



ISSN : 2454-8499 (online)

Impact Factor : 1.3099 (Q1)
0.67 (Q2)

INTERNATIONAL RESEARCH JOURNAL OF MULTIDISCIPLINARY STUDIES

MONTHLY DOUBLE BLIND PEER REVIEWED PAPER ONLY OPEN ACCESS INTERNATIONAL JOURNAL

EDITORS

Chief Editor

Dr. Mahendra B.
Aveghade

Executive Editor

Prof. Tanaji D.
Jadhav

USER

Username

Password

Remember me

Editorial Team

Editors

Prof. Tanaji Dinkarrao Jadhav, Assistant Professor Mamasahab Mohol College, Paud Road, Pune-38 Research Scholar, Bharati Vidyapeeth University, Pune, India

Dr. Mahendra Ramchandra Avaghade, Associate Professor, Mamasahab Mohol College, Paud Road, Pune, India

Dr. Sanjay S. Kaptan, Head, Department of Commerce & Reserch Center, Savitribai Phule Pune University, Pune, India

Dr. Tushar A Shitole, Principal, HOD, Geography, PDEA, Mamasahab Mohol College, Paud Road, Pune, India

Dr. Muktaja V Mathkar, Associate Professor, HOD, English, Brihan Maharashtra College of Commerce, Shivaji Nagar, Pune 04, India

Dr. Umesh Dangarwala, Head, Department of Commerce and Business Management, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India

Dr. Sunil Shete, Joint Director, Higher Education, Pune Region, Pune, India

Dr. Nanasaheb D Pawar, Associate Professor, HOD, Marathi, Mamasahab Mohol College, Paud Road, Pune, India

Dr. Vishnu Mugahe, Associate Professor, Liberian, Bharati Vidyapeeth University, Yashwantrao Mohite College, Erandwane, Pune, India

Dr. Ms. Susan Silverstone, Professor, National University, San Diego, Canada

Dr. Paul Odundo, Professor, University of Nairobi, Kenya

Dr. Dorji Waugchuk, Professor, Dept. of English, School of Arts & Humanities, Royal University of Bhutan, Bhutan

Dr. Antonis Balssopoulos, Professor, University of Nikosia,, Cyprus

Dr. Sudhakar Jadhavar, Dean, Faculty of Commerce, Savitribai Phule Pune Univrsity, Pune, India

Prof. Dr. A. K. Chakrawal, Professor and Coordinator Internal Quality Assurance Cell (IQAC) Saurashtra University Rajkot - 360 005. Gujarat, India

Dr. Kailash K. Patil, Professor, H.O.D. Economics, Late Sow. Kamlatai Jamkar Mahila Mahavidyalaya, Parbhani, SRTM University, Nanded., India

Dr. Ranjit D Patil, HOD & Vice Principal Padmshree Dr.D.Y. Patil College, Pimpri, Pune, India

Mr. Shripad Nathu Pawar

Prof. Dr. Sanjay Patil, Principal, Rajgad Dnyanpeeth Technical Campus, Pune., India

Dr. Somnath Hanumant Mane, Assistant Professor, Animal Husbandry and Dairy Science, College of Agriculture, Pune, Mahatma Phule Krishi Vidyapeeth, Rahuri, India

Principjal Dr. Shivraj N. Kukale, Principal, Mamasahab Mohol College, Paud Road, Pune, India

Dr. Nithin Kalorth, Bennett University, Greater Noida, India, India

Section Editors

Prof. Tanaji Dinkarrao Jadhav, Assistant Professor Mamasahab Mohol College, Paud Road, Pune-38 Research Scholar, Bharati Vidyapeeth University, Pune, India

Dr. Mahendra Ramchandra Avaghade, Associate Professor, Mamasahab Mohol College, Paud Road, Pune, India

Prof. Dr. Karma Yoezer, Professor, Dept. of Economics, School of Social Sciences, Royal University of Bhutan, Bhutan

Dr. Chandrakant Rawal, Principal, Brihan Maharashtra College of Commerce, Pune, India

Dr. Ranjit D Patil, HOD & Vice Principal Padmshree Dr.D.Y. Patil College, Pimpri, Pune, India

Mr. Mininath Baban Wakale, Agri. Asstt. Biotechnology Laboratory, Department of Botany, College of Agriculture Pune, MPKV Rahuri., India

ISSN: 2454-8499

INTERNET RECIPROCAL TEACHING APPLICATION TO IMPROVE LEARNING OUTCOME IN COMPUTER APPLICATION COURSE

¹Aan Nurfahrudianto, ²Prof. Punaji Setyosari, ³Dr. Dedi Kuswandi, ⁴Prof. Waras Kamdi

¹ University of Nusantara PGRI Kediri - Indonesia

^{2,3,4}State University of Malang - Indonesia

Abstract

Internet cannot be separated from modern human life. Almost all people in the world use it. The use of internet simplifies the teaching and learning process at school. Many learning strategies utilize internet, among others, Internet Reciprocal Teaching (IRT). A research conducted in 47 college students succeeded in improving learning outcome. It was evidenced by the influence of Internet Reciprocal Teaching (IRT) on college students learning outcome in computer application course.

Keywords: Internet Reciprocal Teaching, Learning Outcome

Introduction

The development in information and communication technology (ICT), especially in the use of internet in learning increases interaction variation in learning process. ICT has brought changes in level of education and learning leading to quality improvement (Thorwat, 2018). Generally, students could use it as educational tool; however, some of them unable to use it (Dogruer, Eyyam, & Menevis, 2011).

Interaction between learners (teacher) and students should occur in a learning process. Interaction in formal education is designed to encourage learning appropriate to the determined learning goals and outcomes (Anderson, 2003). The learning interaction is not only face to face but also in a distance education.

There are three types of distance learning interaction involving the students (students-students; students-teachers; students-content), and it expands into three other interaction types (teachers-teachers; teachers-content; content-content) (Anderson, T., and Garrison, 1998) as displayed in the following figure.

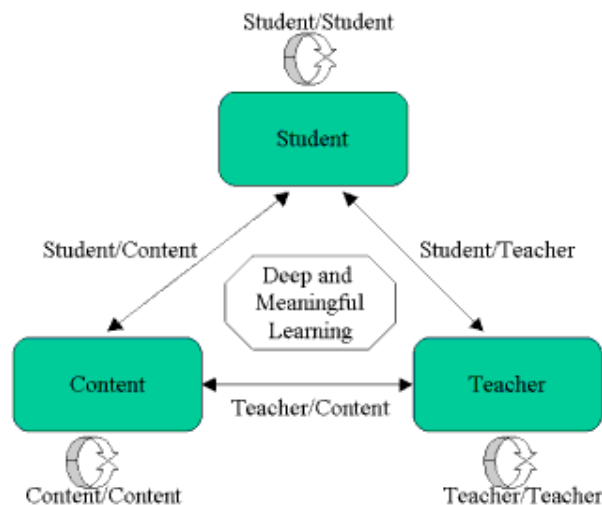


Figure1. Distance Education Interaction Model

The internet users in Indonesia have reached 143 million people. Of the numbers 49.52% are 19-34 years old, 29.5% are 35-54 years old, 16.68% are 13-18 years old and the remaining 4.24% are above 54 years old (Bohang, 2018). Of the data 66.2% are within the active age in learning process. Therefore, the use of internet in learning process is likely to be optimized more.

Learning process also requires learning strategies. One of the learning strategies that uses internet is Internet Reciprocal Teaching (IRT). IRT uses a new literacy skill to teach reading comprehension on the internet since the online internet utilization requires additional skill to effectively read, write and, learn (Leu & Timbrell, 2014).

IRT is rooted in reciprocal teaching (RT). In RT, students alternately facilitate the group members in the process of predicting, clarifying, questioning, and summarizing text or information. These processes also occur in IRT, according to (Head et al., n.d.), there is an important difference in IRT, which is every students are likely to gain different source.

Computer application course covers internet material. However, not all materials in the course use internet. Refers to the average of learning outcome in computer course for the last 3 years that need to be improved, IRT application is expected to optimize the use of internet and increase student's literacy skill. The learning outcome in computer application course for the last 3 years can be seen in Table 1.

Table 1
The Average of Learning Outcome in Computer Application Course

| Academic Year | Average Grade |
|---------------|---------------|
| 2014/2015 | 60,6 |
| 2015/2016 | 60 |
| 2016//2017 | 60,2 |

Source: BAA of Health and Physical Education Course

Problems Formulation

There were two problems formulation in the research: 1) is the students' learning outcome with the application of internet reciprocal teaching (IRT) > 61? 2) Is there an influence in the application of internet reciprocal teaching on student learning outcome in computer application course?

Hypothesis

The research hypotheses were:

1. Students' learning outcome with the application of Internet Reciprocal Teaching (IRT) in computer application course is > 61.
2. There is an influence of internet reciprocal teaching on students' learning outcome in computer application course.

Research Method

The research used quantitative research technique with pre-experiment method. The research population was all second year (junior) college students in Physical Education and Health Study Program at the University of Nusantara PGRI Kediri of 147 students consisted of 5 classes. Samples were taken from 2 classes, which were 47 students. All data analyzed using SPSS 20 for Windows software with significance level of 5% ($\alpha = 0.05$).

Research Result
Hypothesis 1:

Table 2
Statistical Test Result
One-Sample Statistics

| | N | Mean | Std. Deviation | Std. Error Mean |
|---------|----|--------|----------------|-----------------|
| NA_Post | 47 | 67,060 | 10,3512 | 1,5099 |

The above table is obtained from the final learning outcome after the application of Internet Reciprocal Teaching learning strategy. Based on Table 2, the number of data or N = 47, mean of 67.060, standard deviation of 10.3512, and standard error mean of 1.5099.

Table 3
One-sample Test Result
One-Sample Test

| | Test Value = 61 | | | | | |
|---------|-----------------|----|-----------------|-----------------|---|-------|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| NA_Post | 4,013 | 46 | ,000 | 6,0596 | 3,020 | 9,099 |

The above table is obtained from the final learning outcome after the application of Internet Reciprocal Teaching learning strategy. Based on the table, the sig. value (2-tailed) was 0.000 < 0.05 thus H₀ is rejected. It can be concluded that students' learning outcome with the application of Internet Reciprocal Teaching (IRT) in computer application course was > 61.

Hypothesis 2:

Table 4
Statistic Test Result
Paired Samples Statistics

| | Mean | N | Std. Deviation | Std. Error Mean |
|---------------|--------|----|----------------|-----------------|
| Pair 1 NA_Pre | 57,626 | 47 | 7,9846 | 1,1647 |
| NA_Post | 67,060 | 47 | 10,3512 | 1,5099 |

The above table is obtained from the final learning result before and after the application of Internet Reciprocal Teaching learning strategy. Based on Table 4, the number of data was N= 47, Mean value before the treatment was 57.626, standard deviation of 7.9846 and standard error mean = 1.1647. Mean after the treatment was 67.060, standard deviation of 10.3512, and standard error mean = 1.5099.

Table 4
Paired Sample Test Result

| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|--------|------------------|--------------------|----------------|-----------------|---|---------|--------|----|-----------------|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | NA_Pre - NA_Post | -9,4340 | 8,9487 | 1,3053 | -12,0615 | -6,8066 | -7,227 | 46 | ,000 |

The above table is obtained from the final learning outcome before and after the application of Internet Reciprocal Teaching. The 2nd hypothesis of the paired sample test table indicates a significance value of $0.000 < 0.05$ thus H_0 is rejected. It can be concluded that there was an influence of internet reciprocal teaching on students' learning outcome in computer application course.

Result Discussion

Based on the research result of the application of Internet Reciprocal Teaching the learning outcome improved compared to those before the application of the strategy. It was in line with the use of internet in the Internet Reciprocal Teaching learning strategy in the search for different learning sources that could improve students' understanding (Leu & Timbrell, 2014). Internet Reciprocal Teaching could also improve creative thinking in group activities during learning activities and it has impact on the improvement in learning outcome (Chen & Kong, 2017).

Research Limitations

The research had limitations, namely: it was conducted in Ms. Word material and only focused on the improvement of learning outcomes. It is expected that future study could expand to other materials and to the improvement of both learning activities and motivation.

References

- Anderson, T., and Garrison, D. R. (1998). *Learning in a networked world: New roles and responsibilities*. In C. Gibson (Ed.), *Distance Learners in Higher Education*. WI: Atwood Publishing.
- Anderson, T. (2003). *Getting the mix right again: An updated and theoretical rationale for interaction*. *International Review of Research in Open and Distance Learning*. <https://doi.org/10.19173/irrodl.v4i2.149>
- Bohang, F. K. (2018, February). *Berapa Jumlah Pengguna Internet Indonesia?* *Kompas.Com*. Retrieved from <https://tekno.kompas.com/read/2018/02/22/16453177/berapa-jumlah-pengguna-internet-indonesia>
- Chen, Y., & Kong, D. (2017). *An investigation on factors in the integration of reciprocal teaching into multimedia teaching*. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(1), 133–142. <https://doi.org/10.12973/eurasia.2017.00608a>
- Dogruer, N., Eyyam, R., & Menevis, I. (2011). *The use of the internet for educational purposes*. *Procedia - Social and Behavioral Sciences*, 28, 606–611. <https://doi.org/10.1016/j.sbspro.2011.11.115>
- Head, R., Literacies, N. E. W., Online, O. F., Comprehension, R., Literacies, N., Reading, O., ... Educational, R. (n.d.). *Comprehension instruction: Research-based best practices*. Retrieved from https://newliteracies.uconn.edu/wp-content/uploads/sites/448/2014/07/Leu_et_al_Final_Chaptersinglespaced.pdf
- Leu, D. J., & Timbrell, N. (2014). *Best Practices in Teaching the New Literacies of Online Research and Comprehension*, 343–364.
- Thorwat, S. R. (2018). *ICT in Higher Education : Opportunities of Urban Colleges and Challenges of Tribal Colleges Introduction : International Research Journal Of Multidisciplinary Studies*, 4(5), 1–6.