

Designing and Implementation of an On-Line Test Using Classmarker for Assessment of Students

Dr. Vandana Ramteke

Assistant Professor

Zulekha College of Education,

Shantinagar Itwari, Nagpur.

E-mail -vandana16ramteke@gmail.com

Abstract

The present study is aimed at designing and implementing online test through classmarker, as an alternative to the traditional medium of paper and pencil test and to study the reaction of the students towards the developed online test by using classmarker as an online web-based testing service. It was an experimental study conducted on the secondary C.B.S.E school students of standard 9th at Nagpur city of Maharashtra state, India, for the subject Economics. The students had basic knowledge of computer application. Sample of 100 students of two C.B.S.E. school were purposively selected by non-probability sampling method. Self constructed reaction scale was used.

Result revealed online testing through the classmarker was an effective web-tool as it save time and energy of a teacher. Favourable reactions of the students indicated that they prefer to have an online test as it was a new avenue for the students to go through their online test process through the developed classmarker.

Keywords – Online Test, Classmarker and Reaction.

Introduction

The learner is seen as an active participant rather than a passive recipient in the process of learning, and his/her capabilities and potential are seen not as fixed but dynamic and capable of development through direct self-experience. The report, “**Learning without Burden**” by NCF-2005 notes that public examinations at the end of class should be reviewed with a view to replacing the prevailing text-based and rote learning. The demand of the 21st century is to digitalize our country and to produce tech-oriented as well as smart teachers who can change the scenario of traditional teaching-learning to technology based teaching.

Today, the internet has revolutionized the way of education; educators use computers to teach classes, send assignments to students who never have to enter into the classrooms and receive work online from the classes they teach. The Online examination system helps to completely automate the old manual procedure of conducting exams. Usually it is done through a Web Based Online Examination Software or an Intranet variant. It also significantly eliminates the need for monitoring while the exam is being taken. All instructions are displayed to the exam taker before the tests begin.

Now a day's different types of software and gadgets are used to make education as an informative hub for the upcoming generation. One of the technologies of modern era is social networking, mobile apps, online testing services and different kinds of web-tools available on internet for different purpose among different level of audience.

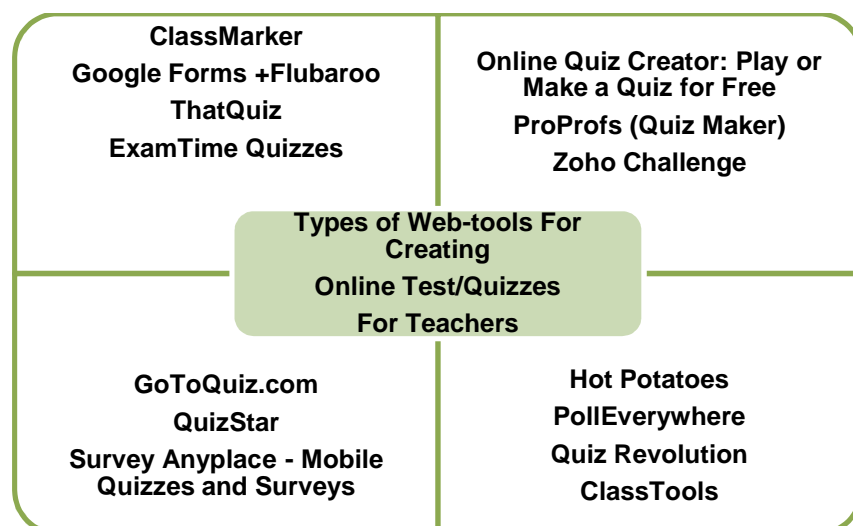
Electronic Assessment

Online assessment is used primarily to measure [cognitive](#) abilities, demonstrating what has been learned after a particular educational event has occurred, such as the end of an instructional unit or chapter. The first element that must be prepared when teaching an online course is assessment. Assessment is used to determine if learning is happening, to what extent and if changes need to be made.

Electronic assessment, also known as e-assessment, computer assisted/mediated assessment and computer-based assessment, is the use of information technology in various forms of assessment such as educational assessment, health assessment, psychiatric assessment, and psychological assessment.

E-assessment is the process of using computers to complete and mark examinations and assessments, removing the need for pen and paper.

Types of Web-Tools for Creating Online Assessment



These are the various website available on internet for taking an online assessment. A teacher can create online tests & quizzes easily. Over 100,000 quizzes created and also help to create online multiple-choice, fill-in-the-blank, matching, short answer and true and false questions all on the same test. One can also insert instructions and divide the test into multiple sections. These professional web-based testing service is an easy-to-use customizable online test maker for business, training & educational assessment with tests and quizzes graded instantly - saving hours of paperwork This tools are free as well as paid and above all no software installations required and its can be use very easily by a layperson also.

Pros of Online Assessments

Online assessments are based on using computer technology and the networking ability of the Internet to deliver and score tests. Many different question formats are available and can be implemented within the same test, such as multiple choices, multiple response, and fill in the blank and true/false. Online assessments are becoming more popular as a method of evaluating student performance, but this form of assessments has its pros and cons.

❖ Accessibility

The Distance from a university campus is no longer a barrier in the education of students. Today's generation have the advantage of utilizing time effectively, for the student to access online education, all he or she needs is a personal computer with internet access with which he or she can find the desired courses online and enroll.

Travel is a one of the major issue that is associated with taking on-the-campus classes if the students reside in remote rural areas. Online education has provided a remedy for issues with those residing remotely. Now, they can attend online tests and classes and save time and money.

❖ A Flexible Schedule

The good thing about an online education is its effective use of time. As a student of online education, does have to maintain a flexible schedule, they can give their tests as per their own pace within the given schedule.

❖ Offers Access to Students with Disabilities

A great advantage of online testing is its accessibility to students with disabilities. Computers can be customized to cater to those with various physical disabilities in order to place them on a level playing field with other students.

❖ Easy Grading

Giving grades for online assessment is easier than the conventional way of examination and is time saving advantage for educators. Even on tests that require grading essay type questions, the submitted exams are organized and easy to read for quicker grading.

❖ for Students

1. Online assessments can give one instant feedback, unlike paper examinations in a traditional classroom learning session.
2. Automated online assessments give us the option of taking practice tests whenever we want. Students don't always have to be in a classroom setting to take assessments.
3. Some assessments are Internet-based, which allows the student to take the test at home or anywhere else he or she likes.

❖ for Teachers

1. Teachers can distribute multiple versions of the exams and assignments without having to manually monitor which students got which tests.
2. Electronic assessments allow teachers to quickly evaluate the performance for the group against the individual.
3. Online assessments take up less storage space in respect to keeping records than paper. All data can be stored on a single server.
4. Teachers can mix and match the question styles on exams, including graphics and make them more interactive than paper exams and eliminates human error in grading.

Cons of Online Assessment for Students

❖ Connectivity issues

Connectivity can be a serious disadvantage of online testing. A student's internet connection either in a school lab or at home can drop at any time for various reasons. In some cases this could cause the student to lose work or inadvertently submit tests that are incomplete.

❖ Cheating

The chances of cheating during an online test are tough to eliminate but to some extent it can be control. In fact, unless an instructor is physically watching someone take the test, it is almost impossible to control. Still e assessment basically requires ethics and trust.

❖ For Teachers

1. Technology isn't always reliable. Information can be lost if a system breaks down. In some cases, teachers need some technical expertise to create exams. The costs to set up an electronic assessment system in a learning institution or business training environment can cost thousands, even more than this.
2. Testing online is not suitable for essay writing and analysis or cognitive thinking testing.
3. Illiterate can't use it well efficiently. Basic computer knowledge is compulsory to have.
4. Theoretical exam can't be conduct in this. Answers on online assessments can only be right or wrong. There is no room for explaining our answer or getting partial credit. For example, in a geometry or calculus exams on paper, a teacher can see how one has worked out equation. He/she can identify where we went wrong to come up with the wrong answer. In this case, he/she can give us partial credit.

1. ClassMarker

Classmarker secure, professional web-based Testing service is an easy-to-use, customizable online Test maker for business, and training & educational assessment with tests & quizzes graded instantly saving our hours of paperwork. It allows creating online test in minutes whether thousands of users, it will save long, painful hours of creating distributing and grading tests. One has not to re-enter the questions or tests and results are calculated instantly and accurately as classmarker is online there is no software installation for us or the users so tests can be taken instantly 24/7.

We can prepare batches of questions offline and import them to classmarker via the question bank. Using classmarker means one doesn't have to pay web developers, designers or network engineers to keep our online exams up and running.

Key features of Classmarker

- **Deliver our Tests, in our way**, Register user groups with individual Classmarker logins or simply choose to save individual user details at the beginning of each Test. Use our Statistics section to compare our users' results across Groups, Links and Categories.
- **Create quizzes in multiple languages**, Classmarker offers a multilingual, student interface with language options including; French, Spanish, Italian, German, Portuguese and Arabic etc.
- **Brand your Quizzes and custom certificates** with our organization's logo and/or colors and create separate links to the same Quiz to use various settings or themes each time.
- **If we have our own website**, pass custom variables to and from our website along with our test results. One can also share and view other shared Tests from the Community section.

- **Charge for our exams**, Optionally set a charge for our own exams, so we can sell our Quizzes online and can be paid instantly.
- **Variety of test can be taken**, Multiple choices, True/False, short answer, essay & more question types. Add time limits and preset test availability dates.

Tests can be both created and taken using standard

- ❖ Computer web browsers
- ❖ Smart phones
- ❖ Tablets
- ❖ Chromebooks

Smart devices including

- ❖ iPhone
- ❖ iPod touch
- ❖ iPad
- ❖ Android

ClassMarker is an online system, so one need internet access and it recommend using a modern web browser.

- ❖ Internet explorer 6+
- ❖ FireFox 2.0+
- ❖ Safari 3+
- ❖ Opera 10.6+
- ❖ Chrome 8+

Importance of the Study

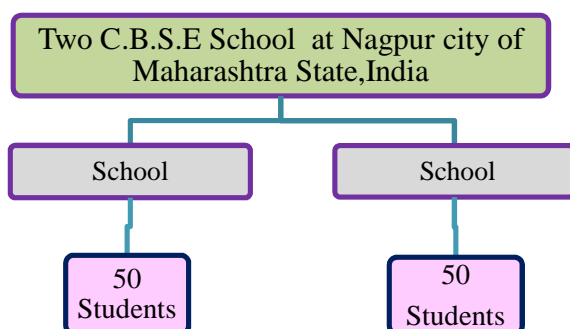
Learner assessments are essential in education. Tests and surveys inform the instructor whether teaching methods and course structures are successful. These assessments also determine if student progress is satisfactory. Online assessment tools provide instructors with many ways to build, distribute, and compile information quickly and easily. This present study is based on design and implementation of on-line test using classmarker for assessment of students which will highly effective way to open doors of web technology in the assessment process and will provides a stress free environment to the students for examination.

Objectives of the Study

- To design and develop an online test on classmarker for the subject Economics to students of class IX C.B.S.E.
- To study the reaction of students towards developed online test on classmarker.

Sample of the Study

The sample size for the final study was 100 students, studying in IX class C.B.S.E. from the two schools at Nagpur city of Maharashtra state, India. The age of students were ranging from 13 to 15 years. The medium of instructions in both the schools was English.



Tools For Data Collection

Self constructed reaction scale for measuring reaction of students towards developed online test through classmarker.

Data Collection Procedure

Self constructed reaction scale (towards the classmarker) was administered to total number of 100 students from two C.B.S.E. school at Nagpur city of Maharashtra state, India. The researcher assisted during the administration of the questionnaire. Data collection was done immediately after the administration and all the response sheets were retrieved from the students.

Analysis and Discussion of Results

Objective No:-1

For The Fulfillment of Objective Number- 1 the Following Process was done, it is as follow:-

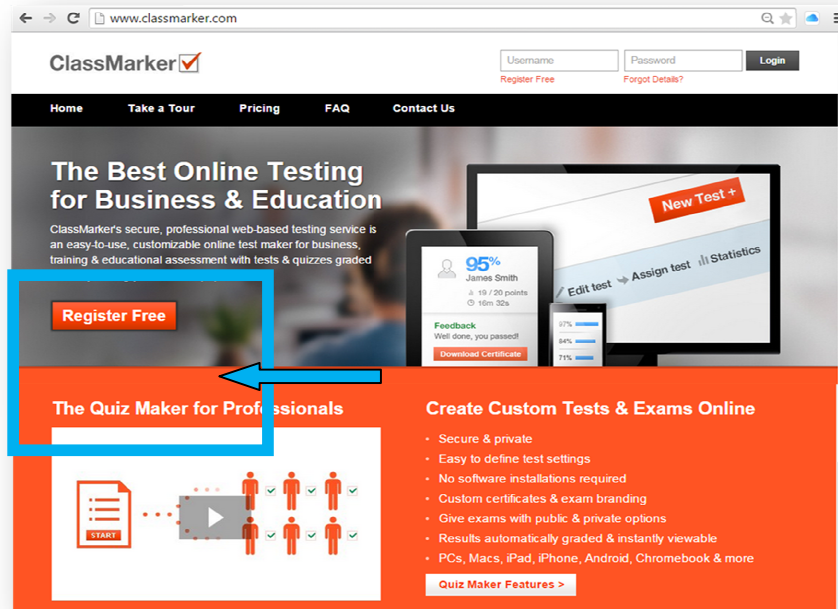
Design an online test through Classmarker and set up statistics collection

The researcher used a free online website (<https://www.classmarker.com/>) to conduct test for the students of C.B.S.E.at Nagpur city of Maharashtra state, India. The process of creating online tests is fairly simple, below is given detail about whole process how the account have been created for conducting test on Economics subject for class IX C.B.S.E students..

Step:-1

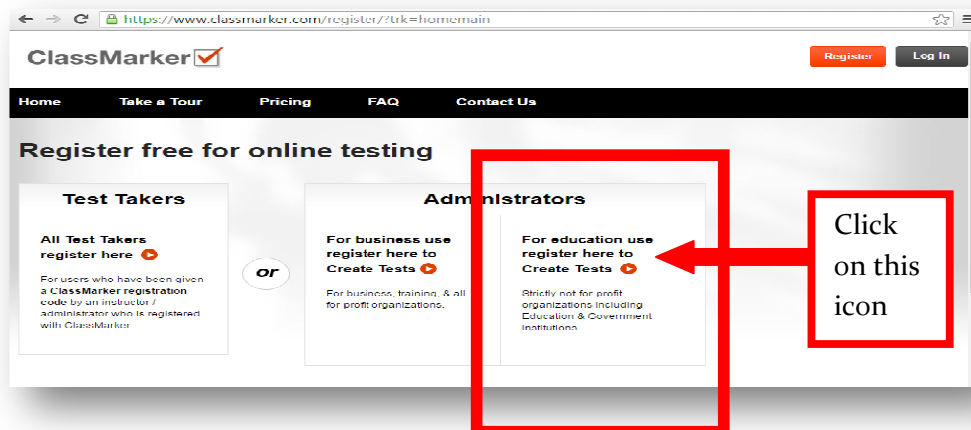
Go to (<https://www.classmarker.com/>), a register free page will appear, click on the register free icon you will get register free for online testing page will appear on your screen. Don't forget to verify your email address so that results and other notifications can be sent to you.

Screenshots Of The Classmarker



Step:-2

“Register free for online testing” will appear. There are two options, one for business use register here to Create Tests second one for education use. Researcher used for the present study a free online testing for education purpose only.



Step:-3

After this “Register today for a Free ClassMarker account” will appear, enter your details, like username, password, email address etc.

A screenshot of the ClassMarker registration form. The URL in the browser is https://www.classmarker.com/register/online-test-creator/?education. The page has a navigation bar with links: Home, Take a Tour, Pricing, FAQ, and Contact Us. The main heading is 'Register today for a Free ClassMarker account'. Below this, there is a section titled 'Account type: Not-for-profit' with a green checkmark icon. It lists three benefits: '+ Free accounts come with full testing functionality available', '+ No credit card required', and '+ Register in under 1 minute'. Below this, there is a section titled 'Register to Create Tests with ClassMarker!'. It contains several input fields: 'First name *', 'Last name *', 'Username *', 'Password *', and 'Email address *'. There are also dropdown menus for 'Select your Country *' (set to India) and 'Select your Time Zone *' (set to GMT+05:30 Sri). Below these is a CAPTCHA image with the text 'D9C7yH'. A text box below the CAPTCHA says 'Type the characters from the image above *'. At the bottom of the form, there is a checkbox for 'I agree with the ClassMarker.com Terms & Conditions and Privacy Policy.' and a red 'Register' button. A note at the bottom left says '* fields are mandatory'. The footer contains links for Home, About ClassMarker, Terms / Privacy, Security, User Manual / Screenshots, Quick Link/Support, Quiz Maker API, and Partners.

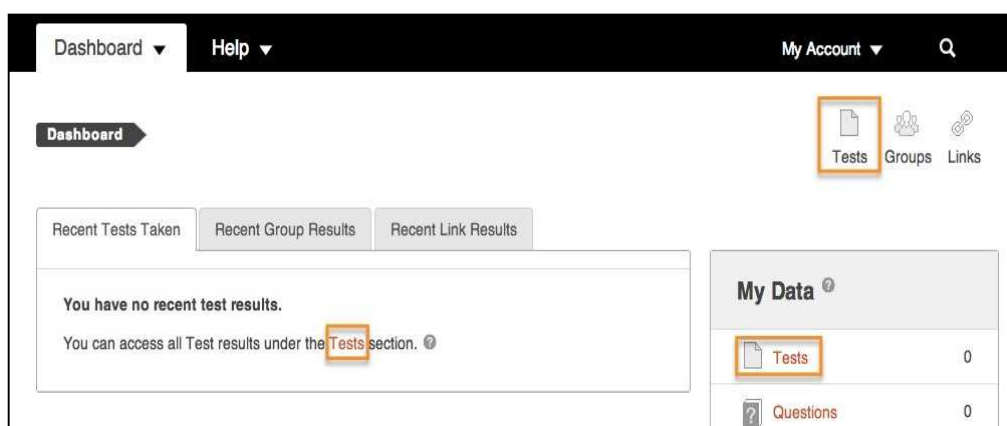
Step 4:- Create a test

The Tests section is where we can create and edit questions and tests. There are a number of different question types available. Create a test with fixed questions, where the same questions are displayed each time the test is taken, or we can utilize

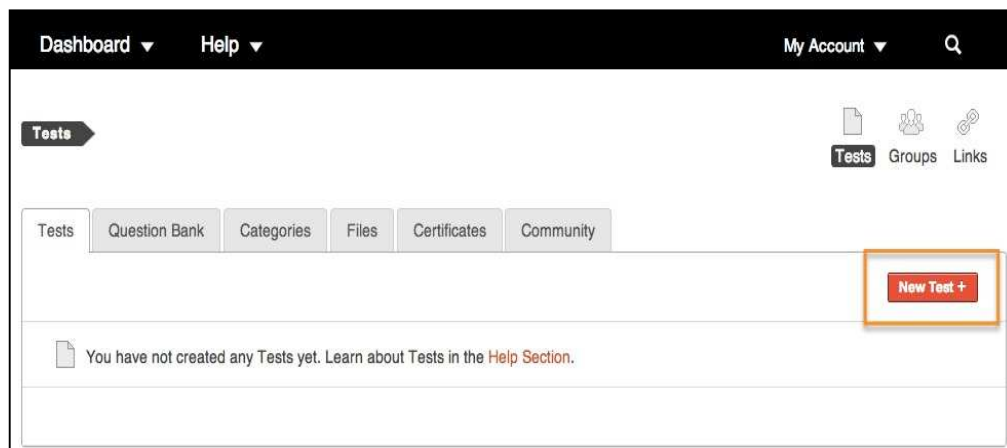
Step:-4 create a test

Start by creating one test, questions, categories and more under the Tests section. The Tests section is where we can create and edit questions and tests. There are a number of different question types available. Create a test with fixed questions, where the same questions are displayed each time the test is taken, or we can utilize the auto-selection feature where questions are selected at random from your specified categories each time the test is taken.

1. Go to the Tests section via any of the available links on your Dashboard page.



2. Select 'New Test'.



3. Enter a Test name and select 'Start Adding Questions'



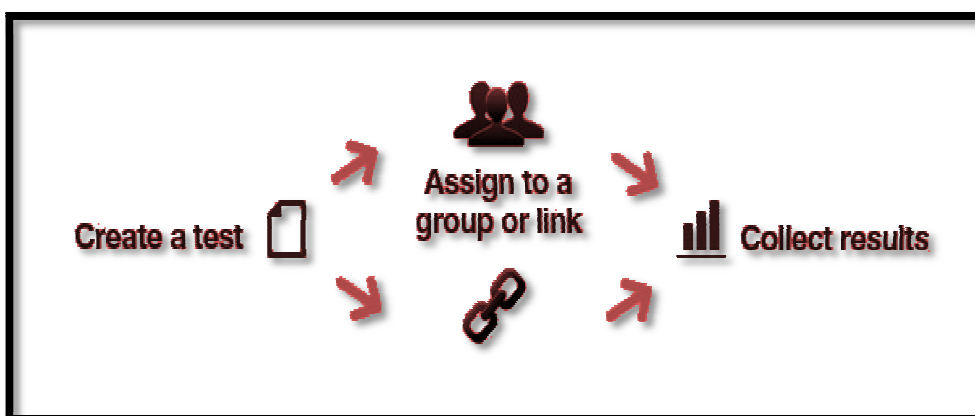
Step 5:- Assign test using public or private options

Choose to Assign (distribute) one tests via groups (where users log in via the Classmarker website) or via Link for non-registered users under the Assign section. When one assign a test it will be provide us with a number of customizable settings to ensure our test is delivered according to our requirements. These include time & date availability, number of attempts allowed, whether a

certificate is to be included, the pass mark, pass and fail feedback messages plus many more settings. You can also save default settings to streamline the assign process.

Classmarker gives two options for assigning (providing access) to Tests:

- ❖ Assigning Tests via link
- ❖ Assigning Tests via group

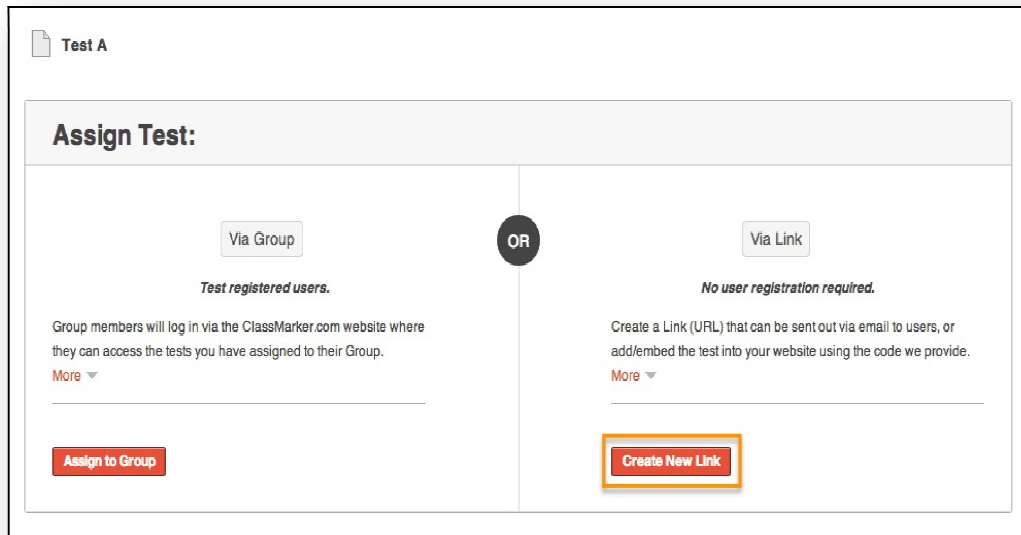


Assigning Tests via link

1. At the bottom of 'Edit Test' page, select the green 'Assign' button



2. On the Assign Test screen select the 'Create New Link' button



Test A

Assign Test:

Via Group

Test registered users.

Group members will log in via the ClassMarker.com website where they can access the tests you have assigned to their Group.

More ▾

Assign to Group

OR

Via Link

No user registration required.

Create a Link (URL) that can be sent out via email to users, or add/embed the test into your website using the code we provide.

More ▾

Create New Link

3. Enter a Link Name. This is only for our reference; it is not seen by Test takers. Test takers will instead see the Test name when taking Tests.

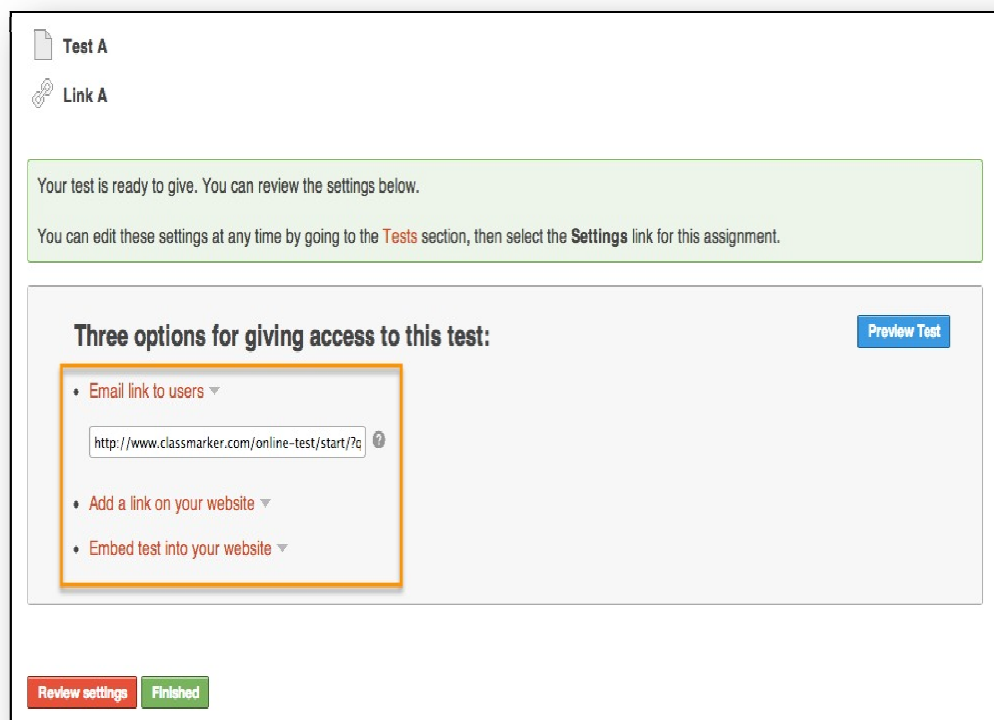


Test A

"Creating new link"

Link name: ?

4. **Provide access to our Test via the Links provided to us under 'Three options for giving access to this Test': We can also edit our Links settings at any time from the Links page to change how it is given.**



Assigning Tests via Groups:

1. **At the bottom of your 'Edit Test' page select the green 'Assign' button**



2.

2. **On the Assign Test screen**

select the 'Assign To Group' button

Test A

Assign Test:

Via Group

Test registered users.

Group members will log in via the ClassMarker.com website where they can access the tests you have assigned to their Group.

[More ▾](#)

Assign to Group

OR

Via Link

No user registration required.

Create a Link (URL) that can be sent out via email to users, or add/embed the test into your website using the code we provide.

[More ▾](#)

Create New Link

3. Choose the Group that to be assigning Test to and select 'Next'.

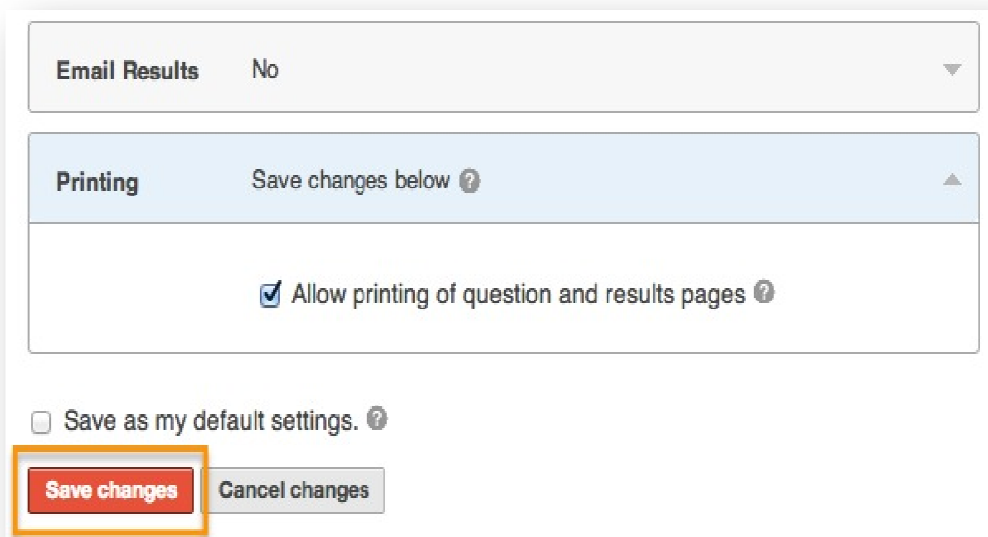
Select Group(s)

☒ Group A

Next

[+ Create new Group](#)

4. Define your Test Settings and select 'Save changes'



Email Results No

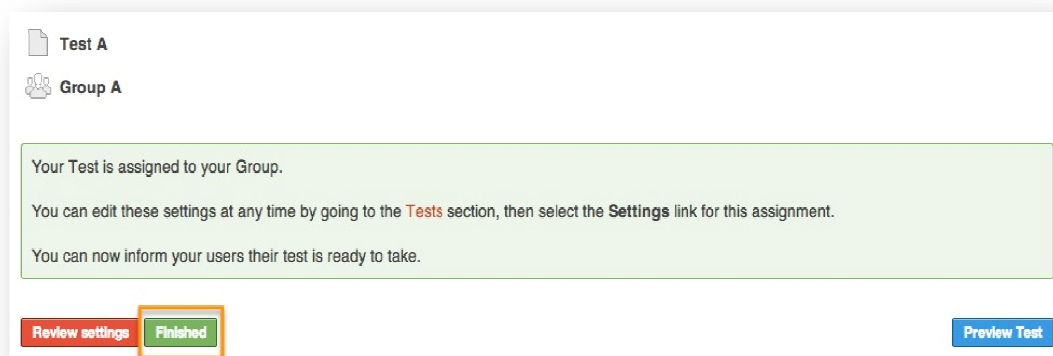
Printing Save changes below ?

☒ Allow printing of question and results pages ?

☐ Save as my default settings. ?

Save changes Cancel changes

5. Now inform the users to that the test is ready to been taken



Test A

Group A

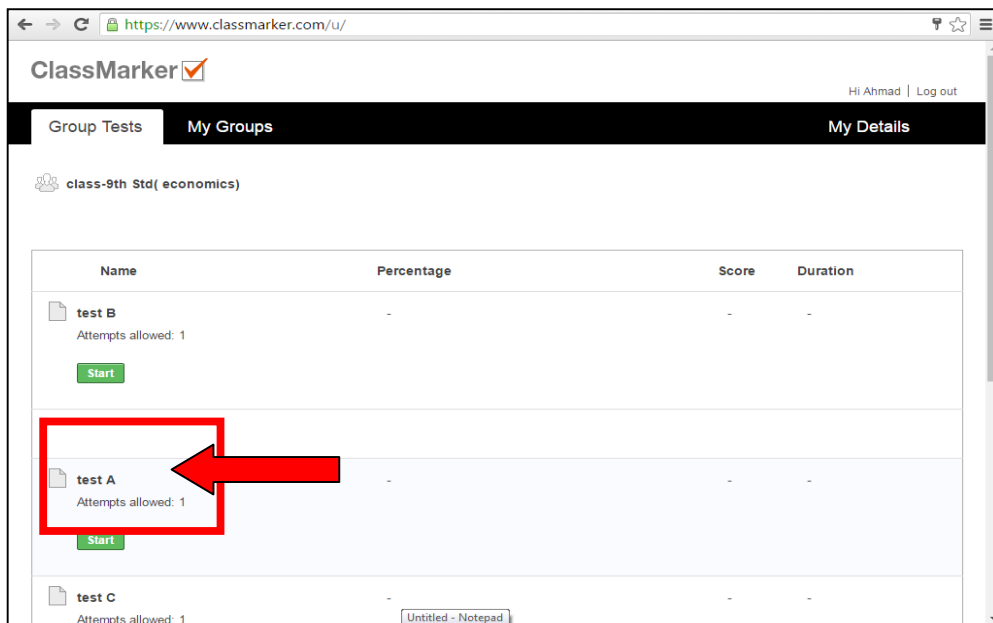
Your Test is assigned to your Group.

You can edit these settings at any time by going to the **Tests** section, then select the **Settings** link for this assignment.

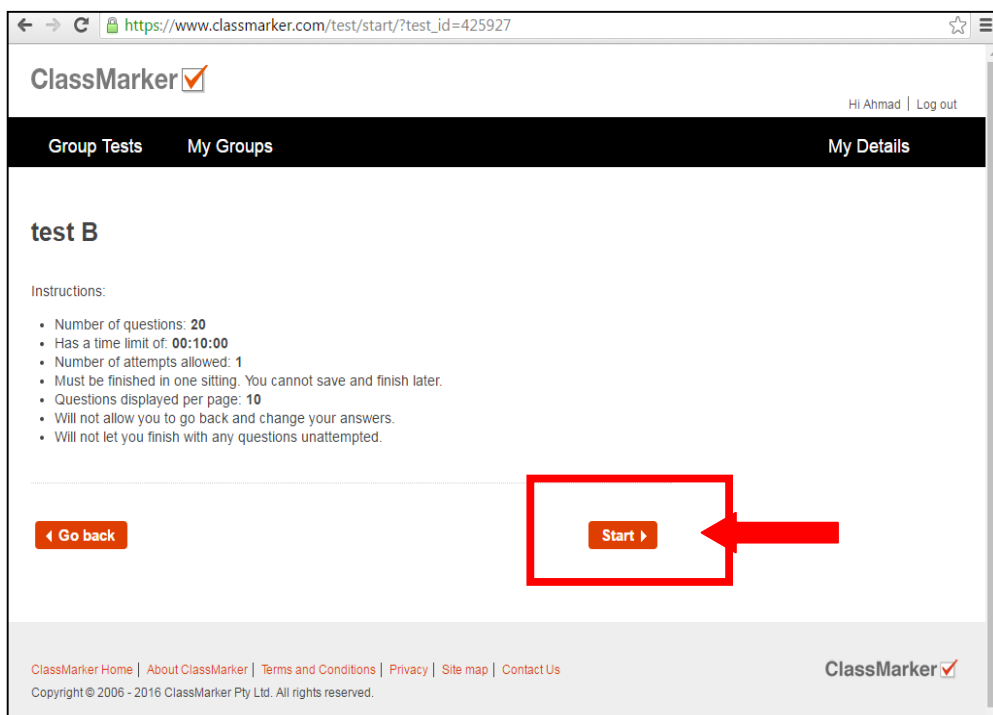
You can now inform your users their test is ready to take.

Review settings Finished Preview Test

Now the students as per the instruction they go through their test



Read the instruction and click onto the start button to take test



Step 6:- Analyze results

Analyze results under the Results section instantly. One can view test results in many ways with Classmarker, from viewing an individual's progress in real time, to aggregated statistics for tests, questions, categories and more. ClassMarker offers the ability to export detailed results reports to Excel where you can sort and filter the data as you require.

Screenshot of Research Test Taken On Classmarker

The screenshot shows the ClassMarker interface. At the top, there's a navigation bar with 'Group Tests', 'My Groups', and 'My Details'. Below this, a group is selected: 'class-9th Std(economics)'. The main content area displays a table of test results:

| Name | Percentage | Score | Duration |
|-------------------------------|------------|-------|----------|
| test B Attempts allowed: 1 | 25% | 5/20 | 00:05:23 |
| test A Attempts allowed: 1 | 65% | 13/20 | 00:06:28 |
| test C Attempts allowed: 1 | 55% | 11/20 | 00:04:44 |
| test D Attempts allowed: 1 | 55% | 11/20 | 00:05:00 |

Each row has a 'Results' button. At the bottom of the page, there's a footer with links: 'ClassMarker Home', 'About ClassMarker', 'Terms and Conditions', 'Privacy', 'Site map', and 'Contact Us'. It also includes the copyright notice: 'Copyright © 2006 - 2016 ClassMarker Pty Ltd. All rights reserved.' and the ClassMarker logo.

For a full history of our results go to the main navigation and view the Tests, Groups or Links sections. Locate the Test, Group or Link results one would like to view and select 'Results'.

Objective No: - 2

Computed Percentage on Reaction of Students towards Developed Online Test on Classmarker

| N | Question Asked | Students Responses | | |
|---|---|--------------------|-----|------------|
| | | Yes | No | Don't know |
| 1 | I prefer to have my test online through classmarker. | 81% | 19% | 0 |
| 2 | I find it difficult to give my test online | 21% | 79% | 0 |
| 3 | I have problems finding my way around a Website | 22% | 68% | 10% |
| 4 | In general, I was satisfied with this course arrangement and taking tests online. | 80% | 20% | 0 |
| 5 | It is fun to figure out how Classmarker work. | 89% | 11% | 0 |
| 6 | I was quite at ease while interacting with Classmarker. | 87% | 9% | 4% |
| 7 | I wish I could choose more online test through Classmarker on other subjects too. | 93% | 7% | 0 |

Table No-1

From the table -1

1. It was revealed that 81% of the students prefer to have an online test, while 19% students said they don't prefer it.
2. 21% of students found it difficult to give their test online through classmarker while the rest 79% doesn't face any difficulties
3. 22% of students reported that they had problems in finding the way around a Web Site and 68% students said that they are good enough in working with the website.
4. 80% students was satisfied with course arrangement and taking tests online through classmarker while 20% reported they were not.
5. It was revealed that 89% students was very excited and fun to figure out how Classmarker work
6. From the above table it is clearly show that, 87% students was quite at ease while interacting with the Classmarker and 9% were not while 4% students reported that they don't know.
7. 93% students wish that they have more online test through Classmarker on their other subjects too.

Conclusion

Thus this can conclude through the data that developed online test through classmarker has proved effective, no more printing or marking test papers. The results can be view and analyze instantly it is automatically. Administrator has a privilege to create, modify and delete the test papers and its particular questions. User can register, login and give the test with his/her specific id, and can see the results as well. If students are given online test through classmarker frequently, they tend to study more and with more regularity.

Favourable reactions of the students indicated that they prefer to have an online test as it was a new avenue for the students to go through their learning process and they want to give more such type online test on other subjects also through developed classmarker. These might be the reason that students reacted favourably towards the developed classmarker.

Recommendation

- Classmarker (as web-based Testing service) offer multilingual student interface with language options including; Spanish, Russian Arabic, and Chinese etc it should also be available in regional language of the Indian state (Hindi and Marathi).
- Taking the advantages of the Web 2.0 technology one can help in designing the online tests for different courses.
- Classmarker should also be available in mobile app too.
- Teachers need to be trained in using such online testing approach as the part of their curriculum. Workshop, seminars and training programme could be conducted for the teachers to provide them an exposure towards different type of technology like classmarker to undertake innovative practices in the classroom.
- Online examination through different web tool service for conducting test should be promoted in **rural areas** to achieve the goals of “**Digital India**”.
- Teachers can use classmarker (online web-based Testing service) for professional as well as personal development.

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