reasoning ability, Research skills, Entrepreneurship skills, Imagination & Creativity Artistic skills, Management skills, Quality of timeliness, Accounting skills, Social Responsibility, Group dynamics, etc.

## Introduction :

It is often said that the students learn more by doing than listening. Therefore, there is a need for inventing creative experiments in which will encourage student participation. This research is focused on developing and implementing an innovative real life simulation experiment for imparting business education.

This research paper studies the following aspects:

1. The advantages and limitations of the present teaching methodologies for teaching subject of Cost and Works Accounting to the under-graduate students
2. It narrates the nature of the innovative experiment conducted by the researchers which was conducted during the three consecutive years for three different batches of T.Y.B.Com. students.
3. It gives the observations on the happenings during the experiment,
4. It states the experiences of the student who had participated in the experiment
5. It narrates the skills gained by the participants of this experiment.
6. The whole exercise is aimed at bringing about an attitudinal change in the mind set of under graduate students who have opted for Cost and Works Accounting subject and who may take

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costing as a career.

## Teaching 'Costing' in the Classroom:

According to the syllabi of Bachelor of Commerce degree course of University of Pune, Cost and Works Accounting is an optional subject for S.Y.B.Com. and T.Y.B.Com. level this paper gets divided into two papers. In S.Y.B.Com. the students learn the basics of costing and in the T.Y.B.Com. level, they learn the techniques and methods of costing. In both these years the students look at this subject as a scoring subject and aim at scoring maximum marks.

This subject has practical assignments consisting of six practicals which are awarded marks out of 20. It is expected by the University of Pune that the students will gain practical knowledge while completing these assignments. However, when enquired about the approach of students towards practical assignments, Mr. Umesh Kulkarni who is a Senior Teacher in Costing, Symbiosis College of Arts & Commerce, said, "Only 20% students complete the practicals as per expectations and the remaining 80% students complete them just as a formality. Actually the practicals were introduced with an intention to teach the hands-on skills required for employability." So the researchers have observed that there is wide gap between the theory and practice of costing.

## Limitations in Teaching Costing in a Classroom:

In the practical life, the students need to apply a lot of skills of head and heart such as communication skills, analytical skills, reasoning ability, research skills, entrepreneurial skills, etc. The psychologists have proven this fact, that the students learn very little out of what they listen and they learn more out of what they actually do. In the classroom, lecture method is used for teaching. Naturally the learning is limited.

The researchers have taught the subject of Cost and Works

Accounting for several years. They have written text books on this subject and have participated in developing learning material by using audiovisual equipments. So they know the limitations of classroom teaching. These limitations are:

1. The syllabus is vast and therefore, the teachers have to utilize the lecture time fully for teaching the syllabus with all its minute details.
2. The teacher gets only 96 lectures in the year to complete the syllabus.
3. The subject of Costing at S.Y.B.Com. and at T.Y.B.Com, has total 3 papers. If we assume that there are 130 students per paper and one teacher to teach these papers, the student teacher ratio becomes 1: 390.
4. The students are not exposed to the practical realities of industries. So creating an industrial environment and motivating the students to participate in this training programme is a big event and even if it is organised, it cannot be organised frequently

### **An Innovative Experiment in Business Education :**

The researchers have taught this subject for several years. They have written text books and have also developed audiovisual learning materials for the benefit of students. All these efforts were taken by the researcher so as to overcome the limitations of classroom teaching.

As a part of such efforts, the researchers have made innovative developments in a management game in Cost and Works Accounting. The noticeable features of this management game are given below:

1. It is an innovative management game specifically designed for undergraduate students.
2. This management game helps minimising the gap between theory and practice by developing a replica of industrial environment in a class room.
3. This game helps the students understand the practical realities that one has to face while ascertaining cost of a product.
4. This management game aims at brings about an attitudinal change in his mind set of the students towards looking at costing and pricing decisions.

### **The Game**

1. In this game the students are divided in groups, each group represents a separate business organisation.
2. Each group is expected to give quotations for getting an order from an event management company to supply 10 name tags for delegates to an international convention.
3. Each group is given an initial capital of Rs.80.
4. The mock bank will give them additional capital by way of loan of 10% per 10 minutes of utilisation.
5. Each group must purchase stationery from the mock stationery shop and should not use their own stationery items.
6. There are three types of resources available in the stationery shop.

7. They pay transportation charges Rs.10 to the mock transporters for traveling to the stationery shop and for transporting the material from the stationery shop to their mock factory premises.

8. The details of available resources and their respective rates are given in table 1.

### **The participants were given the following instructions :**

1. The participating teams will have to make their own creative design of the name tag regarding its size, way of writing delegate names, way of attaching to dress.
2. The teams have to make their own purchase order for consumables, capital resources and make the necessary purchases from the "store department"
3. The team leaders should keep track of time that each team member spends on the making of the name tags. This time is used while calculating the wages to be paid to each member-worker. The teams may use the human resource time sheet provided to them for this purpose.
4. After making their name tags from the resources, the teams are required to calculate the average cost per unit. For this purpose the students were given the cost sheet as a guideline.
5. After the preparation, the group leader must lead the discussion in his respective group. The leaders can discuss on issues such as what is the cost per tag manufactured by your organisation? Were you able to meet all costs within the initial capital you got? What will be selling price per tag you will fix? etc. After completion of the activity, each group leader was requested to make the presentations and share its main discussion points, with the rest of the class.

### **Actual Implementation:**

The researchers have been implementing this management game since last three years for three different batches. This research paper is based on the observations of the participants of these three teams. In the month of July every year, the researchers informed the students about "Management Game Business Education. However, the details of the game were kept secret. Interested students were asked to enroll for the game on first come first basis. Groups of students were formed for playing the game, operating the stationery shop and bank. The students were informed about the rules of the game. They were also shown a film made by researchers on "Elements of Costing" to revise the basic concepts of costing.

### **Feedback taken before the experiment:**

The questions and the summary of the selected answers given by the students are given below:

#### **1. What is cost ascertainment?**

1. Cost ascertainment means selecting a price for any product.
2. Cost ascertainment is assumed price.
3. It is finalising a cost unit and allocating and apportioning it to a suitable cost centre.

**Table 1 : Available Resources and their Respective Rates**

Types of resources	Particulars	Rate in Rupees
Consumable resources (Consumable resources once sold cannot be returned)	Chart paper (30 cms X 30 cms) Safety pins Plastic tag-jackets (9 cms X 6 cms) Ribbons	Rs. 5 per sheet  Rs.10 for 10 pins Rs.2 per jacket  Rs.5 per piece
Capital resources	Scissors Felt pen Pencil Ruler	Rs. 10 for 10 minutes of useage or in multiples Rs.5 per pen for 10minutes of use or multiples Rs.5 per pencil for 10 minutes of use Rs.5 per ruler for 10 minutes of use or multiples
Human Resources	HR will he selected from your own team members.	Payment of wages @Rs.5 for every 10 minutes that each person works or multiples

4. It refers to search of the actual cost with regards to various centers, departments referring to the past data.
5. It is the evaluation of the total cost by way of preparing cost sheet.

**2. What is cost reduction?**

6. Cost reduction means decreasing the production cost.
7. It is to controlling variable costs in a short run.
8. It is the reduction in the overhead cost.

**3. Which factors would you consider before fixing the price of a product?**

Demand, Usage, Availability, Direct indirect cost, Quality of product, Reasonable profit etc.

After filling the questionnaire, the students were divided into groups as mentioned earlier.

They were given all the instruction and blank specimen forms of the purchase order, time sheet and cost sheet.

**Observations of the Researchers:**

1. All the groups prepared innovative and creative designs of their name tags.
2. Some teams prepared the estimated cost sheets and worked as per the budget.
3. Some of them formed departments within the team to save the cost.
4. Some of them rented the resources to the other teams at the last moment to cut the rent cost.
5. The team which got Rs. 5 extra, promptly returned it and we recognised their honesty by giving them a small incentive of chocolates.
6. While making the final presentations students used a lot of creativity. Some of them made nice charts.
7. Two groups also showed the maturity of donating some part of their profit for welfare of HIV infected victims.
8. One group made an Eco-friendly Product.

**Feedback Taken After the Experiment:**

After completion of the game, the students were asked to answer the same questions which were asked to them before playing this game. This was done with an intention to find out the value addition made by this game. The answers are summarised below:

**1 What is cost ascertainment?**

1. The cost ascertainment process begins with designing of product.
2. A change in the design of a product leads to a change in the cost of the product.
3. Cost ascertainment is the process of finding the direct and indirect cost incurred for manufacturing a product.

**2 What is cost reduction?**

1. Cost reduction is the complex process of identifying wastages of resources and taking policy actions to eliminate them.
2. Cost reduction is a process of reducing cost without compromising the quality of the output.
3. Cost reduction is tailoring the product as per requirements of the customers by developing creative and alternate designs of the products which are economical to produce.

**3 Which factors would you consider before fixing the price of a product?**

1. The first and the foremost factor is the design of the product.
2. Cost of material
3. Cost of labour
4. Cost of packing and decorative articles such as coloured ribbons, plastic jackets etc. used for producing the product
5. Transportation cost
6. Cost of running and operating of the purchase and stores department.
7. Rate of interest on loan and period of loan taken.





Groups were formed



Students planning their strategy



Transactions with bankers



Purchase of materials



Group presentations



Actual production of tags



Winner group



Specimen of final product



8. Price that may be charged by the competitors.
9. Profit margin.
10. Future expansion plans of the organisation

**In addition to the above answers, the students also made the following comments:**

1. This was an enterprising experience for us. We learned how product design and costing go hand in hand.
2. Problems that we solve in the class give a very limited idea. However this game gave us a real time business situation experience.
3. Concepts of costing became clearer to us than classroom teaching
4. We also learned about management principles like planning, organising, communication, co-ordination, leadership etc.
5. We learned importance of time by meeting of deadlines.
6. This game also tested our analytical and reasoning abilities.

7. Playing the game was an interesting experience as it gave a lot of scope to our creativity and imaginations.
8. Students who worked as shopkeepers learned the principles of store keeping and the bankers also learned about banking.

**Conclusions:**

It is observed that this management game has not only helped in making some quantitative improvements in the personality of the participants but has also made some unquantifiable improvements. These improvements will certainly help them in Skill Development for enhancing the employability of Arts and Commerce Students.

**Table 2 : Skill Development**

No.	Skill required for business	Skills gained through learning by doing
1	Analytical skills	After knowing the material available, their corresponding prices, and the duration for which they can be used and the time available at their disposal, the students have to think analytically and evaluate different designs and proposals that are suggested by the group members. This develops their analytical thinking ability.
2	Research skills	The students have to explore the various alternate uses of the available material and develop a name tag which will be unique and of reasonable price.
3	Imagination & Creativity	Within the limited material, labour and financial resources, the students are supposed to imagine and create such a name tag that will be attractive, that is easy to wear,
4	Management skills	The students are supposed to plan, organise, coordinate, motivate and control the performance of the team members. This develops their management skills.
5	Entrepreneurship skills	Risk taking is the main ability of an entrepreneur. In this game the students are supposed to take risk and implement the project without any fear of failure.
6	Quality of timeliness	This game has to be played within duration of 30 minutes. This develops their timeliness.
7	Group dynamics	The students learn how the common objectives are achieved through and with the help of a group of persons. So, they learn the basics of group dynamics which is an important aspect that the students must learn for getting employment.
8	Communication skills	The students were supposed to listen to the instructions carefully, follow them meticulously, pass them on the spirit of the text of the instruction to the colleagues, and communicate to the storekeeper, bank officers and to the competitors effectively.

**Opinion Survey:**

The researchers communicated the finding of this research to teachers of the subject of Cost and Works Accounting. They were requested to state whether they will be interested to implement this pedagogical experiment with or without any improvements in their colleges.

The senior faculty members who were contacted for an opinion survey said that they will sincerely and strongly like to implement this Innovative Game in Business Education without any modifications in their respective colleges. The names of these faculty members are:

1. Dr. Sanjay Kandalgaonkar, Principal, Chintamanrao College of Commerce, Sangli
2. Dr. Dongare Reader and Head of the Department of Commerce, Baburaoji Gholap College of Commerce, and Member of Board of Studies in Accountancy and Costing, University of Pune.

3. Dr. Deepika Chhadha, Reader and Head, Department of Costing, Auditing and Income-tax, Saint Mira College of Commerce, Pune.
4. Mrs. Sharayu Bhakare, Senior Lecturer in Commerce, Modern College of Arts Commerce and Science, Ganeshkhind, Pune.

One of the respondents, Mrs. Tessy Thadathil, Senior Teacher in Cost and Works Accounting in Symbiosis College of Arts and Commerce who was present as an observer of this innovative experiment in business education said, "Similar to the group of manufactures, there should also be groups of customers. The customers will dictate the price at which they are ready to buy the name tags. Let there be negotiations between the manufacturers and customers. This will help the students to understand another dimension of business education." The researchers decided to incorporate this suggestion while conducting this game for the next batch of students.

**Annexure 1  
Cost Sheet**

Number of usable tags manufactured \_\_\_\_\_

Item	Rs.	Cost per Tag Rs.
Cost of consumable resources		
Sub total of consumable costs		(A)
Cost of capital resources		
Subtotal of capital resources		(B)
Cost of human resources		
Subtotal of HR cost		(C)
Total cost (D) =- (A + B+C)		
Profit per tag (F) = (E) – (D)		
Selling price per tag (E)		

**Annexure 2**  
**Human resources time table**

Sr. No.	Name of employee	Work done	Time			Wages		
			Started	Completed	Total time taken	Wages @ Rs.5 per 10 minutes	Total Wages paid per employee	
Total wages paid for all employees								

**Annexure 3**  
**Purchase Order**

GROUP NAME \_\_\_\_\_

**Annexure 4**  
**Activity**

Question for discussion

1. What is the cost per name tag manufactured by your group
2. Were you able to meet all costs within the initial capital you got?
3. What will be the selling price per tag you will like to fix?
4. Do you think this is a reasonable price customers may like to pay?
5. Where does your cost per tag and selling price per tag rank as compared with that of other groups?
6. If you were to do this exercise again, what precautions you will take to reduce the cost per tag?
  - a. Improvement in design
  - b. Economy in purchase of consumable materials
  - c. Economy in hiring capital resources
  - d. Proper work planning for human resources
  - e. Reduction of wastage
  - f. Other precautions if any.
7. After completing the activity each group should present and share it's main discussion points with the rest of the class.