

Design and Development of HSES Knowledge Portal

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Abstract— HSES stands Higher Secondary Education Sector which is backbone of backbone of the Indian education. Syllabus, question papers, e-Books and video lectures for classes XI & XII are major facilities of this educational web portal. The URL of HSES Knowledge Portal is www.hseshiksha.in. An online repository of various learning resources is called the knowledge portal. To design and develop a knowledge portal, we need open source software, knowledge and technical skill. PHP, HTMP, MySQL and web server are used in this portal. The admin user manages this portal. The students, teachers and others are three verities of the portal users. Feedback and suggestion can be given by the registered users of our portal. Implementation facility is reserved for the admin. It helps the students and teachers to learn and access anything easily. It also helps other users who want to help the learner of school level. HSES KP reduces the requirement of money and time-consuming. A quality based research is gaining through it. It facilitates tacit and explicit knowledge for users to support members of the institutions or organizations in all aspects of their learning, teaching, working, research and other activities. It helps the learner for downloading and accessing anything easily. Discussion forum is a group of registered members of the KP-HSES. The member of discussion forum will help to improve the portal. This portal promotes green education.

Keywords— Registration form, Feedback form, Suggestion form and Implementation

I. INTRODUCTION

Knowledge portal is a Web site that provides a uniform interface with the ability to use a secure username/password to access customizable content based on specific end-user interests and needs. It gives a single point of access to the tacit and explicit knowledge that support members of the institutions or organizations in all aspects of their learning, teaching, working, research and other activities. HTML and CSS are the basic client side scripting languages for web portal development. Web server is used for the server side scripting. Apache IIS is a famous web server. PHP stands for PHP Hypertext Pre-processor which is the fastest web scripting language. It is a server side scripting language. MySQL is a database management system. I prepare questionnaires for testing the usability of a developed knowledge portal. Registration, feedback, suggestion and implementation are main body part of the portal.

II. HOME PAGE OF KP-HSES

The Uniform Resource Locator of higher secondary educational portal is http://www.hseshiksha.in/. It is design and developing for higher secondary education level of students and teachers. In this portal, a platform is creating for the students and teachers of class 11th and 12th of either the board CGBSE, CBSE or ICSE. The facilities available are syllabus, question papers, e-books and e-lectures. There are four types of login. They are admin login, teacher login, student login and others login. Under about us, introduction of higher secondary education, knowledge portal and developer. The syllabus and question papers menus are including the class XI and XII as sub menus. CGBSE, CBSE and ICSE are also including at the each class. Related resources are porting for same. The E-book menu is including SCERT books and

NCERT books for both hindi and English medium books. Audio and video lectures are porting inside the e-lectures menu. Only registered users can access the e-lectures. Other resources are open for all. The visitors of portal can contact with us. Contact details are given inside the contact menu.

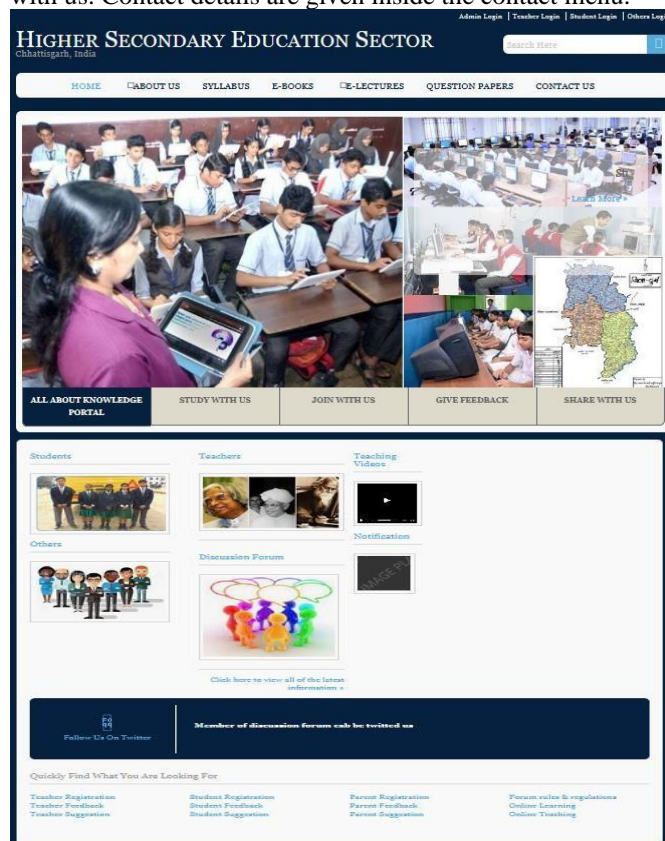


Fig.1:Home Pages of KP-HSES

The six icons students, teachers, others, discussion forum, teaching videos and notification are making in this portal. The student icon is showing the list of registered students when click on it. The list of registered teachers are displaying inside the teaches icon. Name and id of other users are selecting when select the others icon. The discussion forum icon is including discussion about the members of the forum. Teaching video icon is linking with the e-lecture page. The notification icon will show notices for the user. It also include that quickly find what user are looking for. Registration of students, teachers and others, feedback and suggestion from the users, online teaching & learning and rules & regulations of the forum are finding quickly. Users will be twit with us. The bottom part of this portal is also showing the address of researcher.

The supreme power of portal is given to the admin. The admin monitors over all activities inside the portal. User id and password are two very important and secrete data which are necessary for entering in the e-lecture page. It is design as e-lecture door. Students, teachers and others can find them after the successful registration. In registration form, every user can choose own user id and password. Feedbacks as well as suggestions of registered users are accepted which are available along with login form as well as discussion forum icon. Data coming from registration and feedback pages of student users are storing in the single table "student". Data coming from registration and feedback pages of teacher users are storing in the single table "teacher". Data coming from registration and feedback pages of other users are storing in the single table "others". The suggestion coming from student, teacher or others are storing with in separate tables for each type of users.

Type of users	Registra-tion	Login	Feed-back	Sugges-tion	Implement-ation
Admin	No	Yes	No	No	Yes
student	Yes	Yes	Yes	Yes	No
Teacher	Yes	Yes	Yes	Yes	No
Others	Yes	Yes	Yes	Yes	No

Table 1: Power of KP-HSES users

III. REGISTRATION FORM

Registration form is introduction page of the user. It is fillup by those persons who want to join as a member of the portal. Seperate registration forms are provided in the portal for student, teacher as well as others. Few informations are different while maximum informations are same or unique. Tid, Stuid and Oid are declared as auto increment for the teacher, student and others tables individually. User id and password are very important fields of student, teacher and others tables of hses database. Name, Gender, Locale, District, State, Email and date of registration fields are presented in the all registration forms. Board and Medium fields are needed in both student and teacher registration forms. An unique field of student registreation form is class. The field "teach which subject" is unique in the teacher registration form. Educational qualification and occupation are unique fields of the others registration form. Registered and Back buttons are available in the registration forms. After filling of required data, click on

registered button for saving it. Choose Back button for visiting the login form. For counting the registration, seperate counters are provided in these registration froms.

Fig. 2(a): Student Registration Form

Fig. 2(b): Teacher Registration Form

Fig. 2(c): Others Registration Form

IV. FEEDBACK FORM

Feedbacks from registered users are accepted through the feedback form. In the portal www.hseshiksha.in, visitings are open for all the people except video lecture. Seperate feedback forms are designed for three categories of users of this portal. Only registered users can fill the feedback form. User id and password are required to give the feedback about the portal. Student can visit student feedback from to give feedback.

Teacher can give their feedback through the teacher feedback form. Other feedback form is designed for those users who want to give the feedbacks except teachers and students. Users can give their answer either yes or no. After filling of feedback form, click on save button to submit it. Choose the back button to go login form again. Internet knowledge and operation of computer, laptop or smart phone are necessary for visiting this portal. Feedback are required about availabilities of Syllabus, question papers, ebooks and video lectures for the 11th and 12th classes. Comfortability for hindi medium, place dependency, time limitation, preparation of examination, learning and teaching improvement, seaching, accessing and downloading of study materials are also feedback area of this portal.

V. SUGGESTION FORM

Suggestions from registered users are accepted by filling the suggestion form and submit it. The suggestion form is designed for students, teachers and others who are registered in this portal. Suggestions are accepting through the suggestion form. Student can submit their suggestion by filling the student suggestion form. Suggestion from teachers are accepted through the filling of teacher registration form. The other user can fill the other submission form to give their suggestion. Suggestions are requiring for making our portal more useful and comfortable. For making the soft teaching and learning, suggestions of users about video lectures availibilities are required humbly. Teachers can find Tid by choosing the Get Tid button. Fill Tid, write suggestion, choose suggestion type and click on submit button finally. Students can find Stuid by choosing the Get Stuid button. Fill Stuid, write suggestion, choose suggestion type and click on submit button finally. Others can find Oid by choosing the Get Oid button. Fill Oid, write suggestion, choose suggestion type and click on submit button finally.

Fig. 3(a): Feedback form for Students

Fig. 3(b): Feedback form for Teachers

Fig. 3(c): Feedback form for Others

Fig. 4(a): Feedback form for Teachers

Fig. 4(b): Feedback form for Students

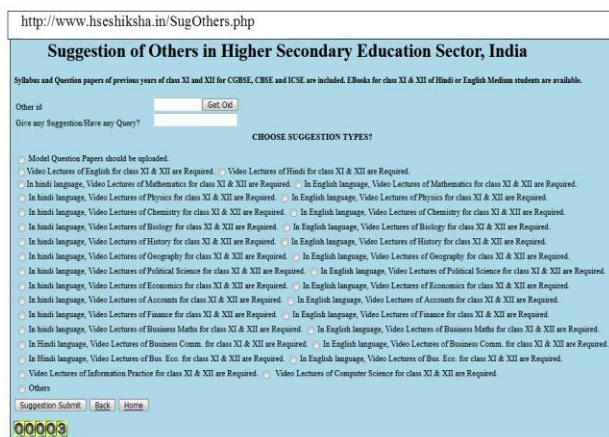


Fig. 4(c): Feedback form for Students

VI. IMPLEMENTATION

Implementation of suggestion is done the admin of the portal. When suggestion rank is more than 4 then it will implemented. The suggestion rank of suggestion id is automatically counted by the system. Suggestion can given by the any registered user of this portal.

VII. LOGIN AREA OF USERS AND DISCUSSION FORUM

Three different login forms are designed in this portal. Registered student can fill the user id and password in the student corner form. New student can click on new student button for the registration. Click on feedback who want to give the feedback. Any Suggestion is used to give the suggestion by the students. Suggested button shows all suggestions submitted by the students. Implemented button displays information about implemented suggestions. Registered teachers can fill the user id and password in the teacher corner form. New teacher can click on new teacher button for the registration. Click on feedback who want to give the feedback. Any Suggestion button is used to give the suggestion by the teachers. Suggested button shows all suggestions submitted by the teachers. Implemented bbutton displays information about implemented suggestions. Registered other members can fill the user id and password in the other corner form. New member can click on new member button for the registration. Click on feedback who want to give the feedback. Any Suggestion is used to give the suggestion by the others. Suggested button shows all suggestions submitted by the others. Implemented button displays information about implemented suggestions.



Fig. 5(a): Login form of Students



Fig. 5(b): Login form of Teachers



Fig. 5(c): Login form of Others

Discussion forum is a forum of all registered member of the www.hsheshiksha.in. The discussion forum icon shows all about the forum. Teachers, students and others buttons shows list of member of the discussion forum.

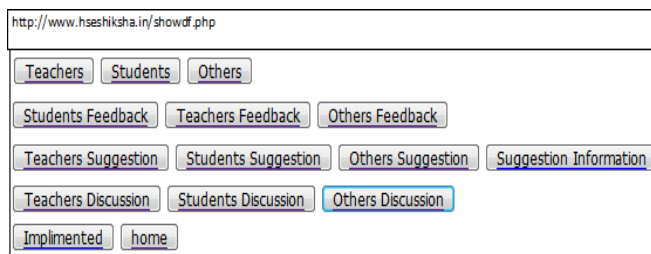


Fig. 5(d): Discussion Page

VIII. DATABASE DESIGN OF KP-HSES

The XAMPP Control Panel Version 2.5.8 and XAMPP for Windows Version 1.7.3 are used for creation of the database. Svc Apache, Svc MySql, Svc FileZilla, Svc Mercury and Svc Tomcat are modules of XAMPP contol panel. Open the XAMPP Control Panel Application. Click on Admin of MySql module. Write hses in the text box of create new data base and click on create button then the hses database is created. It is created on MySql localhost. Databases are managed inside phpMyAdmin. Student, teacher and others tables are created under the hses.



Fig. 6: Tables of hses database

Student Schema=(Stuid, Stuname, Class, Board, Gender, Locale, Medium, Stream, State, District, Email, Userid, Pwd, DOR, IK, CLSP, LM, QP, SY, Time, Region, HM, PEXam, SMSearch, Euse, AMCL, SMDL, ASM)

SRegistration Schema=(Stuid, Stuname, Class, Board, Gender, Locale, Medium, Stream, State, District, Email, Userid, Pwd, DOR)

SFeedback Schema=(Stuid, IK, CLSP, LM, QP, SY, Time, Region, HM, PEXam, SMSearch, Euse, AMCL, SMDL, ASM)

Teacher Schema=(Tid, Tname, Locale, Tsubject, Stream, Board, Gender, Medium, State, District, Email, Userid, Pwd, DOR, IK, CLSP, TM, QP, SY, Time, Region, HM, PEXam, SMSearch, Euse, AMCL, SMDL, ASM)

Teacher Schema is decomposed into TRegistration Schema and TFeedback Schema.

TRegistration Schema=(Tid, Tname, Locale, Tsubject, Stream, Board, Gender, Medium, State, District, Email, Userid, Pwd, DOR)

TFeedback Schema=(Tid, IK, CLSP, TM, QP, SY, Time, Region, HM, PEXam, SMSearch, Euse, AMCL, SMDL, ASM)

Others Schema=(Oid, Name, Gender, Locale, District, State, Qualification, Occupation, IK, CLSP, Email, Userid, Pwd, DOR, QP, SY, Time, Region, HM, PEXam, SMSearch, Euse, AMCL, SMDL, ASM, Parent, Help)

Other Schema is decomposed into ORegistration Schema and OFeedback Schema.

ORegistration Schema=(Oid, Name, Gender, Locale, District, State, Qualification, Occupation, Email, Userid, Pwd, DOR)

OFeedback Schema=(Oid, IK, CLSP, QP, SY, Time, Region, HM, PEXam, SMSearch, Euse, AMCL, SMDL, ASM, Parent, Help)

Sugmaster Schema=(Sid, Need)

ss Schema=(Sid, Stuid, Stype, Itype)

ts Schema=(Sid, Tid, Suggestion, Stype, Itype)

os Schema=(Sid, Oid, Suggestion, Stype, Itype)

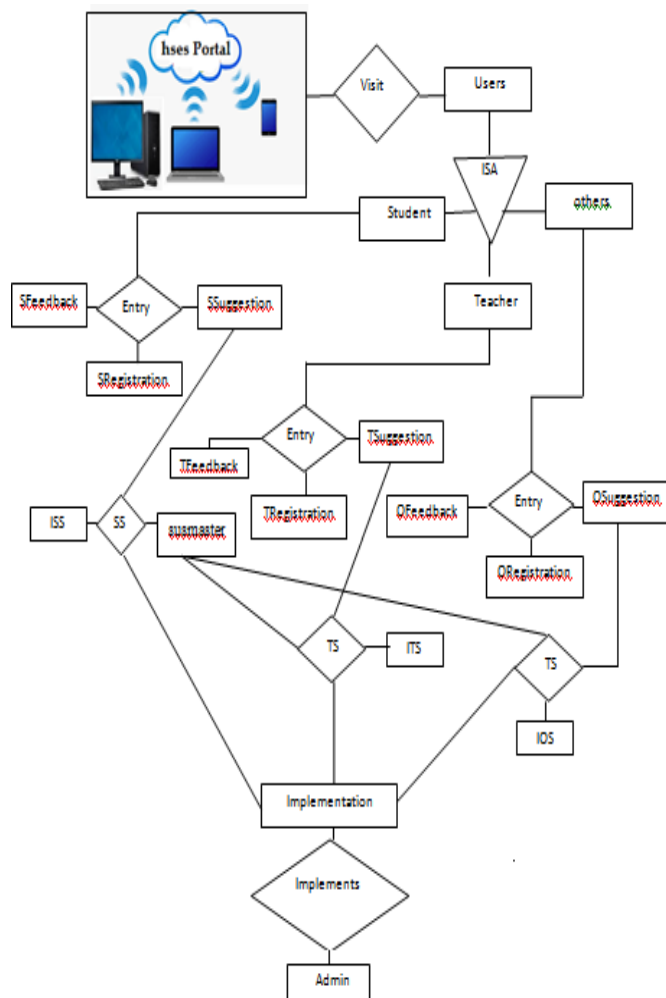
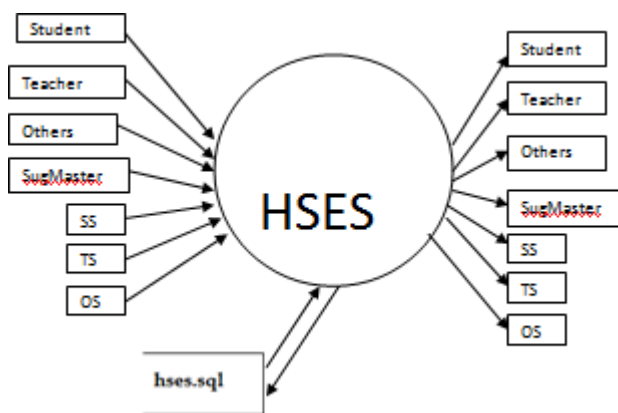


Fig. 8: Entity Relationship diagram for KP HSES



IX. OBSERVATION

After submission of feedback, users can give the suggestion as per own need. There is no bar to give the suggestion. SugNo stands for suggestion number. The full form of S, T, O and TSR are students, Teachers, others and Total Suggestion Rank. The suggestions are collected from September 2018 to January 2019. TSR is sum of ranks coming from teachers, students and others in the specific row. Related formula is given below:

$$TSR = T + S + O$$

The other category of suggestion includes a lot of suggestion verities. It is a suggestion number 32. By default suggestions are counted under the suggestion number zero and considered as nil.

Suggestions Details					
SugNo	Suggestion	SugRank			TSR
		S	T	O	
0	video lect of Bus. Maths in Hindi	1	13	0	14
1	Syllabus of class XI of CGBSE should be given	7	1	2	10
2	VL for physics in English	4	3	1	8
3	video lect of Physics of XII CGBSE	5	6	2	13
4	video lecture of Maths in Hindi	10	5	7	16
5	video lecture of Maths in English	9	0	0	9
6	video lecture of Phy in Hindi	3	2	0	5
7	video lecture of Phy in English	3	4	1	8
8	video lecture of Chemistry in Hindi	3	1	1	5
9	video lect of Chemistry in English	3	1	1	5
10	video lecture of Biology in Hindi	4	5	0	9
11	video lecture of Biology in English	5	2	0	7
12	video lecture of History in Hindi	7	4	0	11
13	video lecture of History in English	1	0	5	6
14	video lecture of Geography in Hindi	2	2	1	5
15	video lect. of Geography in English	2	0	3	5
16	video lect. of Political Sc in Hindi	4	4	1	9
17	video lect. of Political Sc in English	1	0	0	1
18	video lecture of Economics in Hindi	3	2	0	5
19	video lect. of Economics in English	2	1	0	3
20	video lect. of Accounting in Hindi	2	0	2	4
21	video lect of Accounting in English	2	1	3	6
22	video lecture of Finance in Hindi	4	0	2	6
23	video lecture of Finance in English	4	2	1	7
24	video lect of Bus. Maths in Hindi	5	0	0	5
25	video lect of Bus. Maths in English	5	0	0	5
27	video lect of Bus. Commu. in English	4	0	0	4
28	video lecture of Bus. Eco.in Hindi	5	0	0	5
29	video lecture of Bus. Eco.in English	5	4	0	9
30	video lecture of IP	7	1	0	8
31	video lecture of Comp. Sc.	10	4	1	15
32	Notes of Maths	1	2	2	5

X. RESULT & DISCUSSION

The suggestion number 26 is not suggest by any user of the portal. It related to video lecture of business economics in Hindi medium. Suggestion numbers 17, 19, 20 and 27 are not implemented in the portal but other suggestion numbers related requests are implemented. It is found that appreciable suggestions have come in the portal. It means that user's pole is increasing for video lecture.

CONCLUSIONS

The reason for preparation of this research paper is to develop a portal that will provide good study material of higher secondary level of student. In this paper, it is concluded that video lectures improve the quality of teaching as well as learning. Audio and video lecture are available on the Internet but they are not available with collective way. It will require to the more arranged.

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