

# Challenges of Inclusion of ERP in B-School Curriculum: A Study from the B-Schools Student's Perspectives of Kolkata, India

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## Abstract

*Enterprise Resource Planning (ERP) has become a strategic tool to facilitate the business performance and efficiency across the globe. India as an emerging economic power from Asia has also witnessed large scale integration of business processes through ERP implementation and immensely benefitted from such initiatives. However, it has been found that very limited numbers of B-schools are conducting ERP training for the students of business management. Still the acceptance of ERP as a learnable discipline with regular business management curriculum has remained a distant dream in most of the B-schools across India. The present research has attempted to understand the dilemma of the students pursuing business management education in selected B-schools of Kolkata, the state capital of West Bengal and also a popular hub of business management education in eastern India in specific and in India in general. A total number of 660 students randomly chosen from six premier business schools of Kolkata have been surveyed through structured questionnaire. The responses have been analysed through standard statistical processes and hypotheses formulated in course of research have also been tested. The result indicates lack of knowledge about the course content of ERP among students, though the significance of ERP for career facilitation has been found to be widely accepted.*

**Keywords:** Enterprise Resource Planning, B-school curriculum, Challenge, career facilitation, lack of knowledge

## 1. Introduction

Enterprise Resource Planning (ERP) is the facilitator of long term strategy of the company to incorporate all resources of the enterprise into an automated and integrated system. The ERP system facilitates almost every department of an organization such as HRM, marketing and administrative department, production, operations and financial departments. ERP system enables the organizations to assemble relevant data into a single data store [1]. Several companies are offering hosted or 'cloud' ERP systems to manage and decline the huge technical costs. Advance Planning and Scheduling (APS), Business Intelligence (BI) and Supply Chain management are the add-on services, provided on the ERP products. Now, the ERP makers are also providing Customer Relationship Management and Product Life Cycle Management (PLM) tools in the software. Different business schools in India, including many located in Kolkata have employed ERP as a course in the curriculum in order to train students for the future. They have deployed specially trained IT professionals to communicate and teach the key perspectives of ERP. However, in spite of that, penetration of such tendencies to teach ERP across majority of B-schools in Kolkata has been found to be very much limited.

## 2. Review of Literature

According to a study on the Canadian manufacturing organizations [2], it has been found that since mid and late 1990s, researchers and business people felt strong need to replace the traditional systems which has low affectivity and efficiency. The study also observed that handling the pressure created by the presence of competitors, fulfilling all requirements of the business process at a faster speed, integration between different units, and standardization of the organization in different areas in adopting are some of the other major reasons for growing popularity of ERP in the researched organizations. However, the requirements and reasons for every organization to implement Enterprise Resource Planning system have been found to be different based on their unique and distinctive operation processes. Another study [3] has highlighted that in Korea, the main objectives of implementation of Enterprise Resource Planning system has always been improving customer services, replacement of the legacy systems, execution of ethical business practices, along with standardization of business processes, with availability of and accurate and authentic information through a centralized database. A study on thirty major engineering and automobile component manufacturing organizations located across European Union has shown that replacement of any damaged part could be shipped in three days, and its part inventory could be priced in 5 minutes, while, in traditional system damaged part replacement might require 22 days and pricing of the inventory require five days [4].

In all the studies regarding Enterprise Resource Planning systems, researchers have focused on two chief issues, the degree of adoption of ERP system by the business schools and institutions, and the efficiency of the teaching faculty of these business schools to run this course in their curriculum. A study on the advanced management education system in UK, the researchers have found that most of the B-schools have shown high level of scepticism in adopting the ERP as the part of their curriculum. The same study has shown that only 23% of the private business schools of London used to teach ERP as the part of their regular curriculum, though most of the authorities accepted the growing importance of the same [5]. A detailed study in Indian context was conducted on 94 private business schools in central and western part of India. The study also revealed that most of the institutions were confused about including the ERP systems into their curriculum and are still busy researching and inquiring about it in detail. According to another research findings, most of the B-schools were in dilemma about the investment and return on investment from incorporation of ERP in the course curriculum [6]. However, different other reasons have been identified by different researchers behind low penetration of ERP incorporation in B-school course across the globe such as difficulty to adopt with fast changing 'life cycle of ERP implementation' [7], lack of trained faculty and educator [8] etc. Finally, many other researchers have emphasised on operational difficulties [9] difficulty in getting adequate faculties or trainers of the faculties in implementing such initiatives [10] in most of the B-schools.

## 3. Research Objectives

Kolkata is not only the most important city of eastern India, but also has emerged as the important centre of business education with the presence of many universities and institutes offering regular and executive programmes on business management. As on December 2012, total number of 19000 students from different parts of India, mainly from the east and north east states of India were studying post-graduate and undergraduate programmes in different universities, colleges and institutes in Kolkata alone. However, very few of these B-schools have formally introduced ERP in their course curriculum [11].

The present research intends:

- To realize the dilemma while introducing ERP in the business school curriculum, from the student perspectives.
- To suggest suitable recommendations in solving the ERP issues.
- To evaluate the student's perception about the significance of ERP as the facilitator for their career.

#### 4. Hypothesis formulation

Based on the above research objectives, following hypotheses have been framed.

- Majority of the B-school students are aware of importance of ERP as a career facilitating tool.
- Majority of the B-School students accept that ERP should be added in their regular business curriculum in the early semesters.
- Majority of the B-School students accept that ERP is an easier course in comparison to other courses.
- Majority of the B-School students accept that ERP in general is difficult to understand.
- Majority of the B-School students are fully aware of the ERP course content.
- Majority of the B-School students prefer inclusion of ERP at the late semesters of the study program.
- Majority of the B-School students believe that teaching style should be same for ERP like the traditional courses.
- Majority of the B-School students believe that sufficient information on ERP is available on internet.
- Majority of the B-School students believe that sufficient printed materials on ERP are available.
- Majority of the students believe that ERP is practically applicable in business.

#### 5. Research Methodology

Quantitative and descriptive research techniques have been adopted in the present study. The present research has been conducted on the responses received through the structured questionnaire, comprising of ten questions on 5 points Likert scale on the pertinent areas of research. The issues addressed in the questionnaire have been chosen from different available literature such as significance of ERP as a career facilitating tool [12], adding ERP in the course curriculum [13] comparison of ERP with other courses of management in terms of learning [14], ERP as a skill to understand [15], student awareness about the content of the course [16] etc. After the questionnaire was prepared, the *Cronbach's Alpha* Coefficient value was calculated on the responses received through the same for a small aggregate sample of 57 respondents. The alpha coefficient value showed 0.83 indicating a high level of reliability of the questionnaire. Then the questionnaire was administered on the basis of randomly chosen 660 students pursuing post graduate programmes in management in six major B-schools from Kolkata. Based on the responses received, the data has been analysed for testing of the hypothesis formulated for the present study.

##### 5.1. Data Analysis and Results

From the responses received, it has been found that 375 students out of 660 students have not joined the ERP programme, which stands for 56.81% of the total respondents covered in the present study. It is also found that 85 respondents each have strongly agreed and agreed on the importance of ERP as a career facilitating tool. This indicates that total number of 170 students are aware about the importance of ERP as a career enhancement qualification, which is only 25.75% of the total respondents covered in the study. The result also indicates the mean score of 2.49, which clearly shows low awareness about the significance of the same among the respondents (Table 1). Hence the first hypothesis pertaining to the awareness of students about the importance of ERP as career enhancement tool stands rejected (Table 2)

On the issue of whether ERP should be added to the regular business curriculum, almost same patterns in response has been observed. 86 respondents have strongly agreed and 85 respondents have agreed on the issue, which indicates that only 171 in total respondents have expressed their opinion positively out of 660 respondents (25.90%). The result also indicates the mean score of 2.69 (Table 1) showing low acceptance level on the issue. Henceforth, the second hypothesis on the introduction of ERP as B-school curriculum at the earlier semesters has also been rejected (Table 2)

On the issue of acceptance of ERP as an easier subject to learn comparing to other subjects, the research has found that 202 respondents out of 285 respondents, who have attended the ERP training as part of their course curriculum (70.87%) have not agreed on the issue, which shows majority of the respondents still believe that ERP is not an easy area to learn in comparison to other areas of management. The mean score of the response pattern on the issue is also found to be 2.01 (Table 1) and the third hypothesis is also found to be rejected (Table 2).

**Table 1.** Distribution of response pattern

Issues covered	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total respondents	Mean Score
ERP is a significant career facilitator	85	85	10	372	108	660	2.49
ERP should be introduced to business curriculum in the earlier semesters	86	85	09	372	108	660	2.69
ERP is as easy as other subjects of Business curriculum	48	154	27	82	64	375	2.01
ERP is really difficult to understand	78	85	8	68	46	285	3.30
Business students are fully aware of the content of ERP course	146	130	19	246	119	660	2.51
ERP should be added in later semesters	329	175	13	67	76	660	3.93
Teaching style of ERP should be same as any other subject	39	34	18	107	77	275	2.45
Learning material on ERP is sufficiently available on internet	235	228	8	102	87	660	4.31
Printed learning material on ERP is sufficiently available	83	68	17	287	205	660	2.29
ERP is applicable in business	201	175	12	142	130	660	3.13

It is observed that 160 respondents out of 285 respondents (56.14%) (Table 1), who have attended training on ERP have agreed and strongly agreed that ERP is really difficult to understand. The mean score of 3.30 has also shown that the fourth hypothesis pertaining to difficulty of understanding ERP is accepted (Table 2).

The question on awareness of the content of the course of ERP, it is found that more respondents have expressed their lack of awareness on the issue. It is found that 365 respondents in total are not aware about the content of the course, which is almost 55.30% of total respondents covered in the study. The mean score is also found to be 2.51 (Table 1), which also indicates that the fifth hypothesis pertaining to awareness of the respondents is rejected (Table 2).

However, it is found that predominant majority of almost 76.36% of the respondents have agreed on adding the ERP curriculum in the late semesters of the course. The mean value of 3.93 (Table 1) also shows a positive response pattern on the issue and hence, the sixth hypothesis is found to be accepted (Table 2).

**Table 2:** Results of Hypotheses Testing

Sl. No.	Statement of Hypothesis	Accepted / Rejected
1	Majority of the B-school students are aware of importance of ERP as a career facilitating tool.	Rejected
2	Majority of the B-School students accept that ERP should be added in their regular business curriculum in the early semesters.	Rejected
3	Majority of the B-School students accept that ERP is an easier course in comparison to other courses.	Rejected
4	Majority of the B-School students accept that ERP in general is difficult to understand.	Accepted
5	Majority of the B-School students are fully aware of the content of the ERP course content.	Rejected
6	Majority of the B-School students prefer inclusion of ERP at the late semesters of the course.	Accepted
7	Majority of the B-School students believe that teaching style should be same for ERP like the traditional courses	Rejected
8	Majority of the B-School students believe that sufficient information on ERP is available on internet.	Accepted
9	Majority of the B-School students believe that sufficient printed materials on ERP are available.	Rejected
10	Majority of the students believe that ERP is practically applicable in business.	Accepted

On the issue of the teaching style of ERP courses, it is found that only 73 respondents out of 660 have agreed that the teaching style of ERP should be same as any other subject. This indicates a very small 11.06% of respondents have agreed on the issue. In analysing the overall response pattern, 2.45 mean score (Table 1) is observed indicating the rejection of the hypothesis (hypothesis seven) on the issue (Table 2).

Regarding availability of sufficient online material on ERP, the respondents have been found to be quite positive in their opinion. It is found that almost 70.15% of respondents have agreed and strongly agreed on the issue. The mean score of 4.31 of the response pattern (Table 1) also indicates the positive trend in opinion on the issue. The overall observation indicates the acceptance of the eighth hypothesis (Table 2).

However, on the issue of availability of printed material, an opposite trend has been found in the response pattern. Here, almost 74.54% of the respondents have been found to have expressed negative opinion on the issue, which is also reflected in the mean score of 2.29 (Table 1). The ninth hypothesis on the sufficient availability of printed books is therefore rejected (Table 2).

The trend in observation on the final issue, i.e., the applicability of ERP in business, majority of the students believe in a positive way. It has been found that total number of 376 students out of 660 students have expressed their opinion in a positive way, which indicates 56.96% (Table 1) are in favour of the opinion. The result of the mean analysis also indicates a positive note (3.13) and hence the hypothesis is found to be accepted (Table 2).

## 5.2. Key Findings and Recommendations

Based on the results of analysis of the response patterns (Table 1) and subsequent results on hypotheses testing, it is found that there has been serious lacking in understanding the relevance of ERP as a career tool, though majority of the students are aware about the practicality of the same in business. This clearly indicates a vacuum in student perception in understanding the place, where they may get benefit from learning ERP in their professional life. The results also show different other trends in opinions, which are very much supplementary to each other in terms of rational understanding. Based on the overall observations in the perspectives of research objectives, following key findings can be identified:

- Regarding the dilemma while introducing ERP from student's perspectives, it is found that majority of the respondents from the surveyed students are not interested to pursue the same along with their business curriculum in the early semesters of their programme. It is also found that majority of the student respondents have accepted that ERP curriculum is difficult to understand; as the current print materials are not available up to the level of expectation. Therefore, it is recommended that the course on ERP should be introduced at the later semesters with assured print study materials and books well in advance prior to introduction of the course as much as possible and teaching aspects like well experienced faculties with clear idea of delivering sessions on ERP must be found and deputed for the purpose.
- It is also found that majority of the respondents are not even aware about the detailed content of ERP as well, though ERP is delivered as a subject itself and further in comparison with other subjects, ERP has been identified as a difficult one. However this issue can be solved by recruiting specialised faculties with the understanding of the teaching skills for this specific subject and experience along with arrangement for more printed materials to increase the scope of practical learning on the issue.

### 5.3. Limitations of Research

The researcher acknowledges some of the research scope-wise limitations.

- The present study has been restricted to only 660 respondents of selected B-schools and more detailed picture might have been captured by extending the study to a larger number of samples.
- The study could have been more comprehensive by making a comparison, between the students of different specialisations and semesters.
- The study could have been made more comprehensive by adding further demographic dimensions and comparison between genders, age groups, experience profile etc.
- Further, the aspects like life cycle issues of ERP and need for adaptability with continuous learning and perception of ERP as a functional tool rather than managerial skill could have made the study more comprehensive.

## 6. Conclusion

The research has finally shown that the concept of introduction of ERP has still remained a distant dream in most of the B-schools in India. This is due to lack of understanding of the significance, content and availability of printed materials at the B-schools. Further, lack of well-trained faculties in delivering the sessions effectively has also remained as a major problem behind such limited progress on the issue. It is also recommended that the furtherance of the present research can be done by expanding the sample size, by comparing the opinions of the students, pursuing different levels of management education and comparing the feedback of the management students from different cities in India. Some other dimensions like preferences of the students to adopt the ERP learning in case of flexible credit based choice system; acceptance for bearing additional cost etc. can also expand the scope of the present research.

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