An Analytical Study of Flipped Learning in Private Primary Schools of Faisalabad (Pakistan)

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Abstract

The education process is essential to human civilization's evolution. Several empirical studies acknowledged during the past two decades have shown that flipped learning significantly improves educational quality and student learning achievements in developing countries. The primary goal of flipped learning is to acquire knowledge and use research tools in the teaching-learning process. This research aims to examine activity-based performance in primary schools, the efficacy of flipped learning by teachers, the hurdles teachers have in adopting flipped learning, and strategies for overcoming those challenges. Because of this, schools must pay more attention to flipped learning. For this purpose, a survey was conducted with private primary school teachers in the city of Faisalabad. However, the area of Sargodha Road Faisalabad was selected conveniently due to time limitations and available resources. Ten private primary schools were selected from the area. In these ten schools, 174 teachers work, and these teachers are considered the population of the present study. The study's sample size was 120 respondents with a confidence level of 95% and a confidence interval of 5%. The sample size was determined using www.surveysystem.com. Simple random sampling was used to select the respondents. The data was collected through a questionnaire that kept the objectives of this study in view. Collected data was analyzed using the Statistical Package for Social Sciences (SPSS).
Keywords: Flipped Learning, Analysis of Private Schools, Education Sector

Introduction

Flipped learning is the systematic procedure of exploring and defining different concepts. Flipped learning enables the students to understand all the pros and cons deeply and form their own views about them. The reality is that flipped learning always conveys the information according to the needs of the topic and individual differences. It focuses on explaining, rehearsing, and possible

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reinforcement. Flipped learning reduces the stress of understanding among the students. In flipped learning, the procedure smoothly runs when the teaching methodology successfully and efficiently conveys the information (Maseleno et al., 2020). In flipped learning, students concede different diversities and complexities of learning procedures that continuous and systematic procedures can manage. The adequate application of flipped learning and different classroom pedagogies can precede classroom management and successful student learning. The flipped learning style generally focuses on shifting instruction from the teachers to the learners. The primary focus of this learning is to elaborate on students' capacity. This teacher advises and guides the pupils according to their intelligence level and learning demands. The learning path becomes smooth and understandable when the problem-solving method is adopted with great concern (Mueller, 2019). Flipped learning focuses on aspects of content analysis found in a self-regulatory system. In flipped learning, teachers pass the appropriate knowledge to the students while teaching and learning with great zest and zeal. Through this process, the teachers teach the skills by creating a situation in which students gain the experience required to complete the learning procedure. In the learning procedure, most teachers use the student-centered method because in this method, students have the full command of what they want to teach (Stewart, 2018).

Objectives
The specific objectives of the study are:
1. To identify the demographic characteristics of the respondents.
2. To assess the activities performed by teachers in flipped learning.
3. To find out the effectiveness of flipped learning by teachers.
4. To probe out the difficulties teachers face in adopting flipped learning and how to cope with these challenges.
5. To compile suggestions for the improvement of flipped learning activities at the school level.

Review of Literature
Sabir (2011) determined that the flipped learning style is directly related to students' academic achievements because students learn what they want to learn. Flipped learning also encourages the habit of cooperative and competitive study among pupils. With the help of flipped learning, teachers motivate students to gain support and significant education. In this way, teachers try to improve the learning habits of students. Flipped learning mostly improves comprehensive learning in all subjects. Masud and Huang (2019) demonstrated that learning with different educational aids in flipped learning elaborates the topic to the students. In the College of Education Katsina-Ata, students use aids for learning in a flipped learning style so that all students can easily understand the lesson. The chalkboard also has ultimate effects on the frequent learning of students. Non-availability, lack of supporting infrastructures, and human factors are hindrances to using audio-visual aids in the college.

Numberless benefits include flipped learning methods enabling pupils to learn difficult topics at a time. Engelbertink et al. (2020) explained that flipped learning proves very effective and useful as it provides opportunities to achieve different skills and practically apply the new subject matter. It develops the skill of full knowledge and critical thinking during the demonstration. It is very portable and planned, so it has fewer mistakes. Flipped learning is considered the bridge between adopting new technology and the learning process. In flipped learning, special attention is given to the students for achieving new trendy educational goals and tasks. Flipped learning is a planned activity and provides persuasive material to the students.

Najji (2020) explained that the purpose of flipped learning is to personalize the learners with skills and learning abilities. Teachers understand the developmental procedure of students, which helps them recognize pupils' capacities and aptitudes for flipped learning. The numerous needs of students pitched by the teachers in the flipped learning procedure enable the students to do work with great zest and zeal. Effective flipped learning techniques lead each student towards working to complete tasks with the best learning. Students can learn fully when teachers provide them with new learning procedures. Teachers also understand the student's learning level and capacity with the best and particular culture, and abilities are acknowledged in the way to teach the pupils. Challob (2021) stated that flipped learning generally focuses on the teaching aids and presentation of lessons practically that motivate the students toward education. Teachers introduce the lessons with special planning and presentation that mentally convince the students to learn something new. It fosters the confidence and spirit of teamwork among the students. Flipped learning gives the students persuasive learning concepts that increase the feeling of learning new objects.

Methodology

This section of the study explains the design of research on which research is based, the targeted population, sampling technique, instruments used for collection of data, validity, reliability, procedure of data collection, method of analysis of data, and ethical consideration. The researcher focuses on the measurement and conceptualization of basic results that are attained through conducting the latest survey. The methodology contains specific processes implemented in the research procedure to gather consistent data. It includes those instruments that are helpful in gathering dependable material in a specific research program (Wimmer, 2011). Thus, the major objective of this section is to explain various tools and techniques employed for the collection, analysis, and interpretation of the data relating to the present study.

Research Area

This study was conducted in Sargodha Road, Faisalabad, Punjab, Pakistan.

Population

Population is explained as a group of individuals through which the data is collected to measure the sample (Kombo, 2005). There were ten private schools in the area of Sargodha Road, Faisalabad. Of these ten schools, 174 were working teachers, and these teachers were considered the population of the present study.

Sampling Procedure

In the meantime, a sampling technique is used to select representatives from the whole population. In this study, a convenient sampling technique was used for the selection of schools and respondents.

Sample Size

A sample can be defined as a small cluster obtained from the population under observation. Every sample member is represented in terms of subject or informer, which could give an estimate about the whole population. A sample is a smaller group of subjects drawn from the population in which a given study was conducted to draw conclusions about the population targeted. For example, Kothari (2014) argued that the result from the sample can be used to make generalizations about the entire population as long as it is truly represented. There were ten schools with a total of 174

working teachers. The sample size was 120, keeping the confidence level at 95% and the confidence interval at 5%. The sample size was determined using www.surveysystem.com. Additionally, this sample size allows for statistical analysis to assess trends and patterns in teachers' perceptions, contributing to the rigor and validity of the study's findings.

Instruments

A questionnaire is a research instrument that consists of a series of questions and other prompts to gather information from respondents (Neil, 2010). The questionnaires were distributed to the selected respondents, who were asked to answer the questions and return the questionnaire. This method was selected because it was cost-effective and saved the researcher's time (i.e., a short period required to fill out the questionnaire, and it was free from bias). The questionnaire contains different items (parameters) organized into 15 sections. It is a combination of various types of questions. It consisted of open-form items and closed-form items.

Instrument Validity

A structured questionnaire with five 5-point Likert Scale was designed according to the nature and objectives of the study. All the questions were prepared through proper collaboration with the research supervisor and the other faculty members to make them valid and useful for data collection. The first draft of research instrument (questionnaire) were submitted to the supervisor that is expert in qualified degree of education. The expert supervisor reconstruct the research instrument based on expert suggestions. The research tool was checked with the help of the supervisory committee members. All effects from any research about the validity and reliability of the research tool are vital for correct results. Validity and reliability also ensure the accuracy of all the answers to the questions.

Reliability

The reliability of the questionnaire was checked by subjecting the ten respondents to the questionnaire. Cron-Bach Alpha in Excel was used to check the reliability of the questionnaire items using the famous software Statistical Package for Social Sciences (SPSS).

The obtained reliability coefficient was 0.820, which is more than satisfactory.

For the pretesting, ten teachers were selected from the total population, and then respondent data were collected.

Results and Findings

This section explains in detail the results used in this descriptive study. Data analysis or interpretation is the most important step in scientific research for concluding. Without these steps, generalization and prediction, the goals of scientific research cannot be achieved. The characteristics of the respondents' attitudes toward the phenomena under investigation are used to draw generalizations and conclusions.

Table 1: Demographic information of respondents

Distribution of the respondents according to academic qualification		
Qualification	**Frequency (*f*)**	**Percentage (%)**
Graduation	55	45.83
Master	60	50
M.Phil.	05	4.17
Total	**120**	**100.0**
Distribution of the respondents according to their Professional qualification		
Professional qualification	**Frequency (*f*)**	**Percentage (%)**
B. Ed.	66	55.0
M. Ed.	54	45.0
Total	**120**	**100.0**
Distribution of the respondents according to their Subject of teaching		
Subject of teaching	**Frequency (*f*)**	**Percentage (%)**
Science	71	59.2
Arts	49	40.8
Total	**120**	**100.0**
Distribution of the respondents according to their Teaching experience		
Teaching experience	**Frequency (*f*)**	**Percentage (%)**
1 to 5 years	45	37.5
6 to 10 years	38	31.7
Above 10 years	37	30.8
Total	**120**	**100.0**

Discussion

In above table, 45.83 % of the respondents were belonging to Graduation, 50 % of the respondents were belonging to Masters and 4.16 % of the respondents were belonging to M.Phil. qualification, 55 % of the respondents were secured to professional qualification of B. Ed while 45 % of the respondents were secured qualification of M.Ed. while 59.2 % of the respondents were belonging to teaching Science and 40.8 % of the respondents were belonging to teaching Arts subjects and 37.5 % of the respondents were belonging to 1 to 5 years of teaching experience, 31.7 % of the respondents were belonging to 6 to 10 years of experiences and 30.8 % of the respondents were belonging to Above than 10 years of experiences. Majority (66.7%) of the respondents were owner of the schools.

Table 2: Uses of Flipped learning activities for learning of students in private primaryschools of city Faisalabad

(Scale: 1= Some Time,   2=Often,   3=Never)

Sr.	Activities performed in primary school	Mean	S.D	Remarks
1	Self-assessment.	2.17	2.08	Often
2	Inquiry-based learning.	2.14	2.18	Often
3	Class discussion.	2.11	2.2	Often
4	Problem based learning.	2.08	1.87	Often
5	Presentations.	2.00	1.85	Often

Discussion

In above table, the activity of "self-assessment" was ranked 1st and reveal that its tendency falling in often range with a mean value 2.17. The activity of "inquiry-based learning" was mentioned by respondents the 2nd most, with a mean score of 2.14 and its response falling to often. The activity of "class discussion" shows at response 3rd tended to often with mean value 2.11. The activity of "problem-based learning" was mentioned by respondents as the 4th most important topic, and its mean value of 2.08 with often using this activity. The respondents ranked "presentations" 5th and it has a mean value of 2.00 that's mean responded use presentation method in often.

Table 3: Effectiveness of different activities performed in flipped learning?

(Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree)

Sr.	Inquiry-based learning effectiveness	Mean	S.D	Remarks
1	Deliver detail information.	3.02	1	Neutral
2	Improve problem solving skill	2.98	0.43	Neutral
3	Provide systematic knowledge.	2.88	0.53	Neutral
4	Utilizes student knowledge and experience.	2.79	0.57	Neutral
5	Transmission of conceptual knowledge.	2.74	0.69	Neutral
Effectiveness of self-assessment activity		**Mean**	**S.D**	**Remarks**
1	Utilize student knowledge and experience	3.42	1.27	Neutral
2	Create leadership quality	3.35	1.27	Neutral
3	Increases student's interest	3.23	1.15	Neutral
4	Students can be more hardworking and thinking ability	3.19	0.89	Neutral
5	Develop cognitive skill	3.04	1.34	Neutral
Effectiveness of presentation activity		**Mean**	**S.D**	**Remarks**
1	Students can be more active for better performance in the class	3.37	0.94	Neutral
2	Promotes activity-based learning	3.28	1.03	Neutral
3	Encourages constructive learning	2.91	1.01	Neutral
4	Develops scientific knowledge	2.83	0.88	Neutral
5	Encourages self-learning	2.63	0.96	Neutral
Effectiveness of problem based learning activity		**Mean**	**S.D**	**Remarks**
1	Encourages constructive learning	3.23	1.01	Neutral
2	Promotes activity learning.	3.16	1.04	Neutral
3	Utilizes student knowledge and experience	3.06	1.16	Neutral
4	Encourages self-learning.	2.83	0.74	Neutral
5	Boosts confidence level of student by problem based activity	2.8	0.79	Neutral
Effectiveness of class discussion activity		**Mean**	**S.D**	**Remarks**
1	Utilizes student knowledge and experience.	3.53	0.79	Agree
2	Encourages constructive learning.	3.18	0.93	Neutral
3	Develop collaborative skills	3.05	0.84	Neutral
4	Improve critical thinking in students	2.88	1.06	Neutral
5	Increase retention and transfer of new information	2.76	0.76	Neutral

Effectiveness of inquiry-based learning
The answers range from neutral to agree, but they are tended toward neutral with mean value of 3.02. "Deliver detail information" is ranked in 1st place. "Improve problem-solving skills" was mentioned by respondents as their 2nd choice, and this statement seems to coincide with the mean score of 2.98. The answers range from neutral to agree, but they are tended towards neutral with mean value2.98 when "provide systematic knowledge" is ranked at third with mean value of 2.88.

Effectiveness of self-assessment activity
The answer range for "utilize student knowledge and experience" is neutral to agree, although it is tended toward neutral with a mean score of 3.42 as shown by its ranking in first place. Respondents' responses to "create leadership quality" were rated second and tended neutral with the mean value of 3.35 ranking "increases student's interest" in third place reveals that answers range from neutral to agree, but they are tended toward neutral the mean value of 3.23.

Effectiveness problem based learning activity
"Encourages constructive learning" is ranked first, and the answers range from neutral to agree, although they tended toward neutral with the mean score of 3.23 respondents' comments regarding "promotes activity learning" came in at number two on the list, and they prefer to neutral with the mean value of 3.16. The third-place ranking for "utilizes student knowledge and experience" reveals that answers range from neutral to agree, but they tended toward neutral with mean value of 3.06.

Effectiveness class discussion activity
"Encourages constructive learning" falls between neutral and Agree, although it is leaning towards agree with a mean value of 3.23, as shown by its ranking order in first place. Respondents' comments regarding "promotes activity learning" came in at number two on the list, and they prefer to neutral with the mean value of 3.16. The third-place ranking for "utilizes student knowledge and experience" reveals that answers range from neutral to agree, but they are tending toward neutral with mean value of 3.06.

Effectiveness class presentation activity
Effectiveness of class presentation activities "students can be more active for better performance in the class" is ranked first and it reveals that the answers range from neutral to agree, but they are tended toward neutral with the mean value of 3.37. Respondents' comments regarding "promotes activity-based learning" came in at number two on the list, and they prefer to agree with the mean value of 3.28. "Encourages constructive learning" is ranked third, and the answers range from disagree to neutral, although they tended toward neutral with the mean score of 2.91.

Table 4: Difficulties faced by teachers in the adoption of flipped learningand

(Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree)

Sr.	Difficulties faced by teachers	Mean	S.D	Remarks
1	Schools' infrastructure is a big hindrance in flipped learning	3.58	0.74	Agree
2	Management cannot motivate to teachers for performance	3.53	0.86	Agree
3	Lack of activity and creation being faced by teachers	3.17	1.23	Neutral

4	Classroom management not supported to activity-based learning	3.14	0.86	Neutral
5	Lack of lesson planning for flipped learning	3.09	1.21	Neutral
6	Teachers are not well trained for flipped learning	3.07	0.72	Neutral
7	Teachers have less practice in flipped learning	2.69	1.21	Neutral
8	Less availability of required resources for flipped learning	2.6	0.86	Neutral
9	Lack of interest on the part of the teacher about implementation	2.46	1	Disagree
10	Lack of adaptation of flipped learning in primary schools	2.34	1.22	Disagree

Discussion

"Schools' infrastructure is a big hindrance in flipped learning" reveals that answers range from neutral to agree, but tended toward neutral with a mean score of 3.28. Respondents' comments on "management cannot motivate teachers for performance" came in at number two on the list, and they prefer to neutral with the mean value of 3.23. The third-placed ranking of "lack of activity and creation is being faced by teachers" revealed that opinions range from neutral to agreeable but tended toward neutral with the mean score of 3.17.

Table 5: Possible solution for challenges for adaptation of flipped learning

(Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree)

Sr.	Solution for challenges for improvement	Mean	S.D	Remarks
1	Friendly classroom management for activity-based learning	3.52	0.61	Agree
2	Management motivates teachers for flipped learning	2.69	1.09	Neutral
3	Properly lesson planning to perform flipped learning in schools.	2.67	1	Neutral
4	Teachers take it serious about implementing of flipped learning	2.56	0.74	Neutral
5	Management conducts training for flipped learning.	2.4	1.12	Disagree

Discussion

Friendly classroom management for activity-based learning is ranked 1st, and the answers range from neutral to agree, but they tended toward neutral with a mean value of 3.12. Respondents' comments regarding "management motivates teachers for flipped learning" came in at number two on the list, and they were neutral, with a mean value of 2.69. "Properly lesson planning to perform flipped learning in schools" is ranked third, and the response is neutral, with a mean score of 2.67.

Summary

Flipped learning is a method of teaching that transfers the lecture outside the classroom and homework inside the classroom via technology and different activities with the help of teachers. Flipped learning claims a diversity of problem-solving techniques for obtaining new learning interests. In flipped learning, students follow specific procedures that construct discovering knowledge among them. Flipped learning is flexible and summarizes the basic concepts of different investigations. The student's academic performance and achievements are directly related to the learning process used during the educational process. Flipped learning helps students manage the educational resources and materials and perform academically better in educational institutions.

Flipped learning is important for attaining new knowledge, promoting personal views, and transferring new concepts. It enhances the active participation of students in cultivating new skills. In flipped learning, students get motivated toward active learning because this learning method usually starts with problem-solving scenarios.

This study was conducted in the city of Faisalabad. For this purpose, a survey was conducted with private primary schools in the city of Faisalabad. This study aims to analyze the activity-based performance in primary schools, the effectiveness of flipped learning by teachers, the difficulties teachers face in adopting flipped learning, and how to cope with these challenges.

Conclusion

It is concluded that flipped learning increases students' engagement with the material, increases grade marks, deepens their understanding, increases active participation in the classroom, and motivates them to perform better. The effects of flipped learning on the abilities of students are increased quality of education, self-esteem, self-confidence, thinking ability, and retention power. In the modern era, the demand for education and educational technology has increased. Considering the present educational situation, applying the flipped learning technique in the educational process is necessary. This thing surely increases the enrolment of students, which proves fruitful for the best educational quality. So, this study aims to elaborate on the use of flipped learning and analyze its effects on the teaching-learning process.

Suggestions

- Teachers should develop a classroom environment in which different techniques of inquiry-based methods can be easily implemented.
- Teachers should use the inquiry-based approach according to the nature and demand of topics and the mental levels of students for the best educational process.
- Necessary educational resources should be available to implement flipped learning in the classroom better.
- Teachers should involve the students in different classroom activities, such as presentations. Self-assessment, with the help of the students sharing new ideas, solves problems in the target content area of every subject and gives effective learning outcomes.
- School management should support the implementation of flipped learning techniques in schools and conduct proper training for the implementation of flipped learning with different activities in the classroom.
- School management should motivate teachers to prepare proper lesson planning for flipped learning activities in the classroom.

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