

## Higher secondary school student's perception towards scribblar for learning mathematics

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### Abstract

Mathematics occupies an essential place in the school curriculum. It has been its significant part ever since the beginning of formal education and it continues to be so. Scribblar is innovative online tool for mathematics teaching. Variables: Higher Secondary School Students as dependent variable and mathematics teaching using Scribblar as independent variable. Objectives: To give demo class to higher secondary school students about Scribblar for mathematics teaching; To find out the higher secondary school students perception towards Scribblar for mathematics teaching. Survey Method is used for gathering of the data regarding current conditions. The investigator wanted to collect the perception towards scribblar from Higher Secondary School Students. Samples were selected using purposive sampling technique (those who are chosen mathematics as main or optional subject). The investigator constructed, structured and validated five point scale (strongly disagree to strongly agree). The scale consists of 21 statements, all are positive question there is no negative statements about scribblar. Finding of the study revealed that, all the students have positive perception towards scribblar for Learning Mathematics.

**Keywords:** scribblar, learning mathematics, Higher secondary school student's

### Introduction

Scribblar is web 2.0 online tool and real time multi-user whiteboard which can be used for revising artwork and images. The tool can also be used for creative brainstorming and planning of projects regardless of distance. Scribblar offer the possibilities to upload and download image, text, chat, and live audio collaboration. The tool is also used by teachers and learning facilities. With Scribblar pro you are allowed to add you own logo and branding. Guests are allowed to join rooms and sessions without subscribing.

The term 'virtual learning environment' (VLE) refers to the components in which learners and tutors participate in online interactions of several kinds, comprising online learning (Hall, I. & Higgins, S, 2005) [10]. A virtual learning environment (VLE) is a set of teaching and learning tools designed to enhance a student's learning experience by including computers and the Internet in the learning process. The principal components of a VLE package include curriculum mapping, student tracking, online support for both teacher and student, electronic communication (e-mail, threaded discussions, chat, Web publishing), and Internet links to outside curriculum resources. E-learning refers to the use of electronic media and information and communication technologies (ICT) in education. E-learning is widely enclosure of all kinds of educational technology in learning and teaching. E-learning is enclosure of, and is widely synonymous with technology-enhanced learning (TEL), computer-based training (CBT), multimedia learning, computer-assisted instruction, computer-based instruction (CBI) or internet based training (IBT), web-based training (WBT), online education, computer-aided instruction (CAI), virtual education, m-learning, virtual learning environments (VLE) (which are also called learning platforms), and digital educational collaboration.

### Need and Significance

Every individual has the ability to learn. Every individual is

different but they can all learn. Not all individuals learn in the same way and it should, therefore, be taught in different ways. Universally, Mathematics is taught as one of the subjects in Schools, Colleges and Universities. Mathematics is considered as the queen of all Sciences (Latham, P, 2002) [16]. It is an essential subject taught to the students to develop the skills of reasoning, logical thinking and problem solving. Majority of the pupils feel that Mathematics is a difficult subject and it can be understood and followed only by intelligent students. Those who fail in the subject develop hatred towards it. At present majority of the Mathematics teachers follow traditional methods of instruction and learners tend to be passive listeners. Due to reevaluation of technology, teacher may use innovative online tool for mathematics teaching (Kent P, 2006) [15]. Hence, Scribblar is effective innovative online tool for teaching.

### Variables

Higher Secondary School Students as dependent variable and mathematics teaching using Scribblar as independent variable.

### Objectives

- To give demo class to higher secondary school students about Scribblar for Learning Mathematics.
- To find out the higher secondary school students perception towards Scribblar for learning mathematics.

### Hypothesis

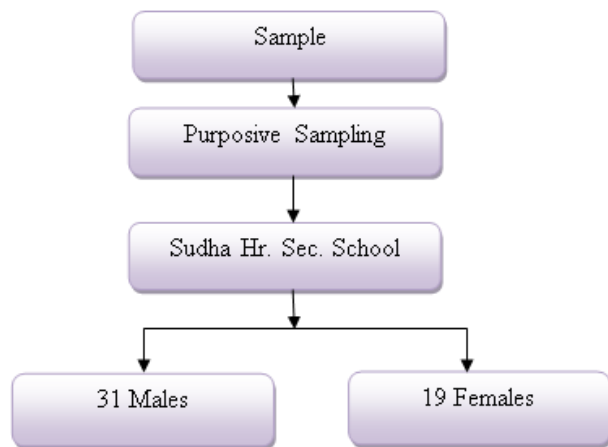
Whether higher secondary school students have positive or negative perception towards Scribblar for learning mathematics.

### Methodology

Survey Method is used for gathering of the data regarding current conditions. The investigator wanted to collect the perception towards scribblar from Higher Secondary School Students.

**Sample**

A sample comprised of 50 (31 males and 19 girls) selected from sudha higher secondary school, thirukkanur, Puducherry. Samples were selected using purposive sampling technique (those who are chosen mathematics as main or optional subject).



**Fig 1:** Sampling technique

**Tool**

The investigator constructed, structured and validated five point scale (strongly disagree to strongly agree). The scale consists of 21 statements, all are positive question there is no negative statements about scribblar. In the perception scale totally four dimensions is there such as Online Whiteboard, Measurement and Academic Achievement, Information Access and Communication. If respondents strongly agree that given statement will be provided 5 points, Agree 4 points, Neutral 3 Points, Disagree 2 Points and strongly disagree 1 Points.

**Data collection Procedure**

Researcher administered the final tool on a sample of 50 students of Sudha Higher Secondary School, affiliated to Pondicherry Govt. The investigator got permission from school principal to conduct the survey on Students perception towards Scribblar for learning mathematics. Before going to collect the data from respondents, investigator gave brief introduction about different mode of examination. The investigator collected data from graduate students of PVP College Arts and Science College and data were entered into SPSS and analysed.

**Data Analysis**

**Table 1:** Students Perception towards Scribblar for Mathematics Teaching

Students Perception towards Scribblar on Mathematics Teaching [()* Number of Persons]		
Online Whiteboard	Agree	Strongly Agree
1. I feel online whiteboard easy to use	22% (11)	60% (30)
2. Online Whiteboard is legible when instructor type something on whiteboard	16% (8)	80% (40)
3. I believe take notes through snapshot	12% (6)	68% (34)
4. Online Whiteboard is more effective compared than blackboard	18% (9)	72% (36)
5. I think participant also can write on the Online Whiteboard	12% (6)	82% (41)
Measurement and Academic Achievement		
1. I expect that Scribblar can be used to increase the motivation to learn.	14% (7)	74% (37)
2. I think Scribblar develop my academic achievement	20% (10)	70% (35)
3. I feel that the use of Scribblar increase the effectiveness of learning	14% (7)	78% (39)
4. I believe that my achievement is possible to increase after the use of Scribblar	12% (6)	80% (40)
5. I think that using Scribblar lead to my learning process	28% (14)	70% (35)
6. Scribblar can be used to enhance the traditional learning	6% (3)	94% (47)
Information Access		
1. I can download the materials which is uploaded by instructors	14% (7)	82% (41)
2. I am enjoying when using a Scribblar	12% (6)	74% (37)
3. Using Scribblar save time and effort to get the information	14% (7)	84% (42)
4. Access the information become easier when using Scribblar	14% (7)	76% (38)
5. I can easily download the materials in Scribblar platform	10% (5)	90% (45)
Communication		
1. Scribblar remove the limitation of place and time	10% (5)	90% (45)
2. I believe that Scribblar encouraging the interaction and participation	12% (6)	84% (42)
3. I think that learning using Scribblar facilitate communication between teacher and learner	22% (11)	78% (39)
4. I feel that Scribblar fosters that collective cooperation among students	24% (12)	60% (30)
5. I think that chat with instructor while deliver lecture on whiteboard	14% (7)	74% (37)

**Online whiteboard**

60% (SA) of the respondents stated that, online whiteboard easy to use, 80% (SA) of the respondents stated that, online whiteboard is legible when instructor type something on whiteboard, 68% (SA) of the respondents stated that online whiteboard is more effective compare than blackboard, 82% (SA) of the respondents stated that participants stated that, participants can also write online interactive whiteboard.

**Measurement and Academic Achievement**

74% (SA) of the respondents stated that, scribblar can be used to increase the motivation to learn, 70% (SA) of the respondents stated that scribblar develop my academic achievement, 78% (SA) of the respondents stated that, increase the effectiveness of learning, 80% (SA) of the respondents stated that, believe my achievement is possible to increase after the use of scribblar, 70% (SA) of the

respondents stated that, scribble lead to my learning process, 94% of the respondents stated that, scribble enhance the traditional learning process.

### Information Access

82% (SA) of the respondents stated that, easy to download the materials which is uploaded by instructors, 74% (SA) of the respondents stated that, enjoy scribble when using scribble, 84% (SA) of the respondents stated that, scribble save time and effort to get the information become easier when using scribble.

### The communication

90% (SA) of the participants stated that scribble remove the limitation of place and time, 84% (SA) of the participants stated that scribble encouraging the interaction and participation, 78% (SA) of the respondents stated that, scribble facilitate communication between teacher and learners, 60% (SA) of the respondent stated that scribble fosters that collective cooperation among students, 74 % (SA) of the respondents stated that chat facilities available instructor while deliver lecture on whiteboard.

### Major Findings

- 80% (SA) of the respondents stated that, online whiteboard is legible when instructor type something on whiteboard
- 94% of the respondents stated that, scribble enhance the traditional learning process.
- 84% (SA) of the respondents stated that, scribble save time and effort to get the information become easier when using scribble.
- 90% (SA) of the participants stated that scribble remove the limitation of place and time, 84% (SA) of the participants stated that scribble encouraging the interaction and participation.

### Suggestion

- Teachers may use this online tool for teaching
- New user can watch the video which is available on [www.scribble.com](http://www.scribble.com) (Basics of Scribble)
- Subject wise you can create room for virtual learning
- Beginners use the trail version (15 days or 30 days)
- After master in the Scribble, you can subscribe monthly or yearly based on your requirements

### Conclusion

Information and Communication Technologies to support new pedagogical approaches for learners. In the traditional classroom, the potential for learner-instructor and learner-learner is very high, but instructors have largely ignored this mandate for change and continue to employ the lecture mode as the predominant method of instruction (Beeland, W.D, 2001) [2]. In the virtual classroom, on the other hand, technology supports collaborative learning, heterogeneous groupings, problem solving and higher order thinking skills-educational process that a lecture format cannot facilitate. All the dimensions (Online whiteboard, measurement and academic achievement Information access, communication) students have responded positive perception towards scribble. Majority of the students have positive perception towards scribble for Learning Mathematics.

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