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A COMPARATIVE STUDY ON ASYNCHRONOUS AND DIGITAL LEARNING IN A CLASSROOM IN NALANDA DISTRICT

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Abstract

Through digital learning and asynchronous learning, the corona virus outbreak in higher education helped teachers and students become independent learners. This study looks at how 200 learners learn a language who is enrolled in a Graduation of Arts (BA) in Hindi course at several colleges within Patliputra University responded to synchronous and asynchronous higher education learning in Nalanda District. The lecture and asynchronous delivery of the module are both available for the test. Weekly digital learning tutorials were also incorporated to allow for instant interaction between the teacher and the students. These tutorials were designed to give students the chance to interact with the teachers for questions or issues, get immediate feedback on their questions, confirm their understanding of the material covered and the tasks given, discuss pressing issues, share knowledge and ideas, and discuss issues of concern. Records of student involvement, online and offline questionnaires given in the midst of the course and at the conclusion of the 04-week module were all used to collect the data. The data analyzed using mean, SD, t-test and correlation. The data analysis showed a favorable. Improvement in participants' clarity of knowledge of the content studied, attitude toward tutorials, and the emergence of a sense of security and comfort. The present study, deals with the final year of students of Graduation studying Hindi subject in different college of Biharshaif under Patliputra University Patna. The sample comprises 200 final years of graduation students studying in different colleges of Patliputra University in Nalanda District. The delimitation of the study is limited to 200 students of Graduation studying in Hindi subject, students of Graduation studying in Hindi subject, and study is limited to the City of Biharsharif of Patliputra University. The offline and online survey was conducted for the study and self constructed and validated by the guide tools were used for asynchronous learning and digital learning in the study.

Keywords: *e-learning, digital learning, synchronous tutorials, and asynchronous tutorials..*

Introduction

The digital learning occurs during a live-streamed lesson or online video conference. Here, everyone who is attending the live meeting or attending class through Google Meet, Zoom, or Teams meeting simultaneously checks in. A few examples of synchronous learning include live webinars, video conferences, and virtual classrooms. The teacher or resource person conducts the course and may complete activities.

Students can learn with asynchronous technology on their own timetable and within a set period of time. Throughout a one- or two-week period, students can access and finish lectures, readings, homework, and other educational resources at any time. a case of reading and writing tasks, viewing pre-recorded lecture videos or lectures, research projects, and watching video demonstrations. Five advantages of asynchronous learning include: 1. Asynchronous learning allows for extra time for idea review. 2. Conversations inside the course are sparked by asynchronous learning. 3. Asynchronous learning makes material easier to understand. 4. Asynchronous learning broadens our network by making content available to more users. 5. Learning asynchronously gives us access to more professors and subject matter experts. Teachers and students must be connected in "real-time," whether it is physically in the classroom or digitally through a video conferencing platform. The following are five benefits of digital learning: 1. Discrimination, 2. Equitable Involvement 3. Learning Preparation, 4. Possibilities for Collaboration and 5. Versatility

Literature review

The ability to engage in meaningful face-to-face online digital interactions is said to be provided by synchronous learning (Harris, Mishra, & Koehler, 2009; Hrastinski, 2008; Simonson, Smaldino, Albright, & Zvacek, 2012). Instead of learning in solitude, it enables students to engage with other students and teachers, ask questions, and receive immediate responses from teachers (Hrastinski, 2008). Lectures, discussions, online tutorials, and other forms of synchronous e-learning are used. It provides many forms of real-time online contact, sharing, and collaboration, flexibility, and individualized learning opportunities (Lorenzo & Ittelson, 2005). However, in order to be present, participants must set up a certain time period in their hectic schedules (Hrastinski, 2008).

Few professors really include synchronous sessions in their online digital courses. The likelihood of effective online interactions is decreased by two factors: (1) the large number of students enrolled in online programs; and (2) the tendency of instructors to view asynchronous forms of communication, such as accessing course materials by simply clicking

on links on the course website, as sufficient forms of communication (Wang & Newlin, 2001). Chat rooms are typically the only synchronous communication used in online courses; the majority of communication is asynchronous.

Significance of the study

Learners, teachers, professionals, and administrators can interact with others for learning, communication, and business objectives through both digital learning and asynchronous activities that are ongoing. This research is crucial for helping teachers and students understand how their difficulties with asynchronous learning and digital learning in the classroom are rooted in their subject-matter expertise. The ability of students to apply their pedagogical topic knowledge in asynchronous and online learning environments was also significantly impacted by this study. By enabling them to adopt the study's findings, which included methods for handling asynchronous classroom management and digital learning to foster a positive learning environment, teachers and students may also gain from it. The outcomes of this study would be useful in the current literature because it was the first attempt at asynchronous learning and digital learning in a single study. By concentrating on this issue, the study's findings may be used to change or improve programs for teacher and student education in digital learning and asynchronous

Statement of the problem

Without an understanding of synchronous and asynchronous learning, education cannot be successfully completed. The underprivileged, physically handicapped, female, and learners with fewer resources may be excluded from education. Therefore, it is the primary responsibility of teachers to adequately educate their students about the differences between synchronous and asynchronous learning. The researcher attempted to investigate a comparison of digital learning and asynchronous learning in a classroom in the Nalanda district through this study. :

Objectives of the study

1. To find a significant difference in digital learning among the students of Hindi Graduation in higher education based on gender.
2. To find a significant difference in digital learning among the students of Hindi Graduation in higher education based on location.
3. To find a significant difference in asynchronous learning among the students of Hindi Graduation in higher education based on gender.

4. To find a significant difference in asynchronous learning among the students of Hindi Graduation in higher education based on location.
5. To find the significant relationship between digital and asynchronous learning among the students of Hindi Graduation in higher education based on gender
6. To find the significant relationship between digital learning and asynchronous learning among the students of Hindi Graduation in higher education based on location

Hypothesis of the study

1. There is no significant difference in digital learning among the students of Hindi Graduation in higher education based on gender.
2. There is no significant difference in digital learning among the students of Hindi Graduation in higher education based on location
3. There is no significant difference in asynchronous learning among the students of Hindi Graduation in higher education based on gender.
4. There is no significant difference in asynchronous learning among the students of Hindi Graduation in higher education based on location.
5. There is no significant relationship between digital and asynchronous learning among the students of Hindi Graduation in higher education based on gender
6. There is no significant relationship between digital learning and asynchronous learning among the students of Hindi Graduation in higher education based on location

Sample, Sample Area, Method and Delineation of the Study

The data was gathered using a combination of student activity records, online and offline questionnaires sent during the course, as well as surveys administered at the end of the four-week module. The data were examined using correlation; t-test, mean, and SD. Analyses of the data were favorable. Participants attitudes about tutorials, their understanding of the material studied, and their sense of security and comfort all improved. 200 graduating seniors from Patliputra University's several colleges in the Nalanda District make up the sample. The study's delineation is restricted to 200 students majoring in Hindi at the graduate level, and the study is only conducted at Patliputra University in the City of Biharsharif.

Result and discussion

Null hypothesis: 01 There is no significant difference in digital learning among the students of Hindi Graduation in higher education based on gender.

Table No. 01 The significant difference in digital learning among the students of Hindi Graduation in higher education based on gender

Gender	Number	Mean	S.D.	t. Value	Remarks
Male	97	69	14.08		
Female	103	70.52	14.24	0.76111	NS

(At 5% level of significance, the tale value of t is 1.96)

The null hypothesis is accepted since the inferred t-value for the attitudes of graduating Hindi final-year students toward digital learning is 0.76, which is lower than the inferred table value (1.96). Conclusion: There are no appreciable gender differences in the attitudes of graduating Hindi final-year students about digital learning.

Null hypothesis: 02 There is no significant difference in digital learning among the students of Hindi Graduation in higher education based on location

Table No. 02 The significant difference in digital learning among the students of Hindi Graduation in higher education based on location

Gender	Number	Mean	S.D.	t. Value	Remarks
Urban	73	68.53425	14.29		
Rural	127	70.50	16.06	0.94352	NS

(At 5% level of significance, the tale value of t is 1.96)

The null hypothesis is accepted since the inferred t-value for the attitudes of graduating Hindi final-year students toward digital learning is 0.94, which is lower than the inferred table value (1.96). Conclusion: There are no appreciable location differences in the attitudes of graduating Hindi final-year students about digital learning.

Null hypothesis: 03 There is no significant difference in asynchronous learning among the students of Hindi Graduation in higher education based on gender.

Table No. 03 The significant difference in asynchronous learning among the students of Hindi Graduation in higher education based on gender

Gender	Number	Mean	S.D.	t. Value	Remarks
Male	97	75.62887	12.48609		
Female	103	72.25243	16.07868	1.664021	NS

(At 5% level of significance, the tale value of t is 1.96)

The null hypothesis is accepted since the inferred t-value for the attitudes of graduating Hindi final-year students toward digital learning is 1.66, which is lower than the inferred table value (1.96). Conclusion: There are no appreciable gender differences in the attitudes of graduating Hindi final-year students about asynchronous learning.

Null hypothesis: 04 There is no significant difference in asynchronous learning among the students of Hindi Graduation in higher education based on location.

Table No. 04 The significant difference in asynchronous learning among the students of Hindi Graduation in higher education based on location

Location	Number	Mean	S.D.	t. Value	Remarks
Urban	73	75.9726	12.88946		
Rural	127	72.69291	15.28694	1.616582	NS

(At 5% level of significance, the tale value of t is 1.96)

The null hypothesis is accepted since the inferred t-value for the attitudes of graduating Hindi final-year students toward digital learning is 1.61, which is lower than the inferred table value (1.96). Conclusion: There are no appreciable location differences in the attitudes of graduating Hindi final-year students about asynchronous learning.

Null hypothesis: 05 There is no significant relationship between digital and asynchronous learning among the students of Hindi Graduation in higher education based on gender.

Table No: 05 The significant relationship between digital and asynchronous learning among the students of Hindi Graduation in higher education based on gender

S.No.	Male		Female		XY	Calculated value	Table value	Remarks
Gender	X	X^2	Y	Y^2	504986	0.0710499	0.13	S
	6693	480813	7336	569780				

At 5 percent level, r = 0.0724, X= Male, Y= Female

The purpose was to investigate how Nalanda District Graduation Hindi final year students evaluated their personal digital learning and how it linked to their asynchronous learning based on their gender. The results of the data analysis using product moment correlation are shown in Table 05. It is clear from table 05 that there is little correlation between innovative digital learning and asynchronous learning. The correlation coefficient between digital learning and asynchronous learning is 0.071, which is neither positive nor negative and is not significant at the 0.05 level. It is therefore asserted that there is a meaningful connection**.**

Null hypothesis: 6

There is no significant relationship between digital learning and asynchronous learning among the students of Hindi Graduation in higher education based on location.

Table No: 06 The significant relationship between digital learning and asynchronous learning among the students of Hindi Graduation in higher education based on location

S.No.	Urban	Rural	XY	Calculated value	Table value	Remarks

Location	X	X^2	Y	Y^2				
	8954	9232	656208	700546	651596	0.025979	0.13	S

At 5 percent level, r = 0.0724, X= urban, Y= Rural

The purpose was to investigate how Nalanda District Graduation Hindi final year students regarded their personal digital learning and how it linked to their asynchronous learning based on their geographic location. The results of the data analysis using product-moment correlation are shown in Table 6. According to the location in the sample, Table 06 displays a 0.025 correlation coefficient between digital learning and asynchronous learning, which is neither positive nor negative and is not significant at the 0.05 level. This finding indicates that there is little correlation between innovative digital learning and asynchronous learning. It is asserted that there is a strong link as a result.

Result and discussion

1. According to Table No. 1, there is no discernible difference in the median scores of male and female graduate students taking Hindi in their final year. The null hypothesis is accepted since the inferred t-value of graduating Hindi final-year students' attitudes toward digital learning is 0.76, which is lower than the inferred table value (1.96). Conclusion: There are no appreciable gender differences among graduating Hindi final-year students in digital learning.
2. According to Table No. 2, there is no discernible difference in the median scores of male and female graduate students taking Hindi in their final year. The null hypothesis is accepted since the inferred t-value of graduating Hindi final-year students' attitudes toward digital learning is 0.94, which is lower than the inferred table value (1.96). Conclusion: There are no appreciable location differences among graduating Hindi final-year students in digital learning.
3. According to Table No. 3, there is no discernible difference in the median scores of male and female graduate students taking Hindi in their final year. The null hypothesis is accepted since the inferred t-value of graduating Hindi final-year students' attitudes toward digital learning is 1.66, which is lower than the inferred table value (1.96). Conclusion: There are no appreciable gender differences among graduating Hindi final-year students in digital asynchronous learning.
4. According to Table No. 4, there is no discernible difference in the median scores of male and female graduate students taking Hindi in their final year. The null

hypothesis is accepted since the inferred t-value of graduating Hindi final-year students' attitudes toward digital learning is 1.61, which is lower than the inferred table value (1.96). Conclusion: There are no appreciable location differences among graduating Hindi final-year students in asynchronous learning.

5. According to Table No. 5, the statement "to investigate how Nalanda District Graduation Hindi final-year students evaluated their personal digital learning and how it related to their asynchronous learning based on their gender" clarifies the study's goal. Table 05 displays the findings of the data analysis utilizing product moment correlation. Table 05 makes it obvious that asynchronous learning and creative digital learning have little in common. Digital learning and asynchronous learning have a correlation coefficient of 0.071, which is neither positive nor negative and is not significant at the 0.05 level. Therefore, it is claimed that there is a significant link.

6. Table No.06 indicates that the statement "to investigate how Nalanda District Graduation Hindi final-year students evaluated their personal digital learning and how it related to their asynchronous learning based on their gender" clarifies the study's goal. Table 05 displays the findings of the data analysis utilizing product moment correlation. Table 05 makes it obvious that asynchronous learning and creative digital learning have little in common. Digital learning and asynchronous learning have a correlation coefficient of 0.071, which is neither positive nor negative and is not significant at the 0.05 level. Therefore, it is claimed that there is a significant link.

Conclusion

In comparison it is clear, we're not urging to completely give up real-time contact with teacher and students. It makes sense in some circumstances. For instance, working remotely might be incredibly lonely. Digital learning communication can help us establish rapport with teachers, students, coworkers and forge personal ties that promote stronger teamwork at work. Additionally, we can utilize it to discuss delicate subjects, provide constructive criticism, review performance, or simultaneously generate several ideas.

A Zoom conference meeting can help you get everyone on the same page when a project is going quickly and we need to get everyone in digital platforms. It makes sense to rally everyone quickly in a crisis or emergency to lessen the situation. However, it can be time-consuming when: • teachers, students and Workers must show up for meetings and wait for everyone to arrive • we wake up in the morning and respond to online assignment, projects, work emails

and Slack messages • we spend an entire day replying task and to an endless email thread instead of finishing that task that is due in an hour

The key is to minimize digital learning communication. Give our teacher, students, coworker autonomy, but establish guidelines that keep everyone on the same page. Don't micromanage, but be there to assist them if they encounter obstacles. Plan frequent team-building activities to combat isolation and sustain social ties. If we combine asynchronous and digital communication, staff and students will be contented and have a good work-life balance.

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