OPTIMIZED FRAMEWORK FOR ICT TOOL TO BE USED EFFECTIVELY IN THE CLASSROOM IN B-SCHOOL

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Abstract: The technology, industry and the educational system have strong linkage & close association. Education system provides efficient human resources required by the corporate to sustain in today's competitive global environment.

The 21st century B-schools aims to develop competency among students by providing functional based education through extensive usage of digital technology. There are some limitations while using ICT tools in teaching learning like infrastructure dependency. To overcome these problems there is need of ICT tool which will fulfill stakeholder's major requirements under one roof. This paper suggests optimized framework for ICT tool. This tool should integrate most of the features required in class-room teaching. The researcher has depicted her ideas about integrated framework through diagram.

IndexTerms **- ICT, ICT tools**

I. IMPACT OF GLOBALIZATION AND IT REVOLUTION ON EDUCATION:

The last decade of 20th century and the beginning of 21st century witnessed two important global events namely Globalization & IT-revolution.

"Globalization is a process of interaction and integration among the people, companies, and governments of different nations, a process driven by international trade and investment and aided by Information Technology." In the process of globalization along with the trade, Non-trade activities i.e. service sector also countersigned phenomenal growth. The one such service sectors is an "Education" and that too witnessed growth in the form of entering into tie-up arrangements amongst the universities across the globe so as to facilitate the process of identifying and utilizing the available human resources through interuniversity exchange program etc.

In this context, it is pointed out that the information technology has aided the process of globalization in the sense that spread of service sector like education across the globe has been facilitated with the help of IT Revolution with dependency on Digital Technologies.

In the IT-Revolution, Information technology has emerged as an inevitable phenomenon influencing every walk of people's life. This is due to the ease of availability of enormous computing power and convenient access to large volume and variety of data and information

There has been increasing use of digital technology. Today we are living in the age of digital era. Digital technologies have the power that has changed many aspects of the lives. The use of digital technologies on non-trade sectors like education is enormous & has become inevitable aspect while imparting an educational program today. These educational programs apart from class room lectures enter into various tie up arrangements amongst the universities as well as they try to develop interface with corporate. The very aim of developing interface is to help corporate in identifying human resources & utilizing these resources in the interest of corporate. It is needless to state that corporate sector is a main pillar of nation & contributes to the GDP of country. Obviously the quality of corporate depends upon effective utilization of human resources. The education sector along with digital technology plays a vital role in building these human resources. Thus, there is a strong association between education based on digital technology & industries. Moreover, in order to survive in the competitive world it has become necessary for industries to change their requirements of human resources with quality & efficiency as important criteria.

The education is a socially oriented activity. It plays vital role in building the society. The quality education traditionally is associated with strong teachers having high degrees. Using ICTs in education it moved to more student –centered learning. ICT is an ever-changing subject. There will always be developments within the ICT that we need to be aware of and keep up to date with. Alongside there are other changes to the environment within which we work (concern with political, social, and technological) which can also impact on the educational era.

From above it is clear that, the technology, industry & the educational system have strong linkage & close association. The 21st century educational system aims to develop competency among students by providing functional based education through extensive

usage of digital technology. We can use these digital technologies as an information tool. It can be used as a great facilitator. Thus it provides efficient human resources required by the corporate to sustain
In today's competitive global environment.

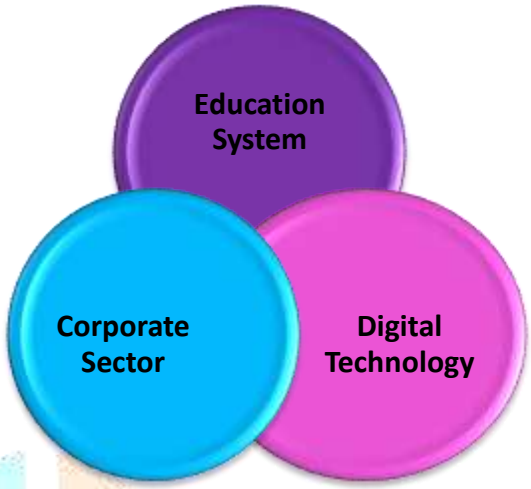
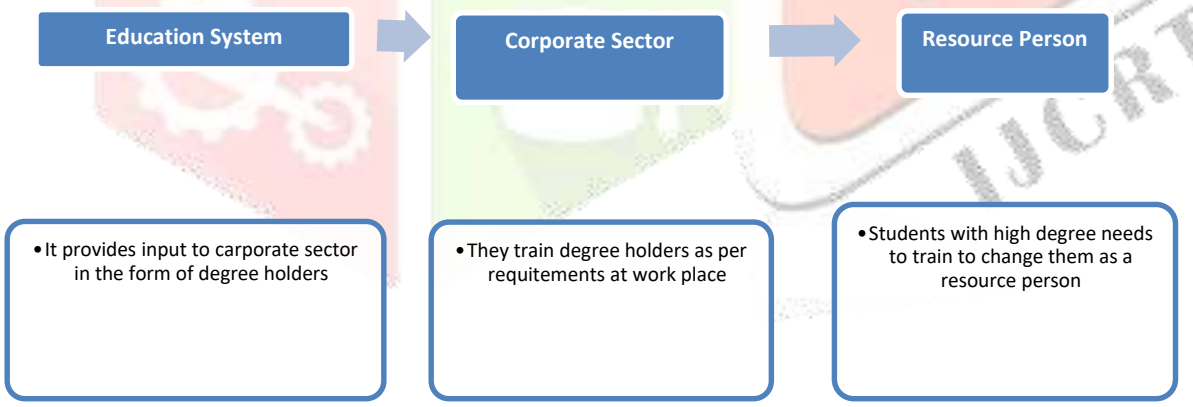


Figure: Strong linkage between education system, corporate sector and digital technologies

Thus frame of reference of the study undertaken lies in finding answer weather ICT tools employed in B-school educational system has efficacy to develop competent human resources for the corporate (applications) & that too according to the fast changing global requirements.

II. RATIONALE AND NEED OF THE STUDY

As world is moving rapidly towards digital information, the role of ICTs in education becoming more and more important and this importance will continue to grow and develop in 21st century . In this age of rapid change and uncertainty, teachers are needed to adapt to change if they want to survive and keep pace with new methods and technologies.



This paper focuses on assessing the efficacy of ICT tools. The need of the study arises out of the requirement of the corporate/industry of skilled resources having expertise & knowledge in application & usage of digital technologies in various stages of operation & such skilled resources are provided by B-schools.

One of the important falls out of globalization was competition & to survive in this competition corporate firms are in look out for efficient man power having expertise in operating digital devices. There has been increasing use of digital technology in management education programs. It is need of the day to broaden the integration of appropriate technologies in the classroom to support enhanced teaching and learning. B-schools should encourage entrepreneurialism both in the learning environment and in research that has commercial viability.

However, the unrelenting gap between the promise and performance of ICT has continued to prompt further research into how the affordances of technology can be better harnessed into B-School education. The significance of the study therefore lies in assessing existing ICT tools used by B-schools & suggesting measures to bridge gaps observed which in turn would unable corporate to sustain in the today's competitive environment.

Keeping in view, a detailed study to assess current status of ICT tools utilization in management institutes has assumed greater importance. Hence, researchers intend to undertake a study of efficacy of ICT tools used in B-Schools in Pune region. The

findings of the study will be of immense use to policy makers of the B-Schools, faculty members and digital technology solution providers.

Thus in line with efforts undertaken by the government the paper aims to offer solutions to bride the industry academia gap stated above & therefore has high empirical significance.

III. CATEGORIES OF ICT TOOLS

ICT TOOLS:

ICT tools have worldwide acceptance. These tools are having potential for increasing productivity by making learning available anywhere and anytime. These tools allow learners to participate in educational activities without the restrictions of time, place and age. ICT tools have the power to make learning more widely available and accessible than we are used to in traditional learning environments.

CATEGORIES OF ICT TOOLS:

ICT Tools are divided into ten categories.

1. **E-LEARNING AUTHORING TOOLS**
2. **VIDEO, AUDIO & IMAGE TOOLS**
3. **COMMUNICATION TOOLS**
4. **NETWORKING & COLLABORATION PLATFORMS**
5. **WEB, BLOGGING & WIKI TOOLS**
6. **BOOKMARKING & CURATION TOOLS**
7. **OFFICE TOOLS & ANCILLIARIES**
8. **PRODUCTIVITY TOOLS**
9. **BROWSERS, READERS & DASHBOARDS**
10. **MOBILE DEVICES & SYNCHRONISATON TOOLS**

IV. VARIOUS TEACHING METHODOLOGIES AND ICT TOOL:

Understanding the concepts is an important and basic component of education. These concepts can be taught more effectively and interestingly using variety of teaching methodologies as per need. The use of available ICT Tools with these teaching methodologies is mandatory for the professors to make the teaching more effective. The researcher has listed out teaching methodologies used in management education. She has also focused ICT tools which can be used with these methodologies. The following is the table representing ICT tools with its category which can be used for a particular teaching methodology.

Sr.No.	Teaching Methodology	Category of the tool	ICT Tool
1.	Presentation	Educational & Training tools	Articulate Camtasia Adobe captivate iSpring Udutu Khan Academy Moodle Coursera learnist
		Video, Audio and Image tools	YouTube Khan Academy Vimeo iMovie AnimotoVoki
		Office Tools and Ancillaries	Google Docs(Slides) PowerPoint Slideshare Google Docs(Sheets)
		Productivity Tools	Google Search Wikipedia
		Browser, Readers and Dashboards	Google Chrome Firefox
2.	Individual Learning	Educational & Training Tools	TED Talks/ED Khan Academy
		Video, Audio and Image tools	YouTube TED Talks/ED Khan Academy
		Web, Blogging & Wiki tools	Blogger Google Sites
		Browsers, Readers	Dashboard Google chrome Firefox
3.	Interactive	Communication Tools	Skype WhatsApp Google+ Hangouts
		Networking And Collaboration Platform	Twitter Facebook Google+ LinkedIn SharePoint
4.	Group Discussion	Communication Tools	Skype WhatsApp Google+ Hangouts

V. NEED OF THE FRAMEWORK

There are variety of ICT tools available for the use, but following are the few limitations faced by the B-schools while using those.

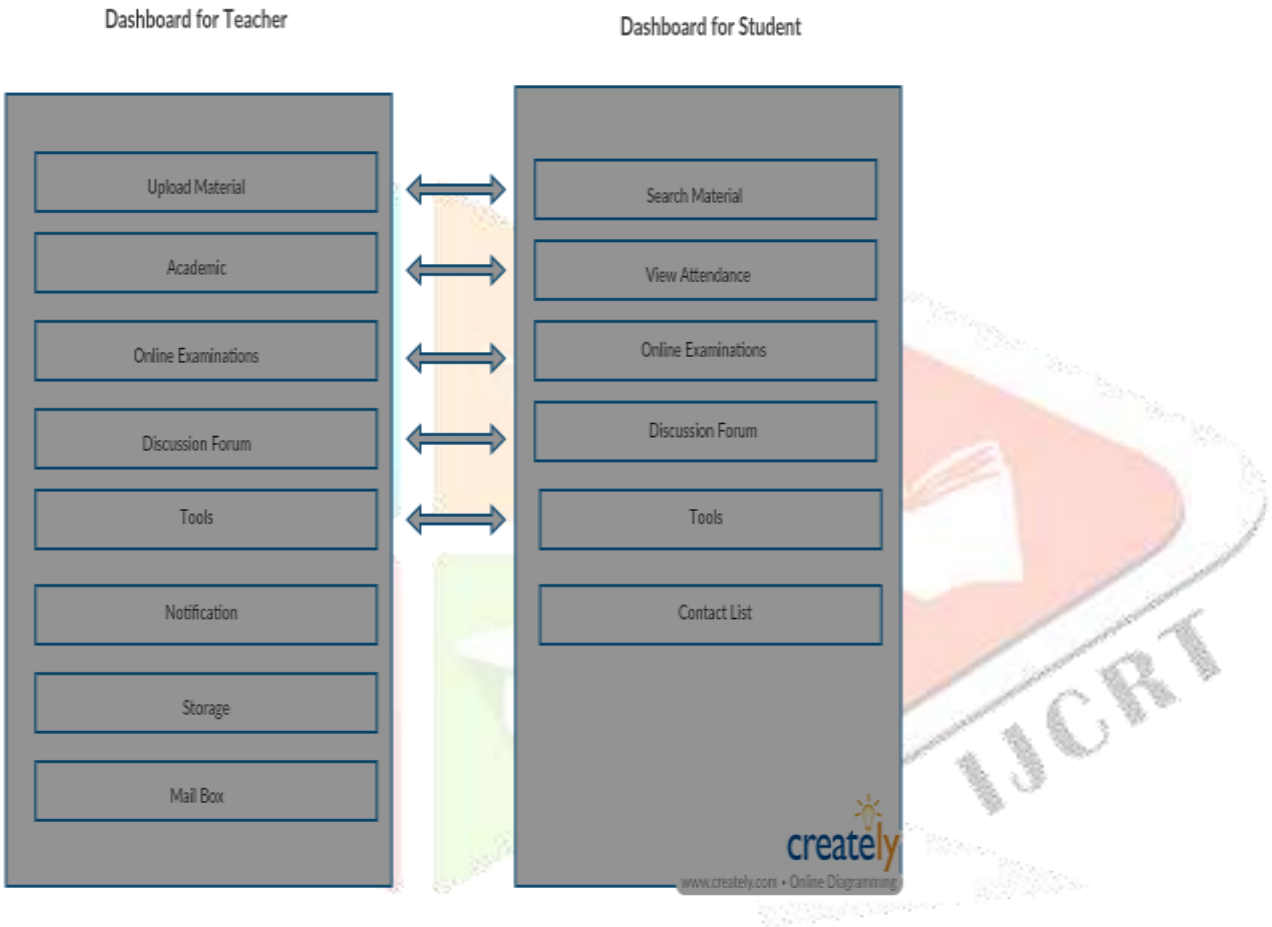
1. Tools are unique: ICT tools available are unique. Many of them are developed to do a particular Functionality only. E.g. Communication tools are developed keeping communication as a focus. They can be used for communication with other party only. To search a specific information one has to use another tool like productivity tool. These tools work differently. So user(teacher) has to use multiple tools.

2. Infrastructure dependency – As discussed earlier, all these tools may work on different platforms (hardware, software). B-schools may be reluctant to provide required infrastructure, due to their own set of problems like funds etc.

3. Cost of ownership – Lets assume, in spite of the limitations mentioned above, B-schools adopts variety of ICT tools. It may put more pressure firstly on B-school management in terms of upgrading required infrastructure whenever there is need, secondly, on stakeholders. They may need to learn, understand, and upgrade their skillset at first time as well as if there are any changes in the tools. So, it may potentially divert the focus of academics.

To overcome these problems there is need of ICT tool which will fulfill stakeholder's major requirements under one roof. So, researcher has suggested optimized framework for ICT tool. This tool should integrate most of the features required in class-room teaching. The researcher has depicted her ideas about integrated framework through diagram.

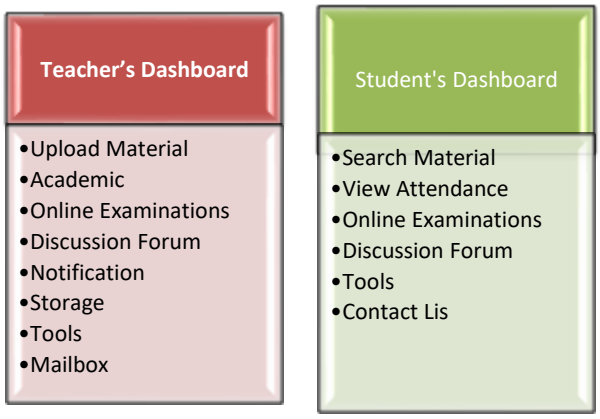
VI. OPTIMIZED FRAMEWORK



The module contains two dashboards.

1. Teacher's Dashboard
2. Student's Dashboard

There should be communication and exchange of information between teacher and student; these two dashboards have exchange of information as per requirement. Teacher's Dashboard contains eight modules and Student's Dashboard contains six modules as follows.



Teacher's Dashboard has eight modules and Student's Dashboard has six modules. For each of these modules a separate framework is drawn. The communication between the teacher and the student is must. Keeping this point in a view, both dashboards are consisting modules which work together.

Upload and Search Material:
Upload module of teacher's dashboard is to upload material by the teacher. On the other end, search material module of student's dashboard is to search a particular material uploaded by the teacher.
Upload module contains two sub modules.

1. Search Material
2. Upload Material

Search Material:
Teacher also needs to search material for the preparation of the study material or lecture. Search module makes the searching available for the teacher.
Teacher has to-

1. Select material type (e.g. Notes, Videos, and PPTs etc.)
2. Select subject.
3. Do search. Click on Show button.

Upload Material:
The main function of Upload module is to make uploading of material possible. Teacher can search material using Search Module, if he wants. He can upload the study material of a particular subject. Teacher has to-

1. Select a subject
2. Select type of the material (e.g. Notes, Videos, PPTs etc.)
3. Browse the material
4. Click on the 'Upload' button to upload the material.

Search Material Module of Student's Dashboard
Upload module of teacher's dashboard and Search module of Student's dashboard communicates with each other through exchanging information. Student can search material in a particular type like pdf, ppt, notes, videos etc. As this module is associated with Upload module of teacher students can get material uploaded by teacher for that particular subject.
Student has to-

1. Select material type.(notes, videos, ppt, case studies etc)
2. Select subject
3. Insert keyword for search
4. Click on 'Show' button.

Academic Module of teacher
Academic module is divided into four sub modules.

1. Attendance
2. Report
3. Personal Time Table
4. Internal Performances

Attendance:
Attendance module allows teacher to log in into Attendance Management System which is online attendance management system.
Report:
Teacher is supposed to generate various academic reports. That is the need of the education system. Teacher is supposed to generate score sheets for the tests/exams, attendance sheet, student's progress report, sheets for internal marks, report of activities done by student. Teacher need to maintain record of this. Considering this, Report sub module is designed. To generate a particular report, teacher has to

1. Select report type
2. Select a class
3. Click on 'show' report.

Report module generate following types of reports.

1. Attendance Report
2. Test wise Score sheet
3. Student Progress Report
4. Student Online Activity
5. Internal Report

Personal Time Table:
It shows personal time table of the teacher. The student get an idea about the time table and the schedule of the teacher. The students can get an idea about the teacher is available for students in particular slot other than sessions/lectures.
Internal Performance:
Teacher can enter the details of the student like class, student name, examination type(Unit test1/ Unit test 2/mid term exam etc.) Teacher can enter how much student has scored out of particular marks. Then teacher can submit the details.

Academic Module of Student:

Report sub module:
Students get necessary reports from this module. It works exactly same way as the Report module of the teacher dashboard works. Report module generate following types of reports.

1. Attendance Report
2. Test wise Score sheet
3. Student Progress Report
4. Student Online Activity
5. Internal Report

The working of all these reports is similar to the working of the reports of academic.

Online Examination Module:
Examination is a part and partial of the education system. ICTLte provides online examination module which provides scope to conduct exams online.
The module handles exams through three sub modules as given below:

1. Create exam / Quiz
2. View exam reports
3. Manage exams

In Online exam module of student's dashboard, student gets an online question paper for a selected class, subject and exam.
The student has to-

1. Select a class
2. Select a subject
3. Select type of exam (unit test, midterm test, internal test etc.)
4. Click on start button to start the test.

Discussion Forum of Teacher and Student:
When you will click on the Discussion forum module of teacher or student dashboard, you will get two sub modules. They are-
1. Blog: It helps to create and manage blogs.
2. Video Conferencing: Teacher can have a video conferencing using Skype. Using Video conferencing teacher can communicate to all the students who are actually not present for her/his lecture. Student can get opportunity to attend lectures of various speakers.

Notification Module of Teacher:
The main function of the notification module is to send notification to the students through Short Message Service (sms) or e-mail. Teacher has to-

1. Select type of the notification (sms/e-mail)
2. Select class
3. Select student name/ All for whole class
4. Click on the send button

Notification Module for student
Notification module of teacher's dashboard and student's dashboard works in association with each other. Through this teacher and student can communicate with each other using sms/mail.

Storage Module for Teacher and Student:
Every teacher and student requires a storage space to store some data. ICTLTe makes this space available for them. It simply makes the Google Drive available for this purpose. They get a storage space on a cloud. It helps teacher to keep all academic records as well as personal data also. The student can place all their notes and necessary data on the drive.

Tools Module for Teacher and Student:
Tools module provides various e-learning tools which are very useful for the students and teachers. The links of these tools are available in the following categories.

1. Educational Tools
2. Audio/video
3. Editors
4. Useful links

Mailbox Module for Teacher:
Mailbox connects teacher to their mail account. When you click on the mailbox module of the teacher's dashboard.

VII. CONCLUSION:

Suggested optimized framework is the biggest recommendation to fulfill stakeholder's major requirements under one roof. The teacher and student have to use different tools for different purposes. It is need of the day, the customized tool as per teachers and student's requirement should make available.

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