YOUTUBE AND SKYPE MODES OF VIRTUAL LEARNING PERFORMANCE IN RELATIONS TO COGNITIVE STYLES OF STUDENTS

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ABSTRACT
The study aimed to find out the relationship between cognitive styles, YouTube learning and Skype learning performance of secondary school students. For that purpose, the researchers randomly selected 20 students from two 9th standards of two English medium secondary schools of Silchar Town, Assam, India to conduct the experiment. Quasi Experimental Design based on Regression Analysis used to assess and relate the effects of variables. 10 class IX students of school 1 was counted as the YouTube learning Group, and 10 class IX students of school 2 was assigned for Skype learning. It resulted that perceiving, feeling, introversion and intuition has the hierarchical significant relationship with YouTube learning performance, however, extroversion, sensing, thinking, judging, has no significant relationship with YouTube learning performance. It also resulted that judging, thinking, sensing, extroversion has no hierarchical relationship with Skype learning performance.
Key words: cognitive styles, skype, virtual learning performance, YouTube

INTRODUCTION

Now, we are living in the knowledge based global world where there is a rapid advancement of science and technology. In fact, communication and technology plays a dominating role in almost all the sectors of human life like: business, industry, bank and education etc. Information and Communication Technology (ICT) refers to all the technologies through which people can communicate with others across the world. ICT plays an important role in education also. It makes the teaching-learning process better, interesting, and manages time, and helps to clarify the concepts in the easier way (Gurol, Kayisli, Basal, 2010). Online learning provides knowledge, skill and competency through Wikipedia, Wikimedia, pdf file, html file, video-conferencing, and mobile-conferencing, and through Skype (Chen & Xu, 2003). Virtual learning is a system of delivering learning materials to students via the web or recorded audio and video lectures. This system includes assessment, students direct participation, student tracking, collaboration and communication tools. Virtual learning environment allows participants to learn or acquire knowledge in a collaborative, co- operative learning activities and interactions (Dascalu, Bodea, Moldoveanu, Mohora, Lytras, de Pablos,2015). Virtual learning environment includes a course syllabus, pre- requisites registration, skilful mentor or instructor, and distant learning applications, and this normally includes materials such as copies of lectures in the form of text, audio/video presentations and the supporting visual presentations (Johannesen, 2013). Virtual classroom includes different types of communication system, multi- dimensional communication process, threaded discussions, chat – rooms, twitter, Skype, wikis, blogs, 3D visual learning spaces in reading (Dascalu & Trăuşan-Matu, 2015). Such type of reading needs collaboration and co-operation of students to share the information among each other. Literature found that recently, virtual learning models, teacher- educators, and researchers are using in their classroom (Jena, 2015a). Wei & Chou (2015) found that online learning improve the achievement of the students and it effects directly the perception. However, Nam (2014) argued that online co- operative learning is a constructive controversy, it trusts with more effectiveness then constructive controversy for student achievement. Face-to-face and on-line learning has significant effect on student's achievement (Zhan and Mei, 2013). Similarly, Cevik, Haslaman,& Celik, 2015 found that online collaborative learning activities help to solve problem and develop solving skills. In fact, achievement and emotion affect students' decision for online learning and participation, interaction and academic achievement are highly related with virtual or online learning environment (Tempelaar, Rienties, and Giesbers, 2015).

YouTube and Skype modes of virtual learning

Literature found that the integration of YouTube learning in school has so many barriers and challenges (Fu, 2013) and this influences teachers' perceptions and confidence (e.g. Koc, 2005**).**Contrast to the above result it was found that teachers' attitude towards technology could significantly predict students classroom performance (e.g. Kohler & Mishra, 2008; Palak & Walls**,** 2009. Moreover, Sang, Valcke, Braak, and Tondeur, 2010; Senapati, 2004 found that pre- service teachers are highly constructive but their depth of content knowledge is not sufficient to teach unless and until they are not using technology in the classrooms. YouTube, Wiki and online animation enhances real learning and high achievement with long retention (Yilmaz-Soylu & Akkoyunlu, 2002). A healthy learning environment is only possible through online collaborative YouTube learning which effects the academic achievement of students. (Jena, 2013) found that smart classroom is better for low – achievers and high- achievers than traditional classes. Chen, Chang, Chien, Tijus, and Chang (2015) found youtube and power-point presentation has significant effects on the achievement of the learner. Similarly, using interactive white-board in teaching and learning through smart classroom, establish teacher – students' attention towards getting meaningful learning. In these literatures, it was very difficult to determine that whether YouTube assisted learning environment has certain effects on achievement of the learners or not. Literature found virtual learning environment assisted by ICT is a significant tool for collaborative learning. The concept of virtual learning is a recent 21st century term engages students through online YouTube, online Wikipedia, and online animation, audio & video lectures**.** Pearson & Trinidad, 2005 found that youtube and conferencing are the instruments for refining the design of virtual learning environment and it has significant effect on learning performance. Similarly, (Andrews & Haythornthwaite, 2007) introduced e- learning in the general classroom found positive effect of achievement on learners. Virtual learning is a flexible learning environment runs through technology in classroom where teacher is a facilitator in learning and students are responsible for their own learning. Contrast to the above literature, it is found that virtual learning has no high confidence in demonstration or in a practitioner environment. It is very difficult to determine virtual learning over traditional approach. Almekhlafi (2006) found that computer assisted learning has positive effect on achievement. (Jahanbakhsh, 2012) found virtual learning environment has positive effect on learner's collaborative learning. (Greenberg & Zanetis, 2013**)** conducted a study entitled the impact of broadcast and streaming video in education. The found a powerful impact of student retention of information and on student engagement. Morgan (2014) found technology has unprecedented impact on achievement. In this virtual learning environment, online YouTube is a new way to consume, create and share information's (Christopher, 2011). Engaging the YouTube Google–eyed generation in teaching and learning engage students in desired practice to get high retention and achievement, online animation model is also effective over traditional approach (Jena, 2015b)

Learners' Cognitive Styles and Learning Performance

Cognitive style is the psychological dimension represents the consistency of individual's manner of cognitive functioning, particularly with respect to information acquiring and information processing (Ausburn & Ausburn, 1978). Similar, to him, Messick(1976) defined that cognitive styles are the stable attitudes, preferences, or habitual strategies of individual's modes of perceiving, remembering, thinking, and problem solving skills. Witkin, Moore, Goodenough, and Cox (1977) characterized that cognitive styles is the individual differences in the way of people perceive, think, solve problems, learn, and relate to others. Investigators thought that cognitive style could be a better predictor of an individual's success in a particular situation than general intelligence or situational factors. In the field of industrial and organizational psychology, cognitive style considered a fundamental factor determining both individual and organizational behaviour (e.g. Sadler-Smith & Badger, 1998**;** Streufert & Nogami, 1989; Talbot, 1989**)** and a critical variable in personnel selection, internal communications, career guidance, counselling, and conflict management (Hayes & Allinson, 1994). In the field of education, researchers have argued that cognitive styles have predictive power for academic achievement beyond general abilities (e.g., Sternberg, Grigorenko, & Zhang, 2008). Literature found that cognitive style is the factors, which affect the academic achievement of university students (Tinajero, Maria, Margarete, Jose, Paramo, 2012). The researchers like Altun& Cakan,2006 found that cognitive style directly affect the learners' leaning performance and it has a positive relationship with achievement. Contrast to this, Al –Salameh, 2011 found that cognitive style and its relationship with gender when comparable to the achievement found no statistical significant difference. Rao (2014) found that academic achievement in Mathematics is related to cognitive style reveals significant differences. Studies conducted by (Jantan, 2004**;** Sarmah, 2015) found that cognitive style has significant relationship with achievement, gender and age of the learners. Hayes, Allinson, Hudson, & Keasey, 2003 found learning style has significant effect on collaborative learning experiences. Tulbure, 2012 found that there exist significant differences between two groups of pre-service teachers in relation to learning styles, teaching strategies and academic achievement. Tabatabaei & Mashayekhi, 2013 found cognitive style tendencies did not show significant differences in relation to achievement and gender. In the above discussion and literature review, it is very difficult to assume the relationship between independent variables and dependent variable. The effect of ICT assisted virtual learning environment how plays effect on

achievement and its relationship with learning style and cognitive style of learners cannot be pre-determined. That is why the researcher has undertaken the study to assess the relationship between real learning performance and cognitive style of students. There is also not sufficient literature found whether virtual learning has significant effect over traditional approach and how the learning performance was related with cognitive style of students is not predictable.

Objectives of the study

H_1) To study the relationship between cognitive styles and YouTube learning performance of secondary school students.

H_2) To study the relationship between the cognitive styles and Skype learning performance of secondary school students.

1.12.0 Hypotheses of the study

H_1) cognitive styles hierarchically significantly relates with the YouTube learning performance of secondary school students.

H_2) cognitive styles hierarchically significantly relates with the Skype learning performance of secondary school students.

METHODOLOGY

Participants

The population of the present study involved all the secondary schools of Silchar Town, India and all the secondary students studying in Class IX. The present study was a Quasi-Experimental Design assessing the effect of independent variable (*i.e. virtual learning*) on dependent variable (*i.e. learning performance*) in relationship with the independent variables (*i.e. cognitive styles& learning styles*). For that purpose, the researcher had randomly selected two English medium secondary schools of Silchar Town. Similarly, out of more than twenty-five secondary schools having five thousand students, the researcher had randomly selected 20 students to conduct the experiment.

Design of the study

The present study is a *Quasi Experimental Design* based on *Regression Analysis* to assess and relate the effects of independent variables (*i.e. youtube and skype like virtual learning, & cognitive styles of secondary school students*) on dependent variables (*i.e. learning performance*). To minimizing the effect of *extraneous variables*, the researchers used *ANCOVA and Multiple Hierarchical Regression Analysis* and random sampling techniques. The findings of the study will generalize upon the whole population. The researchers randomly selected two secondary schools from all the secondary schools of Silchar. 10 class IX students of school 1 was counted as the YouTube learning Group, and 10 class IX students of school 2 was assigned for Skype learning. There was no control group. Before instruction, a cognitive style questionnaire administered and after instruction achievement test was administered among both the group of students. The overall design of the study showed in the Box 1.

Table 1 Design of the study

Sl.	Group	Pre Intervention Test	Treatment	Post Intervention
1	YouTube learning Group (n=10)	Cognitive Style Questionnaire	YouTube in virtual learning	Achievement Test
2	Skype learning Group(n=10)	Cognitive Style Questionnaire	Skype in virtual learning	Achievement Test

Instrumentation

Achievement test in Geography

The researcher developed an achievement test on Geography for Class IX by following all the standardized criteria. The contents were selected after discussing with the school administration and accordingly the blueprint was developed. It is proposed that a 25 mark multiple-choice items having a correct response, two wrong responses and a strong distracter framed for each item followed by measuring the correction of guessing, item difficulty, and item discrimination power. The reliability (Split-half r=,82 & Cronbach α=.81) and validity (Content Validity Ratio=.78) estimated during the standardization procedure.

Table 2 Tool specification

Material	Achievement test on geography having short, long, multiple choice types items. Each multiple choice type items have four options and out of this one correct response and other three are good distracter.
Scoring	1 point for each correct response
Administration	Flexible
Norms	Percentile norms available
Reliability	
Split-half	r=.82
Cronbach alpha co- efficient	r=.81
Validity	
Content	Lawshe(1975) developed a formula termed the content validity ratio:CVR=(n_e—N/2)/(N/2) where CVR = content validity ratio n_e =number of SME panelists indicating "essential" N= total number of SME panelists. This formula yields values which range from +1 to -1; positive values indicate that at least half the SMEs rated the item as essential. The mean CVR across items may be used as an indicator of overall test content validity. Here, the CVR=.78
Usability	
Availability	Sample available to administer the tool
Ease of use for tester	no
Range of use	no
Time limit	No time limit is given for the test. However, most of the students finish it within 10 minutes.

Cognitive Style Questionnaire

Cognitive style questionnaire has eight dimensions measuring (i.e. *extraversion, introversion, sensing, intuitive, thinking, feeling, judging and perceiving*) like factors. Each dimension has eight different items (having two options) to assess the cognitive styles of the students. Factor analysis technique used during the standardization of the items. Accordingly, content validity ratio (CVR=.81) and reliability coefficient (Cronbach α=.85) of the tool was determined. See the tool specification in table1.

Table 3 cognitive style tool specification

Standardization	
Material	Cognitive Style Questionnaire (Deka & Jena, 2015) has eight dimensions (i.e. Extroversion, Introversion, Sensing, Intuition, Thinking, Feeling, Judging and perceiving) like Kirton's model of Cognitive Style.
Scoring	01 point for each correct response of the item
Administration	Flexible
Norms	Percentile norms available
Reliability	
Internal consistency (Cronbach Alpha)	α=.85
Guttmann's Split-half	r=.66
The inter-item correlation ranged from	.66-1
Factor analysis	Factor analysis was calculated for extraversion found .91, introversion .94, Sensing .73, Intuition .78, Thinking and Feeling 1, Judging .92 and Perceiving .91.
Principal component analysis	Principal component analysis used in the extraction method where the initial Eigen values ranged from 1.152 to 52.53
Validity	The validity coefficients, with English version of this instrument was estimated on a sample of 200 students of secondary classes
Criterion: concurrent	The concurrent validity of the tool (Cronbach, 1990; Cronbach & Meehl, 1955) has been supported in the form of positive correlations
Construct : convergent	The construct validity of the tool (Cronbach, 1990; Cronbach & Meehl, 1955) has been tested in several studies, showing

	moderate correlations (0.40-0.65)
Usability	
Availability	Sample available to administer the tool
Ease of use for tester	no
Range of use	no
Time limit	No time limit is given for the test. However, most of the students finished it within 10 minutes.

Procedure of experiment and data collection

The recent study was YouTube and Skype assisted activity based experimental study, where there is no control group.

Activity I- YouTube in virtual learning

Class IX students of school- III counted as the YouTube learning group. Before instruction, in a training session, the researchers advised the participants on how to run the YouTube, how to search the YouTube, and on how to pause, stop or forward the video. No further training was provided to the participants and followed by that, a cognitive style questionnaire was administered. Participants were grouped and each group has laptop with high-speed internet accessibility to search the video on geography. The formal virtual learning instruction was provided up to three months through YouTube to complete the course. After the end of the instruction, a test on geography was administered to assess the learners' performance.

Table 4 lists of hyperlinks used during YouTube learning on geography

Name of the chapters	Virtual Learning Intervention	List of hyperlinks
India – Size and Location	Location,Size,India and the World, India's Neighbours	YouTube https://www.youtube.com/watch?v=VuDbizd_W6k&index=1&list=PL1vNLZF5gfweFN0ps77y2jdFp7hTxl2sK https://www.youtube.com/watch?v=VhdbwB_9YYM https://www.youtube.com/watch?v=gbRtv3egXYs https://www.youtube.com/watch?v=kO7KpL5lFoQ https://www.youtube.com/watch?v=tGqo37fpEN0 https://www.youtube.com/watch?v=IWK0qEFF8-8 https://www.youtube.com/watch?v=YGgYiGwZnuE
Physical Features of India	Plate Boundaries,Major Physiographic divisions, Himalayan Mountains,Northern Plains Peninsular Plateau,Indian	YouTube https://www.youtube.com/watch?v=GFeRHBbJu8&index=2&list=PL1vNLZF5gfweFN0ps77y2jdFp7hxl2sK https://www.youtube.com/watch?v=vEQUl7LGxoY https://www.youtube.com/watch?v=IdZak_mUwf0 https://www.youtube.com/watch?v=G_h-NuSvcE8 https://www.youtube.com/watch?v=PDrMH7RwupQ
Drainage	Drainage patterns, Himalayan rivers, Peninsular rivers, role of rivers in the economy, river pollution	Online YouTube https://www.youtube.com/watch?v=96irIFmvIng&index=3&list=PL1vNLZF5gfweFN0ps77y2jdFp7hTxl2sK https://www.youtube.com/watch?v=uI78xoEkm0c https://www.youtube.com/watch?v=96irIFmvIng https://www.youtube.com/watch?v=jyBvwYdvP1o https://www.youtube.com/watch?v=Xpmv0YLMvo4
Climate	Climatic Controls, Factors affecting India's Climate, Indian Monsoon- its onset and withdrawal, Seasons, Distribution of Rainfall, Monsoon as a Unifying Bond	YouTube https://www.youtube.com/watch?v=SH1SMnwKJTI&index=4&list=PL1vNLZF5gfweFN0ps77y2jdFp7hTxl2sK https://www.youtube.com/watch?v=SH1SMnwKJTI https://www.youtube.com/watch?v=fHm4fD9IVrQ https://www.youtube.com/watch?v=4_QT5XpUSw8 https://www.youtube.com/watch?v=pTrJC7_nKkA

Fig-1 YouTube activity plans

You Tube Activity Plan – 1

1 Subject – Geography

2 Class – IX

3 Topic – India – Size and Location

4 Concept – Location

Goals and objectives - During and after the YouTube learning, students will....

- Understand the concept of India, its size and location
- Understand concept location.
- Understand the latitudes and longitudes

Pre requisites: - Before beginning in India's location, the student should have some knowledge that can fit to the new concept.

Materials and Resources: -

- YouTube software, Smart classroom, Internet, Text book

Guiding question for this concept: -

- Explain the concept of location.
- Discuss where India located is.

Lesson out lines and procedure: -

Read page 1 on concept location in your text book. Choose the important key concepts from them and from the video played pause it, forward, backward mode learn them properly.

Activity II- Skype in virtual learning

Class IX students of school- II was counted as the Skype or video conference-learning group. Before instruction, a special training assigned to the participants, on how to attend the video lectures of the experts. Followed by that, a cognitive style questionnaire administered among the participants to know their cognitive styles. Everyday participants attend the Skype, imo and Google duo assisted video-conferencing lectures in a high-speed internet-accessibility lecture hall. The formal Skype, imo and Google duo assisted video-conferencing lectures was provided was continued up to three months till the completion of the course.

Fig 3.3 screenshot of the videoconferencing learning and lesson plan

Skype learning Activity Plan – 2

1 Subject – Geography
2 Class – IX
3 Topic – India – Size and Location
4 Concept – Location

Goals and objectives - During and after the YouTube learning, students will....

- Understand the inter connectedness of concept India's size and location
- Understand concept size and location

Pre requisites: - Before beginning in India's location, the student should have some knowledge that can fit to the new concept.

Materials and Resources: -

- Skype software, Smart classroom, Internet, Text book

Guiding question for this concept: -

- Where is India located?
- Discuss the size and location of India

Lesson out lines and procedure: -

Read page 1 on concept location in your text book. Choose the important key concepts from them and from the video played pause it, forward, backward mode learn them properly.

Analysis and results

H1 cognitive styles hierarchically significantly relates with the YouTube learning performance of secondary school students.

Table 1.1 Mean and SD of cognitive styles and YouTube learning performance of secondary school students

	N	Mean	Std. Deviation
YouTube learning performance	10	18.70	4.296
Extraversion	10	19.10	3.900
Introversion	10	15.90	3.900
sensing	10	18.80	4.367
Intuition	10	21.20	4.367
Thinking	10	17.00	3.266
Feeling	10	23.00	3.266
Judging	10	16.50	2.915
Perceiving	10	18.50	2.915

Table 1.2 R, R^2, and Adjusted R of cognitive styles and YouTube learning performance of secondary school students

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	df1	df2	Sig. F Change
1	1.000[a]	1.000	1.000	.076	1.000	7125.313	4	5	.000

a. Predictors: (Constant), Perceiving, Feeling, Introversion, Intuition
b. Dependent Variable: YouTube posttest

Table1.3 ANOVA of cognitive styles and YouTube learning performance of secondary school students

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	166.071	4	41.518	7125.313	.000[b]
	Residual	.029	5	.006		
	Total	166.100	9			

a. Dependent Variable: YouTube post-test
b. Predictors: (Constant), Perceiving, Feeling, Introversion, Intuition

Table 1.4 Unstandardized Coefficients (β), Standardized Coefficients Beta and t of cognitive styles and YouTube learning performance of secondary school students

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	39.643	.237		167.201	.000
Introversion	-.378	.033	-.343	-11.612	.000
Intuition	-.598	.039	-.608	-15.189	.000
Feeling	-.207	.025	-.157	-8.163	.000
Perceiving	.135	.022	.092	6.066	.002

a. Dependent Variable: YouTubeposttest

Table 1.1 depicts the descriptive analysis resulted from the Mean and Standard Deviation of cognitive styles and YouTube learning performance of Secondary School Teachers. YouTube learning performance resulted Mean= 18.70 and Standard Deviation= 4.29. Similarly, cognitive styles of extraversion (M =19.1 and SD=3.9), Introversion (M=15.9 and SD=3.9), Sensing (M=18.80 and SD= 4.36), Intuition (M=21.20 and SD=4.36), Thinking (M=17 and SD= 3.26), Feeling (M=23.0 and SD= 3.26), Judging (M=16.50 and SD= 2.9), Perceiving (M= 18.50 and SD= 2.91).(See table 1.4) Cognitive styles on the basic model R=1.000, R_2 =1.00 and adjusted R^2(1.00) resulted significant relationship with perceiving, feeling, introversion, intuition where unstandardized co-efficient for introvert (β =-3.378 P<.05), intuition (β = -.598 P< .05), feeling (β = -.207 P< .05) and perceiving (β= .135 P< .05) resulted hierarchical significant relationship with YouTube learning performance.(See table 1.2, 1.4) The ANOVA of cognitive style and YouTube learning of Secondary School Students was significant (F= df 4/5) (7125.313 P< .05) (See table 1.3)

H_2) cognitive styles hierarchically significantly relates with the skype learning performance of secondary school students.

Table 2.1 Mean and SD of cognitive styles and Skype learning performance of secondary school students

	N	Mean	Std. Deviation
Skype post-test	10	18.60	4.274
Extraversion	10	19.10	3.900
Introversion	10	15.90	3.900
sensing	10	18.80	4.367
Intuition	10	21.20	4.367
Thinking	10	17.00	3.266
Feeling	10	23.00	3.266
Judging	10	16.50	2.915
Perceiving	10	18.50	2.915

Table 2.2 R, R^2, and Adjusted R of cognitive styles and Skype learning performance of secondary school students

					Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.997[a]	.993	.988	.468	.993	186.229	4	5	.000

a. Predictors: (Constant), Perceiving, Feeling, Introversion, Intuition

b. Dependent Variable: Skype posttest

Table 2.3 ANOVA of cognitive styles and Skype learning performance of secondary school students

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	163.304	4	40.826	186.229	.000[b]
Residual	1.096	5	.219		
Total	164.400	9			

a. Dependent Variable: Skype-post-test

b. Predictors: (Constant), Perceiving, Feeling, Introversion, Intuition

Table 2.4 Unstandardized Coefficients (β), Standardized Coefficients Beta and t of cognitive styles and Skype learning performance of secondary school students

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	39.957	1.454		27.474	.000
Introversion	-.808	.200	-.737	-4.043	.010
Intuition	-.103	.241	-.105	-.426	.688
Feeling	-.564	.155	-.431	-3.627	.015
Perceiving	.358	.137	.244	2.619	.047

a. Dependent Variable: Skype post-test

Table 2.1 depicts the descriptive analysis resulted from the Mean and Standard Deviation of cognitive styles and Skype learning performance of Secondary School Teachers. Skype learning performance resulted Mean= 18.60 and Standard Deviation= 4.274. Similarly, cognitive styles of extraversion (M =19.1 and SD=3.9), Introversion (M=15.9 and SD=3.9), Sensing (M=415.90 and SD= 4.36), Intuition (M=21.20 and SD=3.26), Thinking (M=17 and SD= 3.26), Feeling (M=23.0 and SD= 3.26), Judging (M=16.50 and SD= 2.9), Perceiving (M= 18.50 and SD= 2.91).(See table 2.4) Cognitive styles on the basic model R=.997, R_2 =.993 and adjusted R^2(.988) resulted significant relationship with perceiving, feeling, introversion, intuition where unstandardized co-efficient for introversion (β =-808 P<.05), intuition (β = -103 P< .05), feeling (β = -.564 P< .05) and perceiving (β= .358 P< .05) resulted hierarchical significant relationship with Skype learning performance.(See table 1.2, 1.4). The ANOVA of cognitive style and Skype learning of Secondary School Students was found significant (F= df 4/5) (186.229 P< .05) (See table 2.3)

FINDINGS AND DISCUSSION

The study claimed that the impact of YouTube learning performance in relations to cognitive styles was significant among the secondary school students. It is found that perceiving, feeling, introversion and intuition has the hierarchical significant relationship with YouTube learning performance. However, extroversion, sensing, thinking, judging, has no significant relationship with YouTube learning performance. The finding of the study is highly supported by (Tinajero, Maria, Margarete, Jose & Paramo, 2012) but these researchers (Altun & Cakan, 2006) did not support the result. Like YouTube learning performance, Skype learning performance is also related with cognitive styles. It is found that Cognitive Styles have a hierarchical significant relationship with students Skype learning performance but judging, thinking, sensing, extroversion has surprisingly no hierarchical relationship with Skype learning performance. This result was supported by Hayes, & Allinson (1994), and it was rejected by (Hayes, Allinson, Hudson, & Keasey, 2003). YouTube learning in Indian context needs lots of improvement as it was seen in the European and American continents. (Zheng, Niiya, & Warschauer, 2015). The use of digital technology in classroom helps to improve the standard of education (Putjorn, Siang, and Deravi, 2014). The variables in the present study like thinking; judging, sensing, and extraversion were found to be not related with the YouTube learning performance, and Skype learning performance. Therefore, the researchers guessed that such variables as thinking; judging, sensing, and extraversion were not related with the YouTube learning and Skype learning performance.

CONCLUSION

The present scenario of YouTube learning and Skype in the classroom of Indian needs improvement more as comparable to the other advanced countries of the world. It is found that YouTube learning is given importance only in some schools or any particular areas whereas other areas are not benefited with. In underdeveloped and developing countries students are not getting YouTube and Skype like instructions rather, lack of knowledge of the teachers' to handle the technology does not provide more benefit to the students. It is the duty of the government, to take necessary precaution in this regard, especially in those remote and backward areas where technology is far to be reached. Now YouTube and Skype technology and its accessibility is not much expensive, but if we apply these many students can learn at the same time together in a same place. For making successful YouTube learning in the classroom, teachers should train and they should have the necessary knowledge to run the equipments, then students and policy makers would realize the benefits of using such techniques in the classroom. Students should accept the technology assisted learning rather just sitting and listening to the teacher may not be benefitted. It is also the duty of the teacher to make the students skilful in operating the devices properly, so that they themselves can see and learn the study materials whenever they want learn these. In this way, both the teacher and student will be benefited, as this will help them to grow their content knowledge, and have a better and clearer view about all the topics to be discussed.

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