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RESEARCH PAPER

The Role of Flipped Language Learning in Developing the Higher Order Thinking Skills among the University Students in Pakistan

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ABSTRACT

This research study aims to investigate the role of flipped language class models in fostering higher-order thinking skills (HOTS) such as creative ability, evaluating and analyzing ability among the students. Like all other fields of life, schooling is particularly influenced by the Covid-19 situation and a wide range of educating and learning is extended through online and distance learning. This analysis is quantitative in nature as it collects data from students regarding flipped classrooms in relation to HOTS through a questionnaire. In order to analyze the collected data there is a theoretical framework available such as Bloom's taxonomy. Cross-sectional design is adopted and a descriptive correlational plan is utilized in the study. A sample of 160 students is utilized and the results show the positive responses of students about flipped learning in relation to Higher Order Thinking Skills.

KEYWORDS Bloom's Taxonomy, Flipped Language Class, HOTS

Introduction

The COVID-19 pandemic promptly affects higher instruction and Education (HE) fully. The financial, social, political, and instructive educational emergency brought about by the Coronavirus pandemic. This crisis has featured a few existing and known issues of HE (Higher Education). This includes the utilization of traditional lecture method, teacher/instructor-centered education, and learning, absence of advanced training systems like use of technology in classrooms. There is also a need of advanced capabilities of educators and students so far as the use of technological devices are concerned. These problems have been intensified due to the pandemic (Divjak et al., 2022). So, because of pandemic there is an increase in the use of technology like PCs, Laptops, and Mobiles in learning process. Universities created their Learning Management System (LMS). Face to face classes were shifted to online virtual classes in order to continue the learning process. So, in universities teachers send recorded lectures, videos, articles to students one day before lecture and in class there are discussions. There are a lot of applications used by teachers for virtual learning and for the distribution of content. For example, Learning Management System of the university, video, and audio meetings for discussion and activities using options such as Zoom, Skype, Microsoft Teams, Go To Meeting, and Google Hangouts. Moreover, audio and video lectures are also developed by the instructors or from a lot of other technological sources such as YouTube and institutional conference systems for the students. Teachers use WhatsApp, and Gmail to send video links, articles, books, and learning content. So, in this way the online flipped Classroom is developed in those covid-19 days.

The proposed 'flipped model' can be applied to a wide scope of mixed educational strategies, methods such as traditional and video lectures. We can say that through flipped learning the learners distantly access pre-arranged lectures, presentations, notes, and other materials and afterward participate in organized in-class exercises and group activities. (Hale, 2021).

Theoretical Framework

The system explained by Bloom and his colleagues comprised of six significant classes: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. The classifications under the Knowledge level were introduced as "abilities, skills, and capacities. It is stated that information was the fundamental point for incorporating these abilities, skills, and capacities in practical life. However, there is a revised Bloom's Taxonomy, in which levels are defined by action words such as remembering, understanding, applying, analyzing, evaluating, and creating. In revised Taxonomy the level of Evaluation is replaced by creation and vice versa. In Bloom's taxonomy, the levels are presented in the pyramid. There are two types of skills in Bloom's Taxonomy. Students are doing the lower levels of mental work outside of class through watching learning informational material. The higher types of mental skills are focused in class through different activities.

The researcher incorporated HOTS of Bloom's taxonomy in this. This revised framework of Bloom's taxonomy classification is closely related to Flipped class learning. In Flipped learning, the transmission of data such as videos, which is the reason for learning, is acquired freely and outside of class whereas the other side such as critical thinking which requires more active engagement happens during class under the direction of a guide and also in group learning.

This analysis is useful and significant as it features the meaning of innovative learning methods of flipped classrooms. The study investigates the perceptions of students about flipped learning in the language classroom of a multilingual community such as in Pakistan and provides perspectives of learners on whether it helps in fostering learning as a critical and higher-order form of thinking. This research incorporates Bloom's taxonomy as a theoretical base. The study is further significant because it incorporates the perspectives of the students with Higher Order Thinking (HOT) skills. Brooks (2002) depicts that flipped learning incorporates a constructivist approach to learning and the traditional class model rejects this and uses teacher-centered. So, because of this in traditional classes, there is only surface learning rather than deep learning. So, this analysis finds out the need for implementation of the flipped model in Pakistani classes according to the students such as whether they are in favor of this or not. This research conveys the point that how flipped learning and flipped classrooms are beneficial in developing the personality of students that are related to Higher order thinking skills. The study is significant in pedagogical progress and development as it put forwards the learner‘s perspective towards blended learning as a creative and active teaching methodology. This study will help in changing the prevalent teaching and learning strategies in Pakistan. This research clears the new aspect of learning and teaching by integrating the traditional methods with the new, innovative online tasks and methods. This practically helps various educators about the idea of implementation of the problem-solving Flipped methodology in universities of Pakistan.

Literature Review

The expression Flipped Classroom showed up in the world full of writings, method and strategies in 2000 (Lage et al., 2000) and this term Flipped Classroom made well known by two Chemistry instructors named Bergmann and Sams (Bergmann & Sams, 2012). As we can say with effective and productive fulfillment of flipped lectures and after the grand success of the Khan Academy and great triumph of video online lectures, the flipped class model acquired foothold in the region of North America across a range of different subjects and at various degrees of guidance. This teaching method or we can say flipped strategy has reliably appraised as one of the top most strategies in instructive innovational technology (Watters, 2012).

Cooperative and collaborative learning in flipped classes is considered among the dynamic or active learning approaches. Many scholars also consider constructivist theory in relation to it. (Felder, 2012; Bishop & Verleger, 2013; Jensen et al., 2015; Foldnes, 2016). Involving cooperative and collaborative learning procedures in the flipped study surroundings will extend the benefits and competency of the educational experience. However, in comparison to the above point, there are no such above-mentioned benefits of individual learning in a flipped classroom. When flipped study class and cooperative learning techniques are used together, research positively influences students' accomplishments. It may also influence the point of view of teachers and study practices in a good way. (Chen et al., 2015; Foldnes, 2016; Guo et al., 2018; Munir et al., 2018; Zhang, 2018).

The investigation of flipped classroom model depends on the concept of Bloom's revised scientific classification of cognitive domain. This scientific categorization gives six degrees of learning in a pyramid shaped diagram. The clarification is organized from the least level such as remembering to the most significant level such as creating:

In this first stage, the learners attempt to perceive and review the data they get in class. In this second stage of blooms taxonomy, learners attempt to exhibit their full comprehension. In this learners decipher the data. In this third stage of Bloom's Revised Taxonomy, the learners practice what they have understood or apply that particular information to the genuine circumstance in real life. In this fourth degree of learning, the understudies additionally produce imaginative reasoning. In fifth stage of this taxonomy, there is appraisal or peer-survey information, assessment, judge in relational terms. In this level of Taxonomy, learners are assessing the entire learning ideas, process and they could assess or make judgment on how far they effectively understand and grasp the concept. In last level of Bloom's Taxonomy, learners can generate, design, build and produce a new thing from the concept they fully grasped. (Bloom, 1969).

Lankford (2013) referenced that the flipped class model centers on how to help the students in accomplishing elevated level of the Bloom's Revised Taxonomy. Moreover, Nederveld & Berge (2015) added that in flipped learning Classroom, in-class activities is spent on application and moving towards more significant level such as evaluating, analyzing, and creating. Traditional lectures focus on lower-level reasoning and skills. Executing flipped learning permits the learners to invest more energy supporting higher level learning skills like problem solving activities in class.

Material and Methods

This research is based on a quantitative analysis of a closed questionnaire addressing university students' perceptions of language learning through flipped

language classroom and its related effect on higher order thinking skills. The study investigates the perceptions of students about flipped learning in the language classroom of a multilingual community such as in Pakistan and basically provides perspectives of learners on whether it helps in fostering learning as a critical and higher-order form of thinking.

In this analysis, a descriptive correlational plan is utilized. Descriptive Correlational design basically aims to give static pictures of specific circumstances. As well as present the connection and link between various factors presented as variables (McBurney & White, 2009).

Population and Sample of the Study

The population of the study consists of University students. The group of the study consists of BS and MPhil students who experienced Online Flipped Learning mode through Zoom application whereas the sample of the study will be selected through a random non-probability sampling design. So, this study sample consists of 160 BS and MPhil students from universities in Sargodha, Pakistan.

Variables that present the demographic details are considered as independent because they cannot be manipulated. Gender, Class and CGPA are taken as Categorical Variable. Flipped learning experience is a binary variable such as yes or no. There are other variables like good internet facility, Application for online classes, good application for sending lecture material.

Dependent variable in our research is Perceptions of students about Flipped Language Learning in relation to HOTS (Higher Order Thinking Skills), and Independent variable is Flipped Language learning.

Instrument of the Study

The analyst utilizes a questionnaire as a principal apparatus of the research, and for the presentation of data in a systematic way; the researcher will employ SPSS (descriptive and inferential statistics).

Questionnaire deals with the questions regarding Higher Order Thinking skills (HOTS) and its relation to Flipped Classroom. In particular first section deals with the statements based on the fourth level of Blooms revised Taxonomy which is **"**Analyzing**".** Second section deals with the Fifth level of Blooms Revised Taxonomy which is **"**Evaluating**".** Third section of Questionnaire deals with the Sixth Level of Blooms Revised Taxonomy which is **"**Creating**".** Here the researcher only takes Higher Order Thinking Skills Levels of Blooms Revised Taxonomy on the basis of Research Aims. This questionnaire ordinarily incorporates five points Likert scale such as "strongly agree," "agree," "neutral," "disagree," and "strongly disagree."

Results and Discussion

This quantitative, non-experimental, descriptive, and correlational study was intended to investigate the role of flipped learning in developing Higher Order Thinking Skills. This is analyzed and described through levels of Blooms Taxonomy. This is the theoretical framework for the research and all levels are linked to Flipped Learning. The students who experienced Covid-19 Online flipped Language Learning Classes were approached to take part in this research. The people with flipped learning experience filled the form for the research; they also marked ethical consideration as agreed.

Table 1
Student's Responses About Analyzing Level

Q:No.	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		MEAN	MED	S.D
	N	%	N	%	N	%	N	%	n	%			
Q-1	99	61.9	50	31.3	1	0.6	1	0.6	9	5.6	1.57	1	0.99
Q-2	97	60.6	52	32.5	1	0.6	3	1.9	7	4.4	1.57	1	0.95
Q-3	7	4.4	3	1.9	1	0.6	53	33.1	96	60	4.43	5	0.95
Q-4	97	60.6	50	31.3	2	1.3	2	1.3	9	5.6	1.60	1	1.01
Q-5	8	5	1	0.6	1	0.6	51	31.9	99	61.9	4.45	5	0.95
Q-6	99	61.9	51	31.9	0	0	5	3.1	5	3.1	1.54	1	0.90

This descriptive table answers the research question. It is the first section of questionnaire known as Analyzing Level. So, in this section there are six questions related to analyzing level of HOTS. The first question "Do you think that flipped language classroom helped you to improve your ability to break a concept into parts?" was asked 160 students. Cumulatively, 93.2 % students agreed with this that flipped language classroom helped you to improve your ability to break a concept into parts. Only 6.2 % students disagreed with this question and remaining 0.6 % students responded as neutral. More than 90 % students believe that flipped language classroom helped you to improve your ability to break a concept into parts. The mean of this question 1.568, median is 1, and standard deviation is .988. The second statement in this section is "Do you think that watching videos before the class helped you to understand how each part of a concept is related to one another?" Cumulatively, 93.1 % students out of 160 agreed that watching videos before the class helped you to understand how each part of a concept is related to one another. Only 6.3 % students disagreed with the question, while 0.6 % responded as neutral. The mean of statement two is 1.56, median is 1, and standard deviation is .949. The third statement in this section is "Reading content related to the lecture before the class does not help you to compare and contrast two related concepts." Cumulatively, 93.1 % students out of 160 disagreed that watching videos before the class helped you to understand how each part of a concept is related to one another. Only 6.3 % students agreed with the question, while 0.6 % responded as neutral. The mean of statement three is 4.42, median is 5, and standard deviation is .948. The fourth statement in this section is "Watching lesson videos before the class contributes to the clarity and comprehension of different points in a better way in class." Cumulatively, 91.9 % students out of 160 agreed that watching lesson videos before the class contribute to the clarity and comprehension of different points in a better way in class. Only 6.9 % students disagreed with the question, while 1.3 % students responded as neutral. The mean of statement is 1.6, median is 1, and standard deviation is 1.010. The fifth statement in this section is "Flipped Language Learning does not promote class-group discussions" Cumulatively, 93.8 % students out of 160 disagreed that Flipped Language Learning does not promote class-group discussions. Only 5.6 % students agreed with the question, while 0.6 % responded as neutral. The mean of statement five is 4.45, median is 5, and standard deviation is .950. The sixth statement in this section is "Pre Reading Material helps you to question more frequently in class." Cumulatively, 93.8 % students out of 160 agreed that Pre Reading Material helps you to question more frequently in class. Only 6.2 % students disagreed with the question, while 0 % responded as neutral. The mean of last statement is 1.53, median is 1, and standard deviation is 0.90.

Table 2
Student's Responses About Evaluating Level

Q No.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Med	S.D

	n	%	n	%	n	%	n	%	n	%			
Q-1-	96	60	54	33.8	0	0	1	0.6	9	5.6	1.58	1.00	0.98
Q-2-	57	35.6	91	56.9	2	1.3	7	4.4	3	1.9	1.80	2.00	0.82
Q-3-	8	5	2	1.3	2	1.3	55	34.4	93	58.1	4.39	5.00	0.97
Q-4-	97	60.6	53	33.1	0	0	4	2.5	6	3.8	1.56	1.00	0.92
Q-5-	97	60.6	52	32.5	2	1.3	4	2.5	5	3.1	1.55	1.00	0.90
Q-6-	59	36.9	89	55.6	3	1.9	4	2.5	5	3.1	1.79	2.00	0.85

This table answers the research question. It is the second section of questionnaire known as Evaluating Level. So, in this table there are six questions related to evaluating level of HOTS. The first "Do you think that Flipped Language Learning helped you to justify a stand or decision?" was asked to 160 students. Cumulatively, 93.8 % students agreed with this that Flipped Language Learning helped you to justify a stand or decision. Only 6.2 % students disagreed with this question and remaining 0 % responded as neutral. More than 90 % students believe that Flipped Language Learning helped you to justify a stand or decision. The mean of this question is 1.58, median is 1, and standard deviation is 0.98. The second statement in this section is "Do you think that watching videos before a lecture helps you to utilize your skills to start a research project on your own and show creativity?" Cumulatively, 92.5 % students out of 160 agreed that watching lesson videos before the class contribute to the clarity and comprehension of different points in a better way in class. Only 6.3 % students disagreed with the question, while 1.3 % responded as neutral. The mean of this statement is 1.80, median is 2, and standard deviation is 0.82. The third statement in this section is "I feel that watching videos and taking notes before class does not contribute efficiently to making judgments in-class time." Cumulatively, 92.5 % students out of 160 disagreed that watching videos and taking notes before class does not contribute efficiently to making judgments in-class time. Only 6.3 % students agreed with the question, while 1.3 % students responded as neutral. The mean of this statement is 4.39, median is 5, and standard deviation is .97. The fourth statement in this section is "Do you think that reading content and watching videos before class allows you to argue on a topic in a better way in class?" Cumulatively, 93.7 % students agreed that reading content and watching videos before class allows you to argue on a topic in a better way in class. Only 6.3 % students disagreed with the question, while no student responded as neutral. The mean of this statement is 1.56, median is 1, and standard deviation is 0.92. The fifth statement in this section is "Flipped Language Learning boosts argumentation and discussion abilities" Cumulatively, 93.1 % students out of 160 agreed that Flipped Language Learning boosts argumentation and discussion abilities. Only 5.6 % students disagreed with the question, while 1.3 % students responded as neutral. The mean of statement five is 1.55, median is 1, and standard deviation is 0.90. The sixth statement in this section is "Flipped Language Learning fosters self-evaluation." Cumulatively, 92.5 % students out of 160 agreed that Flipped Language Learning fosters self-evaluation. Only 5.6 % students disagreed with the question, while 1.9 % students responded as neutral. The mean of statement six is 1.79, median is 2, and standard deviation is 0.85.

Table 3
Student's Responses About Creating Level

Q: no.	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Mean	Med	S.D
	N	%	N	%	N	%	N	%	N	%			
Q-1	99	61.9	51	31.9	0	0	1	0.6	9	5.6	1.56	1	0.98
Q-2	97	60.6	53	33.1	0	0	2	1.3	8	5	1.57	1	0.96
Q-3	16	10	133	83.1	1	0.6	8	5	2	1.3	2.04	2	0.65
Q-4	9	5.6	1	0.6	0	0	92	57.5	58	36.3	4.18	4	0.93
Q-5	9	5.6	2	1.3	0	0	56	35	93	58.1	4.39	5	1.00

This descriptive table answers the research question. It is the third section of questionnaire known as Creating Level. So, in this study, there are five questions related to evaluating level of HOTS. The first "Do you think that flipped language classroom enables you to construct and formulate new ideas about different topics in class?" was asked to 160 students. Cumulatively, 93.8 % students agreed with this that flipped language classroom enable them to construct and formulate new ideas about different topics in class. Only 6.2 % students disagreed with this question and 0 % responded as neutral. More than 90 % students believe that flipped language classroom enables you to construct and formulate new ideas about different topics in class. The mean of this question 1.56, median is 1, and standard deviation is 0.98. The second statement in this section is "Do you think that flipped language classroom enables you to plan and devise something new in research projects?" Cumulatively, 93.7 % students agreed that flipped language classroom enables them to plan and devise something new in research projects. Only 6.3 % students disagreed with the question, while 0 % responded as neutral. The mean of second statement is 1.56, median is 1, and standard deviation is 0.96. The third statement in this section is "Flipped Language Learning enables me to complete the learning tasks or start my project with alternative method not taught by the teacher." Cumulatively, 93.1 % students out of 160 agreed that flipped language classroom enables them to plan and devise something new in research projects. Only 6.3 % students disagreed with the question, while 0.6 % responded as neutral. The mean of statement is 2.04, median is 2, and standard deviation is 0.64. The fourth statement in this section is "Flipped Language Learning does not help me to reflect on what I had learned in a new way." Cumulatively, 94 % students disagreed that Flipped Language Learning does not help me to reflect on what I had learned in a new way. Only 6.2 % students agreed with the question, while zero % responded as neutral. The mean of statement four is 4.18, median is 4, and standard deviation is .93. The fifth statement in this section is "Reading and watching content before class does not allow me to assemble different ideas to form a new point in-class discussion." Cumulatively, 93.1 % students disagreed that Reading and watching content before class does not allow them to assemble different ideas to form a new point in-class discussion. Only 6.9 % students agreed with the question, while 0 % responded as neutral. The mean of statement five is 4.38, median is 5, and standard deviation is .996.

Table 4
Overall comparison of Students perception based on Gender

Section	Gender	N	Group mean	Group Std.mean
Analyzing Level	Female	100	2.48	0.072
	Male	60	2.6	0.159
Evaluating Level	Female	100	2.06	0.069
	Male	60	2.19	0.150
Creating Level	Female	100	2.74	0.069
	Male	60	2.76	0.150

This table explains the overall comparison of responses of students based on the variable gender. In this table there are sections such as numbers of male and females, group mean and group standard mean. First section is named as analyzing level. In this group, mean of male students is 2.6, while that of female students is 2.48. Second level is named as Evaluating Level. In this group mean of male students is 2.19, while that of female students is 2.06. Group Standard Mean of male students is 0.150 and that of female students is 0.069. Third Level is Creating Level. In this Group Mean of Male students is 2.76 and that of female students is 2.74. Group Standard Mean of male students is 0.150 and of females is 0.069.

Higher Order Thinking Skills is related to Bloom's Taxonomy. So, to find out the perspectives of students to investigate whether flipped learning methodology helps in

fostering learning as a critical and higher-order form of thinking (HOTS). The section basically answers the research questions which are about Higher Order Thinking Skills (HOTS) in relation to flipped learning. To answer this question, there are 3 sections named Analyzing Level, Evaluating Level and Creating Level. First section is named as Analyzing Level. In this section there are 6 statements. Every statement shows positive response towards flipped learning such as flipped learning methodology helps in fostering learning as a critical and higher-order form of thinking (HOTS). In this section there are 2 negative statements and 4 positive statements about flipped learning in relation to Analyzing Level of HOTS. The mean of 1, 2, 4, and 6 is 1.57, 1.57, 1.60, 1.54 respectively and the median of all these statements is 1. The statement one is a positive statement about flipped language learning. The mean of this statement is 1.57 and this shows that most students strongly agreed with the statement. They agreed that flipped language classroom helped you to improve your ability to break a concept into parts. In Flipped Classroom, students learn at home and cleared their concepts. So, in class activities they have previous knowledge about the topic. In this way they know how to develop a concept and break it into subtopics or subparts. This is related to the Higher Order Thinking Skill of Blooms Taxonomy. In this students learn such as how to analyze and interpret different concepts. The mean of 2, 4, 6 statements is 1.57, 1.60, 1.54 respectively. So, students strongly agreed with the point that watching videos before the class helped you to understand how each part of a concept is related to one another. Students also strongly agreed that FL methodology contribute to the clarity and comprehension of different points in a better way. Students strongly agreed to the point that pre reading material and watching videos helps them to question more during class time. So, according to student's beliefs, FL (Flipped Learning) increases the analyzing abilities in a student. This is because they learn at home and grasp different concepts by themselves, and in class discussions they are able to make associations and comparisons. Students believed that it is easy for them in class to take complex knowledge and concepts from teachers and then break it into parts and summarize. The mean of statement number 3 and 5 is 4.43, 4.45 respectively and the median of these two statements is 5. This shows that students strongly disagreed with these statements. Students disagreed that Reading content related to the lecture before the class does not help them to compare and contrast two related concepts. In this students also strongly disagreed with the point that FL does not promote class group discussions. In the end, the point is that Students are in favor of flipped classroom in relation to the development of analyzing skill.

Second section is named as Evaluating Level. In this section there are six statements. Every statement shows positive response towards flipped learning such as flipped learning methodology helps in fostering learning as a critical and higher-order form of thinking (HOTS). In this section there is one negative statement and five positive statements about flipped learning in relation to Evaluating Level of HOTS. The mean of statement number 1, 4, 5 is 1.58, 1.56, 1.55 respectively and median of these statements is 1. The mean of statement 1 is 1.58 which shows that most of the students strongly agreed with the point. Students agreed that Flipped Language Learning helped you to justify a stand or decision. This is because through reading online course related material before class, they have some knowledge about the topic. Teacher guidance and in-class activities make the learners very much capable of differentiating between different concepts. This is all because they develop mental schemas in brain before the class by themselves. Students also strongly agreed with the point that reading content and watching videos before class allows them to argue on a topic in a better way in class than other students. So, Students also strongly agreed with the point that Flipped Language Learning boosts argumentation and discussion abilities. However, the mean of

statement two and 6 is 1.80, 1.79 respectively and the median of these two statements is two. This shows that students agreed with these two statements. Students agreed that watching videos before a lecture helps you to utilize your skills to start a research project on your own and show creativity. They also agreed that Flipped Language Learning fosters self-evaluation. However, students disagreed with the statement 3. Because flipped learning and the content provided before the class helps students in making good judgments in class. So, students agreed that they make criteria based judgments due to flipped learning methodology. All these statements in this section show a positive response about FL in relation to evaluating level. So, basically they are with the point that Reading content before the lecture helped them a lot in developing reviews and creating informed judgments.

Third section is named as Creating Level. In this section there are five statements. Every statement shows positive response towards flipped learning such as flipped learning methodology helps in fostering learning as a critical and higher-order form of thinking (HOTS). In this section there are two negative statements and three positive statements about flipped learning in relation to Creating Level of HOTS. The mean of statement one and two is 1.56 and 1.57 respectively and the median of these two statements is 1. Students strongly agreed with these statements. Students strongly agreed that Flipped language classroom enables them to construct and formulate new ideas about different topics in class. Students also strongly agreed that flipped language classroom enables them to plan and devise something new in research projects. Creating is the final level of Bloom's Taxonomy. In this students agreed that reading material before class allows them to develop that ingrained mental schemas. This will help them in class in different activities and in creating new ideas about one topic. Due to pre learning and self-initiated learning in FC, students think that they are able to project creative ideas in research projects. The median of statement number three is 2. This shows that Flipped Language Learning enabled them to complete the learning tasks or start any research project with alternative method not taught by the teacher. The mean of statement number 4 and 5 is 4.18, 4.19 respectively. So, in this students disagreed with the point that Flipped Language Learning does not help them to reflect on what they had learned in a new way. Students also disagreed with the point that Reading and watching content before class does not allow them to assemble different ideas to form a new point in-class discussion. However they are with the view that FL methodology helped them a lot in creating new aspects in projects. Watching videos before class helped them in developing and creating new things such as both physically and also in mind. Due to pre reading of content, students are able to assemble different points and ideas on their own. They use these points to create a new aspect in return. So, students have positive responses for all these statements about flipped learning in relation to HOTS.

Conclusion

Due to Covid-19 situation, the learning system is shifted from traditional to online classes. The lockdown days promptly affects higher instruction and Education (HE) fully, through the world. The educational emergency brought about by the Coronavirus pandemic was the main issue. The result shows that the Flipped Learning is related to HOTS (Higher Order Thinking Skills). Most of the students give positive responses about Flipped Classroom in relation to HOTS. Female students showed positive response about FL and increase in HOTS than males. There is difference in responses of male and female students. Results also show that students with above 3 CGPA have positive perspective about Flipped Learning in developing Higher Order Thinking Skills. Flipped Learning basically increases Higher Order Thinking Skills of

the students. FC also increases students evaluating, analyzing, and creating abilities. So, we can conclude that there is a strong relation between Flipped Language Learning and HOTS. Flipped Classrooms are better than Traditional classrooms because of use of active /methodology that in return increase critical Thinking of students.

References

Bergmann, J., Sams, A., & Gudenrath, A. (2016). *Flipped learning for English instruction*. Hawker Brownlow Education.

Berrett, D. (2012). How 'flipping' the classroom can improve the traditional lecture. *The chronicle of higher education*, *12*(19), 1-3.

Best, J., Kahn, J., Boston L London L Toronto, B., Tokyo, S., & Singapore. (n.d.). *Research In Education*. https://ww2.odu.edu/~jritz/attachments/reined.pdf

Betihavas, V., Bridgman, H., Kornhaber, R., & Cross, M. (2016). The evidence for "flipping out": A systematic review of the flipped classroom in nursing education. *Nurse Education Today*, *38*, 15–21. https://doi.org/10.1016/j.nedt.2015.12.010

Bishop, J., & Verleger, M. A. (2013, June). The flipped classroom: A survey of the research. In *2013 ASEE Annual Conference & Exposition* (pp. 23-1200).

Chen, N.-S., Hsieh, S.-W., & Kinshuk. (2008). Effects Of Short-Term Memory And Content Representation Type On Mobile Language Learning. *Language Learning & Technology*, *12*(3), 93–113

Chen, T. S., Chiu, P. S., Huang, Y. M., & Chang, C. S. (2011). A study of learners' attitudes using TAM in a context-aware mobile learning environment. *International Journal of Mobile Learning and Organisation*, *5*(2), 144. https://doi.org/10.1504/ijmlo.2011.041567

Divjak, B., Rienties, B., Iniesto, F., Vondra, P., & Žižak, M. (2022). Flipped classrooms in higher education during the COVID-19 pandemic: findings and future research recommendations. *International Journal of Educational Technology in Higher Education*, *19*(1). https://doi.org/10.1186/s41239-021-00316-4

Felder, R. M. (2012). STEM education: A tale of two paradigms. *Journal of Food Science Education*, *20*(1), 8–15. https://doi.org/10.1111/1541-4329.12219

Foldnes, N. (2016). The flipped classroom and cooperative learning: Evidence from a randomised experiment. *Active Learning in Higher Education*, *17*(1), 39-49.

Guo, S., Tian, Q., & Liu, Y. (2018, January). Study and practice in flipped class based on inquiry cooperative learning. In *2017 7th International Conference on Education and Management (ICEM 2017)(Atlantis Press)*

Jensen, J. L., Kummer, T. A., & Godoy, P. D. D. M. (2015). Improvements from a flipped classroom may simply be the fruits of active learning. *CBE—Life Sciences Education*, *14*(1), ar5.

Lage, M. J., Platt, G. J., & Treglia, M. (2000). Inverting the Classroom: A Gateway to Creating an Inclusive Learning Environment. *The Journal of Economic Education*, *31*(1), 30. https://doi.org/10.2307/1183338

McBurney, D. H., & White, T. L. (2009). *Research methods*. Wadsworth, Cengage Learning.

Munir, M. T., Baroutian, S., Young, B. R., & Carter, S. (2018). Flipped classroom with cooperative learning as a cornerstone. *Education for Chemical Engineers*, *23*, 25-33.

Nederveld, A., & Berge, Z. L. (2015). Flipped learning in the workplace. *Journal of Workplace Learning*, *27*(2), 162–172. https://doi.org/10.1108/jwl-06-2014-0044

Watters, A. (2012, November 28). *Top Ed-Tech Trends of 2012: The Flipped Classroom*. Hack Education.

Zhang, L. (2018). English Flipped Classroom Teaching Model Based on Cooperative Learning. *Educational Sciences: Theory & Practice*, *18*(6). https://doi.org/10.12738/estp.2018.6.278