

# IPAD AS A TOOL TO CHANNELISE THE DIVERGENT THINKING OF SECONDARY LEVEL LEARNERS – AN EXPERIMENTAL STUDY

Research  
Paper

## ABSTRACT

*Technology plays a vital role in all the fields. The use of iPad in education is rapidly emerging all over the world. It paves a way to channelize the thinking skill which is the base for all the language skills. Divergent thinking is the combination of creativity and lateral thinking. It is essential to compete in this competitive world and to prove one's own unique quality. The aim of the study is to find out whether the use of iPad can help channelize the divergent thinking of secondary level learners through iPad applications, activities and games. The experimental study has been conducted with the IX Standard students of Government Higher Secondary School, Coimbatore. The collected data has been quantified and the obtained results reveal that iPad acts as an effective tool to channelize the divergent thinking of the learners.*

## INTRODUCTION

In a developing country like India, massive growth is observed in the field of education but still all the facilities for teaching are not properly used at the primary and secondary level. Nowadays, iPad is considered to be an effective tool for teaching second language learners. It occupies a new space in technology and helps to personalize learning. Technology always helps us to get into the process of thinking. In fact, thinking skill is the base for all the language skills such as listening, speaking, reading, and writing. It is an essential element of most professions in this competitive world. It is a vital part in the process of learners' progress. Thinking skills are the mental processes of solving problems, making decisions, asking questions, making plans, passing judgments, organizing information and creating new ideas.

## SIGNIFICANCE OF THE STUDY

The use of iPad in the process of learning is increasing day by day. The functions of iPad are eBook Reader, Web Research, Presenting to a small group, Blogging, Publishing, Art work, Note Taking, Comic-making, Digital Storytelling, Creativity, Music, Video Editing and Podcasting. Bringing the iPad into the classroom will stimulate the curiosity of the learners. In China, students of IX standard are provided with iPad,

which has reduced the burden of carrying loads of books. Joanne Chen has created iPad lesson plans for the school students. iPad helps them to learn, read, write, interact with the teachers through call, mail, etc. It is this curiosity, which helps the students to think in a divergent manner. Divergent thinking is the combination of creativity and lateral thinking. It is the process of thinking differently within the frame of rules and ideas. This study focuses on channelizing the divergent thinking process of the learners through the prose piece based on The Merchant of Venice, Act IV– Scene I (Court Scene) with the assistance of iPad and its applications.

## OBJECTIVES

The study has the following objectives

1. To find out the effectiveness of iPad in channelizing the divergent thinking of the learners at the secondary level.
2. To improve and test their thinking skills through a questionnaire.

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3. To compare the efficiency of iPad in teaching with that of the traditional method of teaching in enhancing their divergent thinking.
4. To find out the difference between the learners with the prior awareness of iPad usage and those without the prior awareness of iPad usage.

### HYPOTHESES

The following hypotheses are formulated.

1. There is no significant difference between the mean scores of the pre-test and post-test regarding the divergent thinking of the learners.
2. There is no significant difference between the mean scores of the learners with prior awareness of iPad usage and those without prior awareness of iPad usage.

### SAMPLE OF THE STUDY

The sample of the study consisted of 35 students studying in the eleventh standard in the Government Higher Secondary School, Kalveerampalayam in Coimbatore District, Tamil Nadu. The sample included both boys and girls.

### LIMITATIONS OF THE STUDY

The study has the following limitations:

1. The researcher has selected only thirty five students of eleventh standard.
2. The study has been conducted only in the Government higher secondary school.
3. The researcher has selected only one prose piece from the syllabus for the present study.

### TOOLS USED

The following tools were used for the study

1. Multimedia learning materials (MLM) developed by the researcher for channelizing the divergent thinking of the learners through iPad.
2. A questionnaire used to test their level of divergent thinking.

### METHODOLOGY

It is an experimental and quantitative study. The multimedia learning materials such as video, images, etc

are collected for the prose piece "Merchant of Venice, (Act IV) – Court scene". The iPad applications are used to channelize the divergent thinking of the learners. The students are taught the lesson through the conventional teaching method and the pre-test is conducted by the researcher to test their level of divergent thinking. After that, the students are taught the lesson through iPad and the post-test is conducted to test their level of divergent thinking. The collected data are quantified and the results obtained are interpreted.

### DATA ANALYSIS

#### Hypothesis 1

There is no significant difference between the pre-test and post-test regarding the divergent thinking of the learners.

't' test was applied to test the significance of the difference between the mean achievement test score of the pre-test with that of the post test.

**Table 1**

#### MEAN ACHIEVEMENT TEST SCORE OF THE PRE-TEST COMPARED WITH THAT OF THE POST TEST

| Groups    | N  | Mean  | S.D  | Calculated 't' value | Significance |
|-----------|----|-------|------|----------------------|--------------|
| Pre-test  | 35 | 9.7   | 1.8  | 24.3                 | .000*        |
| Post-test | 35 | 12.72 | 2.17 |                      |              |

\*Significant at 0.05 level.

Table 1 indicates that the 't' value is significant at 0.05 level. Hence it could be inferred that there is a significant difference between the pre-test and post-test regarding the divergent thinking of the learners. The higher mean value in the post-test shows that the students' level of divergent thinking is better in the post-test than in the pre-test. It also shows that the iPad has facilitated them to score more in the post-test.

#### Hypothesis 2

There is no significant difference between the learners with prior awareness of iPad usage and those

without prior awareness of iPad usage regarding divergent thinking.

The data is quantified and the mean value has been taken to find the difference between the learners with prior awareness of iPad usage and those without prior awareness of iPad usage regarding divergent thinking.

**Table 2**

**MEAN ACHIEVEMENT TEST SCORE OF THE LEARNERS WITH PRIOR AWARENESS OF IPAD USAGE WITH THAT OF THE LEARNERS WITHOUT PRIOR AWARENESS OF IPAD USAGE.**

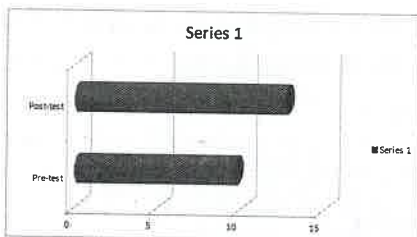
| Groups   | N  | Mean  |
|--|----|-------|
| Learners with prior awareness of iPad usage.   | 11 | 12    |
| Learners without prior awareness of iPad usage | 24 | 11.50 |

Table 2 indicates that there is no significant difference between the learners with prior awareness of iPad usage and those without prior awareness of iPad usage. There is not much difference between the mean values of the two groups. Hence the hypothesis is accepted.

**FINDINGS**

1. There is a significant difference between the scores of the pre-test and the post-test regarding the divergent thinking of the learners.
2. There is no significant difference between the learners with prior awareness of iPad usage and those without prior awareness of iPad usage.
3. The iPad applications and games facilitate the learners to think divergently and make them involved in learning.

**RESULT**



**SUMMATION**

Thinking is the most essential skill for language acquisition. iPad is one of the most powerful Information and Communication Technology tools in the field of education. It can have a qualitative impact on the students to improve their thinking skills. It provides flexibility through which the students can learn the language skills anytime and anywhere. It is an effective mode for teaching with appropriate images, audios and videos. Students may be provided with iPads through the support of the Government, because, when compared to the laptop, the price of the iPad is very low and it is easy to carry and handle. Moreover, it will be useful for the teachers to trigger the curiosity of the students.

*Research Paper*

**REFERENCE**

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3. [www.ipadineducation.co.uk/ipad\\_in\\_education/ipads\\_in\\_schools.html](http://www.ipadineducation.co.uk/ipad_in_education/ipads_in_schools.html)

"Hard work does not go unnoticed, and someday the rewards will follow"

- Allan Rufus.

"Stand out from the crowd, be yourself."

- Stephen Richards.

"I do not believe in taking the right decision, I take a decision and make it right."

- Muhammad Ali Jinnah.

"Write it on your heart that every day is the best day in the year."

- Ralph Waldo Emerson.