

Global Education System via Technology

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Abstract: *In this era of information and technology there is high influence of World Wide Web in business, entertainment and education systems. For finding distributed information www is used, it works just like an online library. In different areas of education it provides a medium that has the prospective to be more receptive to the students, to encourage larger contribution in their own knowledge. The proposed software deals with the problems related to distance education or distance learning and provide their tentative solutions. First, it recognizes those difficulties which were faced by the students or distant learner during their course of study. It also recognizes the problems related to the different distance education systems and provide its tentative solution for the improvement of distance education systems. Global Education System via Technology (GEST) is an enhancement to Virtual Universities and Tele Education. Through GEST unlimited Virtual Universities, Colleges, Schools etc can be made on a single platform. The scope of Virtual Universities is so limited that it works under a single domain. Hence, GEST will support the merger of several domains. GEST will be capable of determining the academic level of students and suggest those courses which will be beneficial for them using Decision Support System. All in all we are going to group institutions globally according to their education level.*

Keywords: *Distance education, Adaptive guidance, distant learner, Decision support system, Unicode*

I. INTRODUCTION

Education is the process of attaining knowledge or facilitates learning, abilities, ideas, thoughts and habits. It is one of the most powerful tools to build a foundation for persistent economic growth by reducing the poverty and discrimination. In distance learning programs it is not important that student always physically present in the classroom. The key benefits of distance education are flexibility, cost reduction and availability of educational material. Students have facility of taking lectures at their own place rather than classroom and able to do homework, without interruption to their daily life.

There are lots of web-based applications used by different groups of learners without any support of human teacher. The World Bank builds dynamic knowledge societies to help countries to achieve Education for All (EFA).

In the mid of 19th century distance education map out it's beginning in United State and Europe. The best technology for these days is postal system.

This system gives an opportunity to people who wanted to learn but could not learn as they do job in school timings, or the woman who's not allowed to enroll in any educational institute with man and also for those who live in remote areas. In 1980s a new technology, teleconferencing was introduced through which teachers used to communicate with their students, listened to their students and also solve their queries.

II. LITERATURE REVIEW

Distance education or distance learning is basically depends upon different factors and these factors affect its success and failure. There is an analysis of research and literature on the effectiveness of the distance education system [1]. This includes the role of the distance education team, technology implementation, tactics and ways to increase the interactivity, operational issues, teacher's cooperation and characteristics of learners and different modes of learning. There is a research on two different areas [2], research on barriers on the adaptation of distance learning and summaries that are best support in this field. The summary of the paper is that the distance education is not different education. An online quantitative course for business undergraduate's [3] to gain the experience and collect useful observation. The proposed model presents how to assess, define and promote-learning.

The paper [4] discussed about the challenges for the implementation of different modes of distance education. Distance provides freedom to the distant learner; they are deploying open source social software at Alhabasca University in both formats, cohort-based and self-placed continuous enrolment courses. The tool is working for both on-campus and off-campus but they mainly focused on distance learning. Paper [5] based on the result of survey conducted at an Australian University, amongst the students which enrolled in an online management course. They identify three different critical factors of success according to student's perspective are: current technology, the instructor and previously used technology. Also argue about the role of the lecturer in online education. Another research on strengths and weaknesses of distance education are discussed [6] and presented some useful suggestions for the betterment of distance education.

III. OVERVIEW OF THE PROPOSED SYSTEM

In today's fast life, time is very precious. People choose to do their work on computer instead of doing it manually for the sake of ease and time saving. We differentiate three levels or steps of increasing complexity on the way to a flexible and adaptive courseware which can easily be created over GEST by any institution.

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The first level presents a well-designed course including all the essential educational material: quizzes, examples, explanations, and all those problems that students face with different learning capabilities. By using this learning material a student will find his or her unique path. Many users are not able to work with complex information systems; they cannot deal with highly developed hyperspace presented by web-based applications. They will be able to discover a hyperspace path which is most related to their goals, knowledge and background.

The second step is to allow institutions to offers a standard course according to the needs of a particular student and class. In the third step an adaptive guidance mechanism is provided to customize the current information, learning goals and knowledge according to searching tasks of the individual user. Guidance in this perspective deals with the problems of the user and suggesting next step to update them about the knowledge structure of the hyperspace in web-based courses. Adaptive guidance is mainly important in many cases, because the user is working alone with it.

We declared that all the above three steps, till adaptive assistance, should be made easily available for any institution using GEST, and provide maximum educational opportunities to the learner. We will provide a way to those who want to learn through web, being independent of their ages and educational levels. The scope of this project is very wide because it will support National languages using UNICODE data storage. The project will support addition of any subject by any authorized institution later introduced. Authorized Institutions will be provided ownership for any Specific field, so they will be responsible for all the material to be uploaded according to specific age criteria. Authorized Institutions (Owners) can make Sub-owners for their own assistance.

Our project will be capable of determining the academic level of students and suggest those courses which will be beneficial for them and for this purpose students will have to provide their age and their interest of study as well as they have to give a short online test.

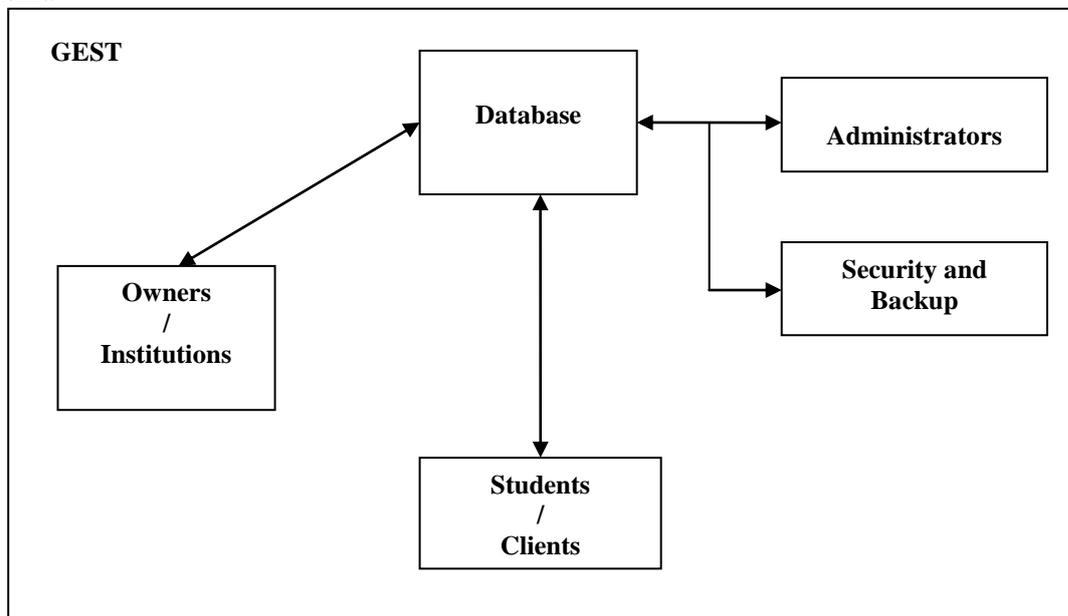


Figure 1. Overall System Flow

The System consists of five Subsystem modules: Administrator Module, Institute Module, Judge Module, Teacher Module and Student Module as shown in Fig 1.

A. Administrator Module

Multiple numbers of people can be a part of GEST administrative panel. This panel will be responsible for allowing different institutions to be a part of GEST. Administrative Panel can also perform certain other tasks, like creation of administrator, judges, modification of resources of institutes.

B. Institute Module

Institutes are registered to GEST and allow the students to learn that are registered to it.

C. Judge Module

Judges have the variety of jobs including check for request of course, approve contents, rate institute and

courses, view students and contents, attend or participate in conference.

D. Teacher Module

Teachers also have certain responsibilities like view students profile, upload/delete contents, create test, check test, view result/test, rate students.

E. Student Module

Students can join courses, give tests and examinations, view results and also can improve their ratings.

F. Security Module

Whenever any institution upload their data security module will apply automatic virus scan to all data.

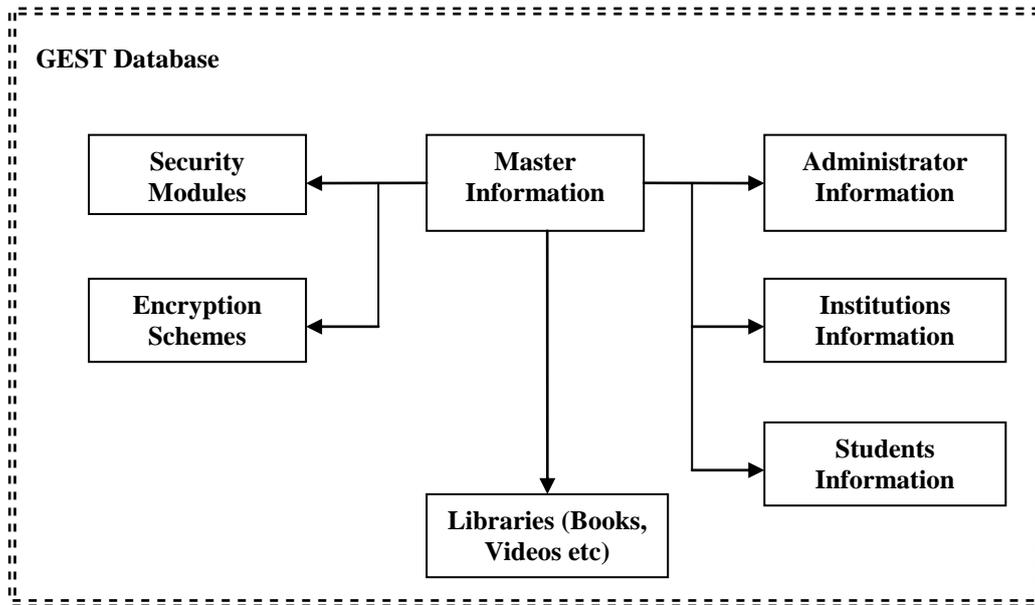


Figure 2. Database Architecture

G: Database Module

The complete architecture of database is shown in Figure 2. Database contains all the information about the institutions, students, teachers and keeping the record of library. By using different algorithms database will be periodically generate backup for recovery purpose.

The simple login and some other sample forms are shown in Figure 3.1 and 3.2. In Figure 3.1(a) graphical users interface of our system which consist of user name and password. If the user is not registered then first registered him and then connect to the server. Figure 3.1(b) shown, the registration panel for administrator and judge have some

mandatory fields of information. In Figure 3.1(c), all the registered judges are shown. Registration panel for institution admin is shown in Figure 3.1(d). All the registered institutions are shown in Figure 3.1(e). Registration form of teachers is shown in Figure 3.1(f). Rating of all the institution and courses are shown in Figure 3.2(a,b). The contents uploaded by any institution are shown in Figure 3.2(c). All the registered courses from institutes are shown in Figure 3.2(d). The selected course with their description and rating is shown in Figure 3.2(e). All the registered students are shown in Figure 3.2(f).

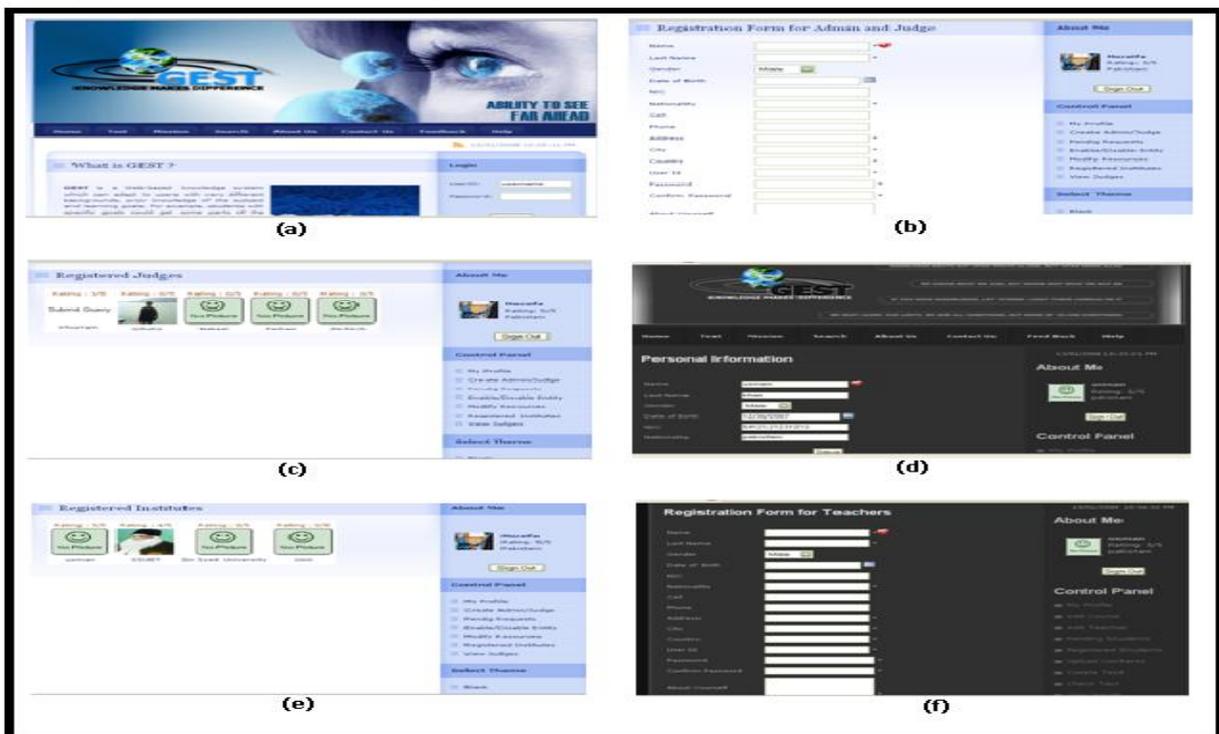


Figure 3.1. Snapshots of the Proposed System

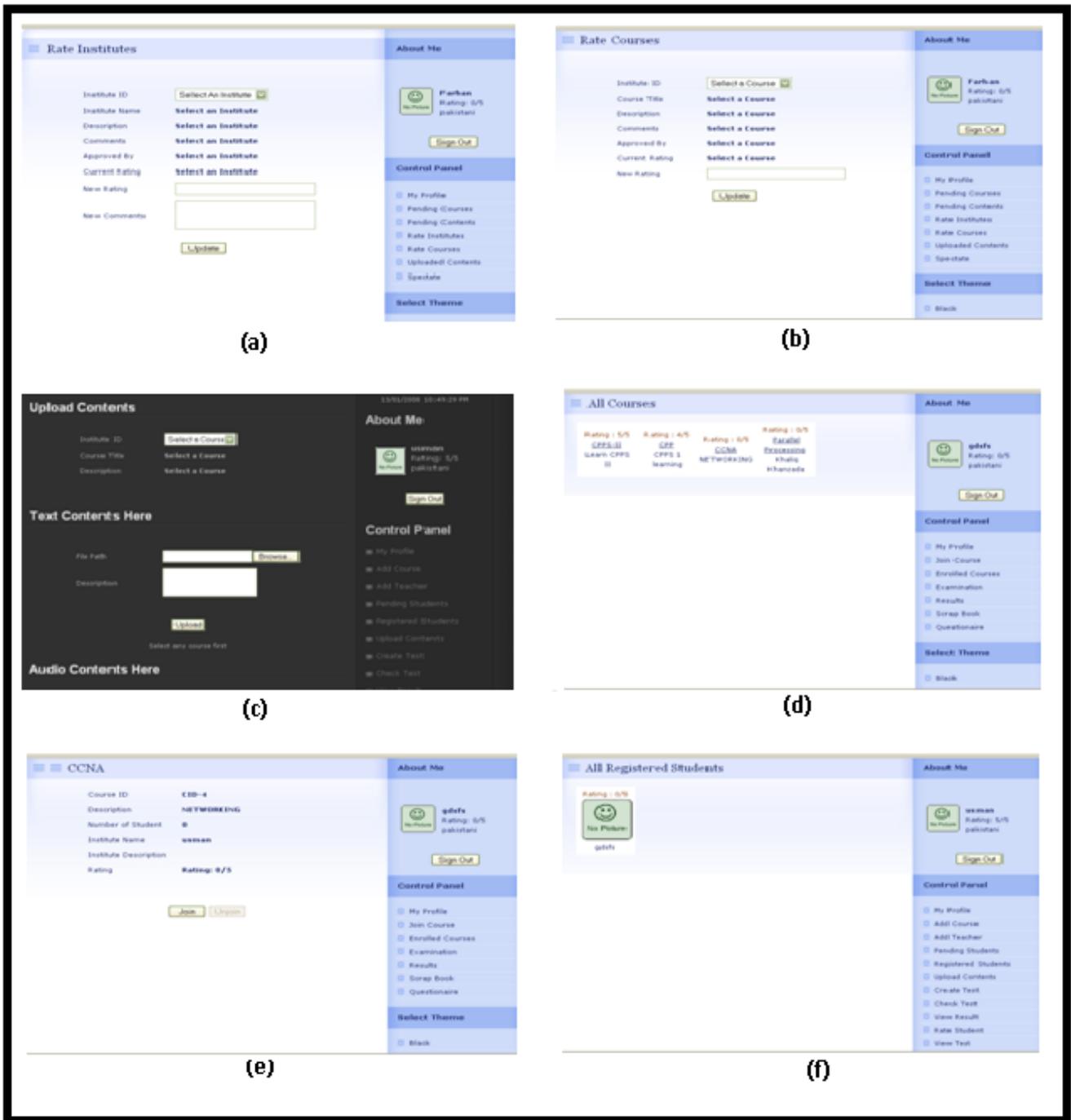


Figure 3. 2. Snapshots of the Proposed System

IV. FEATURES

As we already know that GEST will provide a way to those who want to learn through web, being independent of their ages and educational levels as well as it will also provide a way to those who wants to establish their institutions on web. For this to be implemented, GEST will be fully loaded by a number of user friendly features. Maximum of those features are listed below:

A. Administrative Level Features

A desktop application will be provided to GEST Administrators, which will always be connected to GEST database and can be executed from any remote computer loaded with internet facility and GEST Administrative

application. GEST Administrative application will contain the following key features

1) **Administrative Panel:** Multiple numbers of people can be a part of GEST administrative panel. This panel will be responsible for allowing different institutions to be a part of GEST. Administrative Panel can also perform certain other tasks, detail of which will be provided in the final report of the GEST.

2) **Monitoring Institution's Activities:** By the help of this feature GEST will keep a track over the activities of institutions such as, how much of data is uploaded by any institution, number of students enrolled in a particular institution, etc.

3) **Stilted Data Redundancy Checker:** This feature will check different types of text files, and will inform the administrators about the redundant data present in a particular institution's database.

4) **Active Intelligence:** The web pages created by our server will be dynamic that means, the HTML code is not written for a page to be developed but its information can be stored in GEST, so that modifications in it will always be a handy task.

5) **Secrecy Tool:** Administrators will be able to limit the resources for particular institution. For example voice control, video control, image control is allowed with respect to the package. Limited administrative rights can also be included in their package.

6) **Intelligent Rating:** Automatic Rating of reconfigurable aspects will be applied to institutions, students and different courses.

7) **Built-in Templates:** Designed Templates will be available on GEST to facilitate the institutions for a rapid and accurate development. The templates can later be added or removed from GEST.

B. Institution Level Features

A desktop application (GEST Framework) will be provided to GEST Institution, which allows different styles of web development. But some restrictions are to be followed provided by the administrators. GEST Institute application will contain the following key features

1) **Free Design:** The Framework will allow interactive web development. A user friendly interface like Microsoft's Front Page will be available with this framework.

2) **Framework Add-on:** The Framework will allow new emerging controls to be installed, in the form of patches and updates.

3) **Facile Management:** Database management and tasks scheduling will be as handy as it could be. Suppose, if any institution wants to add subject then they will create only a new subject not to create their own database. And GEST will automatically handle all the issues.

4) **Dilate Institution:** Institutions can allow different peoples (Sub Owners) to help them in developing their address space. Those people can fulfill their student's requests, and can also upload and manage different subject materials.

5) **Tech Conferencing:** Institutions can be configured for video broadcasting, audio conferencing etc to facilitate those students who want to learn from a specific teacher. Thousands and hundreds of students can be connected at a time.

C. Student/User Level Features

Students will be provided GEST web address, through which they can access different courses taught by different Institutions. GEST will support two types of users, i.e. registered user and visitors. This level will contain the following key features

1) **Stilted Course Advisor:** GEST will be capable to advice any student, that what they should learn and what they should not. For this purpose student will have to provide their age and their interest then system will

check their IQ level and provide subject or course they should learn.

2) **Supervised Knowledge:** GEST will assure that all the knowledge present in it is in representative form, so that student should not integrate knowledge coming from different domains but it should automatically be integrated by GEST.

3) **Registered Students:** Registered users of GEST will be allowed to join different institutions and to access different interactive materials of their interest available on GEST.

4) **Visitors:** Visitors will only access text based materials, but still they can search the topics relevant to their interests.

D. Security and Backup Level

GEST will be integrated with antiviral protection, encryption and recovery systems. This level will contain the following key features

1) **Antivirus Application:** An antivirus application possibly Symantec Corporate Edition will be configured to execute with GEST.

2) **Active Update:** Update of any threat (virus) will automatically be patched over GEST antiviral Software.

3) **Surety Gateway:** Automatic Virus Scan will be applied to all data which is to be uploaded by any institution.

4) **Backup and Recovery:** Database will be backed up periodically using emerging compression algorithms. Recovery will be handy at any instant.

V. CONCLUSION

Our goal was to develop a Web base Global Education System via Technology and maintain a database that can keep record for library Department that helps user or student in all over the world. The software has been able to easily and quickly enhance its solution to give user's goal objectives with the help of adaptive guidance mechanism capabilities.

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