

Evaluating Effects of Innovative Media Technologies on Educational Achievement of Prospective Teachers

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Abstract

Nowadays across the globe innovative media technologies like Android phones are becoming part and parcel of education. Students in higher education are specially getting acquainted with this technological innovation. Present research study evaluated effects of smart phones on the educational achievement of prospective teachers at higher education level. Major objectives of the study identified effects of innovative technology in the development of educational behavior of the graduates and evaluation of the problems faced by the learners at higher education level. Android phones became all in one portable devices of knowledge access pertaining face to face communication (video call, WhatsApp, Facebook, blogs and Imo) for the prospective teachers. Now learners seemed to use this media device as “technological object” as well as; “social interactor.”

Key Words: Educational technology, Media technology and learning, Prospective learners, teaching innovatively, innovation in learning.

Introduction

Education being a social institution in a society tried to speed up social growth and existence of the society. Due to its multiplicity education should not only be inclusive, defensible and flexible, but it must unceasingly incorporate the innovations of the global world. Education had been considered as social institution which served the society in all perspectives. It had been an essential element for the societies of the world which helped them in growing and subsisting in the world. This progression should be universal, persistent and ascendable. The major aim of all exponents of education like teacher educators, professors, administrators, researchers and policy designers should be to bring innovativeness in theory and practice of teaching and learning, and to make sure that quality education is delivered to the students who were to be prepared for the society.

Innovative teaching and learning is not confined to four walls of classroom or knowledge is not just confined to teacher educators. Currently, prospective teachers had immense resources to attain skill and then transfer it to the learners. Last decade or so induction of smart phone media technology revolutionized educational system. Use of Social Media (video call, WhatsApp, Facebook, blogs and Imo) use in these phones seemed to bring close knowledge and information poles to the teacher educators as well as; to the prospective teachers. Use of social media technology in the teacher training institutions became popular; as ready available tool and got fame due to its cost effectiveness. This technology all across the world seemed to improvise proficiency, optimality, capacity and educational process. Technological invasion in Pakistani educational scenario took place late but it engulfed this systematic process of conceptualization of learning and teaching with the help of innovative educational teaching methods. Such innovative educational teaching techniques included instructional materials, methods and organization of teacher educator attitudes towards learning process. These technological innovations are used

on the basis of two major categories a) on the basis of technical physiognomies b) on the basis of pedagogical application.

Application of innovative media technologies in education, demanded diversity and care, as field of teaching dealt with several areas such as; psychology, didactics, psychomotor skills and pedagogy. In teacher training institutions of Pakistan media technology had not been used sufficiently. Major reasons behind it were lack of equipment, essential resources and dearth of qualified teachers for the implementation of these resources.

Application of these innovative technologies as stated by the majority of the researchers, (see for example, Lowther et al., (2012), Leu et al., (2009), Son et al., 2010 and Kaufman, 2004) suggested three major usages that were:

- 1) Media assisted instructions where media is used as, a guide or facilitator
- 2) Innovative technology used as, teaching tool
- 3) Innovative technology used as, learning disseminator

While incorporating innovative media technology tools such as; android phones in teacher training institutions, a few observations were regarded by research analysts such as, Clements and Sarama, 2003; Glaubke 2007; Dynarski et al. 2007,

“Primary focus should be considered on the educational value of the tools and its applicability of knowledge which it deem to help in getting the knowledge, whether there is an interaction between the users and tools, and look towards its advantages and disadvantages.”

Another research conducted in this regard at the Center for Educational Research in Pittsburgh identified that smart phones were tailored to the individual abilities of the prospective teachers

instead of teacher educators. They found that the technology use in the training sessions might be integrated into classrooms and curricula (see for example; Clements and Sarama, 2003; Glaubke, 2007; NAEYC and Fred Rogers Center, 2012). Majority of the studies conducted in this scenario seemed to present the conclusion that number of teacher educators in the globe seemed unwilling to incorporate android phones during their teaching activities (See for illustration; Becker, 2000; Hemans et al., 2008; Stosic and Stosic, 2013; Wang et al., 2004).

Cause behind showing this resentment among the teacher educators seemed to be that the majority of the teacher educators did not have comprehension of educational technology while minority of them had thorough know how of the operations and use of these gadgets so they apply it completely in their daily class routine.

Background of the study:

Higher educational institutions in the world are focusing their attention towards brick university concept to click university ideology. Last two decades saw horrendous progression in the field of mobile devices and internet technology. Due to these intelligent and smart devices the knowledge has broken the restrictions of time and space. Android phones and social media became pervasive learning tool at present. In department of education and in department of media studies in Pakistan the current issue under discussion had been designing of teaching and learning activities through flexible application of technology tools and integration of such tools into educational perspective.

Aim of the study

The present study was aimed to present a critical analysis of the use of social media devices as an educational innovator. Basic aim was to classify socially used innovative media based devices implemented at the teacher educator institutions. The

study also identified the barriers ensuing in the implementation of innovative tools in the educational scenario in the teacher training institutions of Pakistan. It was aimed that the study would transform the scales and rates of innovation based transformation in the teacher training institution of Pakistan.

Objectives of the Research

The researchers seek to meet the following research objectives in this study:

- a. To evaluate the extent to which the universities have integrated social media technology in teacher training programs.
- b. To determine the relationship between smart phone integration and the performance of the prospective teachers at university level.
- c. To find out the impact of social media adoption on universities, in general, and on students' performance, in particular
- d. Suggest remedies for the use of innovative technologies at higher education level.

Significance of the study

Present research would provide helping hand to the policymakers, university quality enhancement cell, research and innovation department of HEC and higher educational institution, teacher educators and prospective teachers. It is important because learners and classrooms are getting to be digitalized sooner or later. It is need of the hour that our prospective teachers might also equip themselves with the methods that are used in the world for innovative teaching. Social media is spreading its wings and almost in the reach of every person in the society. It is needed that the learners and parents may get involved into these social media

learning schemes and teachers may innovatively apply them in the classroom scenario. Social media technology is becoming more in use through Android phones as they are cheap and easy to use. So this smart technology with its application is becoming an asset in the classroom. Moreover, use of these technologies provided liberty to the teacher educators in order to become distinctive, modify guidelines to meet the needs of the learners. Present study sets out to show how smart innovative technology might leave positive effects on prospective teachers' academic achievement and motivation in the classroom.

Research Methodology

The overall functions and usage of the smartphone has attracted youth to different purposes and to perform various functions in their daily life. However, the present study is primarily a cross-sectional social survey applying quantitative approach. A questionnaire on five-point Likert scale was developed to collect the data from subjects. Cluster, multistage, simple, random and purposive sampling techniques were applied to select a sample from four universities. The sample comprised 200 subjects (male and female) studying at BS/B.Ed and MA/M.Ed level in selected universities. Different tests like Regression Analysis, t-test, ANOVA, Chi-Square and Cross-tabulation were applied to analyse the results and interpretation. The reliability of questionnaire was also assessed through Cronbach's alpha which was 0.79.

Material and methods:

Present study applied mix method of research where survey, interview and observation checklists were applied to attain the results. Teacher educators, trainee teachers were given questionnaire, interview and observation checklists to consider effective use of social media in their learning sessions and teaching sessions.

Research Questions

- 1) Does smart technology affect student academic achievement?
- 2) Does teaching through social media affect student's motivation?

Literature Review

Reviews presented in this part of the research were recapitulation of the findings adopted from earlier studies regarding effects of innovative social media technologies on the achievement of the prospective teachers. Majority of the studies had been carried out to investigate this impact. These studies had focused on the adaptation of the innovative technological tools while present study had focused on the prospective teacher performance at the teacher training institutes.

Learning is not confined to four walls at present due to incessant use of mobile devices such as laptops, personal digital assistant, and smart mobile phones. These innovative technological devices had found their places as an accessible learning tool for the teacher educators as well as for the learners. Researchers such as (Ellis and loveless, 2013), (Chen et al., 2013, pp.1045-1049) identified that pedagogy at higher education level cannot be secluded from educational attainment and it seemed to be the core agent of the teaching process and innovation. Same was identified by Sari and Mahmutoglu, 2013, 582-592 that revolution can be brought altogether if a change in teaching methodology in educational training institutions might be adopted at university level then a paradigm shift is required for this purpose.

Integrating mobile devices with learning and instruction

Smart mobile phones had found their place in the educational set up over the past two decades or so. Induction of social media in these sets had made them mini information box which every individual can carry in the pocket. This power box is portable, and when fast internet facility is integrated with it makes it one to one communicative

competent tool for traditional learning as well as informal learning. Majority of the advanced countries like USA, Germany, France and UK developed programs through social media such as YouTube, WhatsApp, Facebook and many more to learn on line (Bebell and O'Dwyer, 2010, Fleischer, 2012, Zucker and Light, 2009). To have an android phone now a day is a fashion in Pakistan and everyone is connected with the social media and its impact in the learning achievement has been seem more. These technological tools not only promote innovation in education rather they are means of spreading information and even support traditional teaching styles and innovative methods such as cooperative learning (Lan et al., 2007, Roschelle et al., 2010), exploratory learning outside the classroom (Liu, Lin, Tsai, & Paas, 2012), and game-based learning (Klopfer, Sheldon, Perry, & Chen, 2012). These innovative tools have great capability to improvise educational methods as well as subject content learning. It also develops communication skills, problem solving methods, creativity, and other high level skills among learners. (Warschauer, 2007).

While reviewing literature researchers had gone through seven studies on integrating mobile devices with teaching and learning which divided this integration into two types that were 1) usages in the institutions as contextual study and 2) application of mobile devices in education.

Zucker and Light (2009) found that integration of these devices along with social media had positive impact on students' achievement while Penuel (2006) found after presenting review of 30 studies that one-to-one computer programs helped prospective teachers in completion of their home assignments, take notes, and developing understanding. General-purpose software such as word processors, web browsers, and presentation software were relatively common. Bebell and O'Dwyer (2010) examined those institutions where teachers used one-to-one social media programs there were significant increases in grade-point averages or standardized tests of student achievement. Fleischer (2012) piloted

a narrative research review of 18 different empirical studies and found that prospective teachers had a positive attitude towards learning, and felt that they were more motivated and engaged in their instructional learning process. The research also found that these innovative technologies had encouraged teacher educators to change their previous beliefs in teaching methods such as teacher centered lectures as these technologies helped them in developing flexibility and autonomy in designing interactive curriculum and teaching models. Hwang and Tsai (2011) presented Meta-analysis of 154 articles published during the period of 2001 to 2010 on the effect of mobile technology in higher educational institutions and identified that mobile technology enhanced learning achievement of the learners while Frohberg, Goth, and Schwabe (2009) categorized 102 mobile-learning projects, and discovered that mobile devices are used primarily as a sort of reinforcement tool to stimulate motivation and strengthen engagement, and secondarily as a content-delivery tool and most learning activities using mobile devices have been controlled by the teacher. Wong and Looi (2011) investigated the influence of mobile devices on all-in-one learning. All-in-one learning refers to a learning model that students can learn whenever they want to learn in a variety of scenarios and that they can switch from one scenario or one context to another easily and quickly.

Educational Innovation

Innovation means to do something which is novel or to do perform a job in a new way. In order to have an impactful innovation one should work punctually with a transmission and large scale application. In its application innovation is generally regarded as,

“The *successful* introduction of a new thing or method” (Brewer and Tierney, 2012, p. 15).

Innovation can be divided into two components

These components are further divided into three major steps for the implementation of the innovation in a sector that are:



Innovation and evolution are key components for survival and progress of an individual, community or a nation. Educational innovation seemed quite indispensable because education plays its role in the creation of sustainability of an individual.

“Innovation resembles mutation, the biological process that keeps species evolving so they can better compete for survival” (Hoffman and Holzhter, 2012, p. 3).

In underdeveloped countries like Pakistan, India, Bangladesh and Srilanka a pressure is ensuing from political, economic, and demographic as well as individuals to teach technological based education. Behind this is ever-growing pressure of globalization where jobs are offered to the innovative enterprises.

Android phone and Social media effect in Teacher Training institutions

Teacher educators and prospective teachers both need to adjust themselves in the new role which is knocking at their door. Although this new role is quite perplexing yet it is essential in educational field of Pakistani educational training institutes. This puts a larger impact on the trainee teachers’ professional approach and development. It is obvious that the educators might also train prospective teacher about the use of smart technology so that the prospective teachers might attain the skill to equate with the ever shrinking world and in this global village. Researcher like (Becker, 2000; Hermans et al., 2008) had presented their view about the incorporation of the innovative technology in this way;

“As potential teachers and educators we must determine what roles technology can play in the school and just as important the role that computer/technology can play in the lives of the students to help develop them as reflective, competent and concerned citizens”.

Data Analysis and Interpretation

Table 2.1 *Description of the use of innovative equipment in educational institutions*

1) Never (N) 2- Rarely (R) 3- Occasionally (O) 4- Frequently (F) 5- Usually (U) 6- Sometimes (S) 7- Every time (E)

My Teacher Educator uses following Innovative equipment while delivering training.									
Factor-3: Use of Innovative Equipment	N %	R %	O %	F %	U %	S %	E %	Mean	S.D
Android Phone	23.5	14.5	12.1	7.2	17.9	14.4	10.5	3.67	2.10
Interactive white board	83.7	1.0	0.3	10.5	-	-	4.5	1.60	1.49
Video Conferencing	85.4	2.1	0.7	7.2			4.7	1.48	1.27
Audio equipment	66.5	5.0	4.5	4.4	6.0	9.5	4.1	2.23	1.98
Digital still Camera	80.7	6.8	7.5	0.6	1.7	2.0	0.8	1.45	1.12
Digital video camera	70.5	16.1	8.6	4.4	0.3		0.1	1.48	0.86
iPods	66.5	7.8	6.0	3.8	10.8	1.2		2.08	1.80
Projector	31.7	7.0	18.2	12.4	11.2	13.9	5.6	3.28	1.99

Overall	63.6	7.5	7.2	6.3	8.0	8.2	4.3	2.2	1.6
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Innovation or modern techniques of teaching can only be produced when the Teacher Educators would be linked with the modern technological equipment. Table 2.1 identified clear situation of using innovative equipment in the training situations. 23.5 percent of the plaintiffs said that the teacher educators never used their smart phones while delivering training sessions. 14.5 percent alleged that TEs used Smart technology rarely, 12.1 indicated that occasionally Smart Technology is used by the TEs while 7.2 percent of them illustrated that they used it frequently. 17.9 indicated it as usually, 14.4 termed them sometimes and 10.5 percent indicated that their TE used it every time.

It seemed obvious from the scores attained from the responses that the Teacher Educators had been reluctant to use Personal computers as the Mean value 3.67 defined that the use of personal computer by the TE is less while S.D value also indicated 2.10 which seemed to be alarming as this value states that the use of innovative equipment in the training session needs improvement.

Advanced countries had developed modern tools of communication and interaction. Interactive whiteboard had been one such example. While my observation on the visits of educational institutions I have seen USAID donated buildings had interactive white boards in their labs. So I asked from the PTs whether their teacher educator uses this innovative device or not. The table 4.3 identified that majority of the respondents 83.7 percent orated that their TE never used interactive board (As in most of the institution it was not available). 1.0 percent said that their T.E used it rarely, 0.3 percent narrated that s/he used it occasionally, 10.5 percent discoursed that s/he used it frequently while 4.5 said that their TE used it every time.

Value of Mean score 1.60 identified that the Interactive board had not been available in the most of the Educational institutes and if

available the TEs did not know how to use. The Standard Deviation score $S.D=1.49$ also identified the same as defined by mean score.

Universities have now been shuffling from brick to click universities. Globalization had wiped away the boundaries and now distances had been shrunk. A learner sitting in remote area of Punjab (Pakistan) can talk and see the happenings in advanced countries and this had been done due to the facility of Video Conferencing or tele conferencing. The reaction from respondents 85.4 percent showed that their teacher educator had not been using video conferencing tool to equip them innovatively. 2.1 percent of the respondent viewed that their TE used it very rarely while 0.7 identified that their teacher educator used it occasionally, 7.2 percent pronounced that s/he used it frequently and 4.7 percent alleged that they used it every time. Accumulative Mean value of the factor 1.48 identified that Teacher Educators had not been using video conferencing technique to equip their PTs innovatively.

With visual innovative equipment audio innovative equipment also seemed important. The majority of the respondents 66.5 percent viewed that the Teacher Educator Never used audio equipment while delivering training while 5.0 percent said that TEs used Audio Equipment, 4.5 percent branded occasional use of audio equipment, 4.4 percent, 6.0 percent opined that usually they used it, 9.5 percent beheld that their teacher educators sometimes used audio equipment while 4.1 percent said that their teacher used it every time. The mean value $2.23 > 3$ and greater than one which provided proof of the statement the standard deviation 1.98 also supported the statement. It may be concluded that the use of audio equipment may develop innovation if used.

Table 2.1 identified that majority of the respondents 80.7 percent indicated that the teacher educators never used digital still camera in the classroom activities. 6.8 percent of the respondents used it rarely, 7.5 percent used it occasionally, 0.6 percent used it frequently, 1.7 used it usually, 2.0 percent used it sometime and 0.8 percent used it every time.

It had been obvious that the TEs did not use modern technological equipment as the Mean value identified 1.45 while the deviation that is 1.12 which identified that the PTs would not be able to develop their attitude towards innovation. So it is obvious from the table 2.1 that majority of the respondents 70.5 percent were of the view that TEs never used this device in the training sessions. 16.1, 8.6, 4.4, 0.3 and 0.1 percent of the respondents replied rarely, occasionally, frequently, usually and every time respectively. The mean value of the score 1.48 identified insignificant use of digital video camera during training sessions while delivering training to the PTs. The standard deviation also showed 0.86 that is less than one which shows negative deviation and inclination towards use of innovative equipment.

Mobile phones had been frequently available devices in the society. Use of mobile phone as a modern equipment had been in vogue in the advanced but in case of TEs in Punjab it was revealed that the TEs did not use it even as 66.5 percent of the respondents viewed that TEs never used Mobile phone as teaching device while 7.8, 6.0, 3.8, 10.8 and 1.2 percent of the responses supported rarely, occasionally, frequently, usually and sometimes respectively. Standard deviation 1.8 also showed that the personal deviation rated high and this deviation advocated the mean score.

Table 2.1 evidently identified that the majority of the teacher educators seemed not to use modern technological equipment as data identified that 63.3 percent of the TEs never used these innovative equipment while 7.5 percent of the TEs used it rarely, 7.2 percent used it occasionally in training sessions, 6.3 percent of the respondents used it Usually, 8.2 used it sometimes and 4.3 percent of the respondents used it every time. So it is evident from the discussion and responses that the Teacher Educators of the educational institutions do not know how to use these modern equipment. They had not been able to develop innovative attitude among their followers (PTs).

Table 2.2 *Tabulation of the factor which showed use of technology during training*

1-Not At All (N.A), 2- Rare (R), 3- Very rare (V R), 4- To Some Extent (TSE),

5- Sometimes (ST), Every time (E.T), To very High Extent (H.E)

My level of ability to use each of the following technologies									
Factor-4: ability to use technology	N.A %	R %	V.R %	TSE %	ST %	ET %	H.E %	Mea n	S.D
Use of Social Media	0.8	3.8	28.9			45.5	21.1	5.82	0.83
Face book	0.8	7.9	11.3	23.7		39.1	17.2	5.44	1.17
Tweeter	3.1	25.1	44.5	-	20.3	6.8	3.2	4.15	1.04
U tube	1.3	8.8	-	-	25.7	17.3	16.1	5.02	1.24
Blogs	11.7	22.5	-	-	40.4	6.6	2.2	3.91	1.14
Use of modern technologies (Internet)	1.6	3.4	7.9		30.7	37.4	19.0	5.56	1.08
Use of modern audio visual aids (Multimedia)	6.0	20.6	47.9	-	11.7	11.2	2.6	4.09	1.11
Overall	15.4	15.1	25.5	18.4	15.8	16.3	9.6	4.0	1.1

Prospective teachers are future teachers who are going to take the reins of future nation. Educational training institutes had been established with a view to transfer teaching skills and to prepare future teachers for the new age challenges. This question had been asked deliberately to observe what type of innovative abilities had been produced among the PTs. Social media had been a source of learning now a day. In Pakistan, youth seemed to be linked with the social media and their users are on increase. 0.8 percent of the

respondents said that they had not the ability to use the social media while 3.8 percent opined that they had rare ability to use social media while 28.9 said that they used it very rarely and 45.5 percent said that they used social media every time. 21.1 said that they used social media to a high extent. The mean score 5.28 showed incline towards the use of social media and it is evident that the majority of the respondents had the ability to use social media in their lives. The standard deviation also identified that the respondents had the ability to use it.

In the next phase of this research survey it was asked from the respondents which type of social media they used most in their daily routines. The table 2.2 identified that 0.8 percent of the PTs said that they had not the ability to use Facebook while 7.9 percent of the PTs rarely used it while 11.3 percent used Facebook very rarely and 23.7 showed that they had ability to use it to some extent. 39.1 percent accepted that they had used Facebook every time while 17.2 percent admitted that they had the ability to use Facebook to a very high extent. The Mean scores 5.4 identified that the PTs had the ability to use Facebook in their daily lives and the Deviation level of the table goes towards positive inclination as it scored 1.17. 3.1 percent of the respondents were of the view that they had not at all the ability to use Twitter while 25.1 percent said that they had rarely used it, 44.5 used it very rarely, 20.3 stated that they used it sometimes while 6.8 percent said that they used it every time and 3.2 opined that they used it to a very high extent. Cumulative Mean score 4.15 identified that the Prospective teachers had the ability to use Twitter while positive value of Standard deviation also expressed the ability of the learners to use technologies.

YouTube had attained greater value in modern technologies The data retrieved from the respondents showed that 1.3 percent of the respondents had not at all used YouTube while 8.8 percent of the PTs were of the view that they had rarely used it, 25.7 percent of the respondents showed that they used it sometimes, 17.3 percent

opined that they used it every time while 16.1 percent viewed that they used it to a very high extent. The Mean value identified that the prospective teachers had the ability to use YouTube while the standard deviation S.D value inclined towards positive inclination that is 1.24.

On the use of interactive technologies (blogs), the respondents shared their ideas by giving opinions freely. Result of their opinions denoted that 11.7 percent of the respondents. Not at all used blogs, 22.5 percent said that they rarely used blogs, 40.4 percent told that they had been using it sometimes while 6.6 were every time users of the blog and 2.2 used it to a very high extent. It indicated that the prospective teachers had been using it quite occasionally as the mean value also identified 3.91 which showed that the PTs have the ability to use blogs in their daily routines but they use it slightly. The S.D value also denoted 1.14 which supports the statement.

Use of modern technologies such as internet in the educational scenario had been considered to be one of the major aspects in the innovative attitude development. The table identified that 1.6 percent of the respondents viewed that they had not all used it while 3.4 percent used internet facility rarely and 7.9 percent used it very rarely. 30.7 percent of the respondents used it sometimes while 37.4 percent used it every time and 19.0 percent of the respondents used it to a very high extent.

It is evident from the above tabulation that the prospective teachers used internet facility in developing their innovative attitude as the mean total 5.56 identified the use of internet facility by the prospective teacher while the value of S.D also showed positive inclination of the prospective teachers. It may be concluded from the above facts stated by the respondents that the Prospective teachers had the ability to use modern devices like internet.

Overall score of the table 4.4 identified that 15.4 percent of the prospective teacher did not at all have the ability to use modern

technological tools, 15.1 had rare ability to use while 25.5 percent had very rare ability to use and 18.4 percent used to sometime. 16.3 percent showed their ability to use it every time while 9.6 percent of the respondents shown that they had the ability to use these innovative technology tools to a very high extent.

Overall mean score identified that the prospective teachers had the ability to use these modern social media branches to some extent and it is demanded that there should be proficiency developed among the learners.

Findings

Pakistani system of education demanded effective innovations of scale that could help in the production of required high-quality learning outcomes across the system. The primary focus of educational innovations should be on teaching and learning theory and practice, as well as on the learner, parents, community, society, and its culture. Practical implications are required for the creation of large scale innovations and this could be done only and only if the prospective teachers are taught through innovative technology. Learning achievement can be enhanced and capacity building can be increased if the effective technological innovation in education sector is introduced particularly online learning; social media learning and learning through interaction with advanced countries. Educational innovation through social media is regarded as a promotion in educational system thorough community participation. It brings interrelations and interdependencies at all levels of the social sector. This would result in rise in the quality of education. Innovation in education seemed to put positive affect on the education itself and society can get benefits from it on the whole. Almost all the subjects (youth) were found using smartphone in different ways and at different times. Their responses showed that they were selective in using social network applications. The male subjects, in majority, used social applications for building social relationship as compared to

female subjects. Most of the male subjects liked WhatsApp, Facebook, Round and Viber; whereas, female subjects had been using WhatsApp and Facebook only for social relationships. The overall results proposed that smartphone usage habits had impacted positively on the social behavior of youth.

The overall findings documented that smartphone usage had a positive impact on values, beliefs, education, social relationship and social behavior of youth in Pakistan which was significantly proved. The majority of the subjects agreed that smartphones usage led to increase social relationships, and had a positive impact on their social behaviour. The results of t-test of selected variables also proved that youth (both male and female) was more inclined to the smartphones usage. The results also showed that emerging patterns of social behaviour were associated with the smartphone usage in social connection. Based on findings, it has been suggested that university teachers may establish learning environment for youth like BYOD (By Your Own Demand) or SMILE (Smartphone Interactive Learning Environment).

Results:

The results deduced from the research stated

- 1. Digital learning presents better positive effects on learning motivation than traditional teaching does.*
- 2. Learning through smart phone social media technology shows better positive effects on learning outcome than traditional teaching does.*
- 3. Learning motivation developed through innovation could develop aptitude of the learners significantly and positive effects on learning achievement could be seen in the form of learning outcome,*
- 4. Learning motivation appears remarkably positive effects on learning gain in learning outcome.*

Conclusion on Impact and Effectiveness

Today, smartphone has become an essential gadget in our lives. In many ways, the smartphone facilitates our relationships enabling us to contact those who would not otherwise be able to converse face-to-face. Design and programming technologies, show positive gains in achievement on researcher constructed tests, standardized tests, and national tests. Teachers will need to be able to use the various technologies discussed above and also be able to design, structure, guide, and assess student projects. Resources and services will need to be coordinated with other colleagues and professionals. This new role is challenging and necessitates the need for a different approach to teacher professional development. The typical isolation of teachers from each other and the outside world will have to eliminate in light of this very different form of education. In fact, smartphone has been converted into an all-in-one device as it provides access, like SMS, voice and video call, Internet through Wi-Fi, sharing and editing MS word files. It has become an important aspect of youth's daily life that has moved from a mere 'technological object' to a key in 'social object'. Despite of the fact, this device has projected many challenges and prospects. In the nutshell, it is convenient to conclude that the smartphone has become an essential part of the youth's life for interaction, sharing, liking, etc. The most prominent findings were that youth with higher levels of smartphone usage had a greater tendency to engage in using social networking applications for social relationship.

Recommendations

In the light of the results taken from the respondents it is recommended that the educational institutions may try to incorporate social media innovation in theory and practice, curriculum, teaching and learning, policy, technology, institutions and administration, institutional culture, and teacher education. It can be applied in any aspect of education that can make a positive impact on learning and learners.

In a similar way, educational innovation concerns all stakeholders: the learner, parents, teacher, educational administrators, researchers, and policy makers and requires their active involvement and support.

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