

INFLUENCE OF PAST ACADEMIC PERFORMANCE AND NEW MEDIA USAGE ON CO-SCHOLASTIC AREA RELATED LEARNING OUTCOMES FOR SENIOR SECONDARY SCHOOL STUDENTS IN NORTH INDIA

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ABSTRACT

The school education as well as higher education has attained a new paradigm due to a massive transformation and the usage of New Media in education learning. The educators have to use internet enabled hybrid technologies in education pedagogies. The hypotheses of this exploratory research study pertain to ascertaining the relationship between Student's past academic performance in grade-XI and the expected learning outcomes using New Media for the student of senior secondary education level in grade-XII. The study based on the questionnaire survey from 785 students of grade-XII, CBSE board affiliated private schools in North India, focuses on identifying expected learning outcomes in term of Non-academic areas of school education which are vital for the holistic development of Students. The results reveal that there is a significant impact due to New Media usage explained in terms of the expected learning outcomes of co-scholastic areas such as Social Wellbeing and Indoor Gaming. The past academic performance i.e., marks secured by students in grade-XI do make a significant impact on the students' use of New Media devices for interest in extra Co-circular activities related media information in term of total effect. Whereas no impact is observed on New Media usage due to past academic performance of students. This led to the conclusion that the usage of New Media for any specific learning objective is not related to the past academic performance but it may motivate students to perform better in terms of Non-academic areas or Co-scholastic areas by accessing to various information sources using New Media technology.

Keywords: Academic performance, CBSE Board, Co-scholastic area, Continuous comprehensive evaluation (CCE), Learning outcomes, New Media, PLS-SEM, Senior Secondary.

INTRODUCTION

The conventional or technology-based pedagogy must emphasize on inculcation of academic excellence and professional skills that help students to apply conceptual learning to live business situations while they join any industry after completing their education. The students spend time for the purpose of scholastic as well as co-scholastic areas which defines comprehensive curriculum evaluation in their holistic development. In the modern era of digital and internet revolution and changing lifestyles patterns of family life, students' preference has changed beyond outdoor activities or reading bed time stories. The influx of New Media technology has affected the holistic development of Students. Most of children

prefer watching Television, surfing internet, playing video games on smart phones or on computer or watching their favourite video series using online media (Kalyan & Lakshmikantha, 2016). The traditional academic evaluation system has been emphasizing more on evaluating children's abilities in scholastic areas whereas the behavioral outcomes in co-scholastic areas are not much discussed. The Continuous comprehensive evaluation (CCE) is being emphasized to achieve the objective of holistic development of learners at school level. In CCE, the student's performance is assessed in term of scholastic and co-scholastic areas. So, the expected learning outcomes for students in term of Scholastic and Co-scholastic areas are the desirable behavior related to the learner's

knowledge, understanding, application, evaluation, analysis and creativity in subjects. The objectives of scholastic domain include the feasibility to apply it in an unfamiliar situation. Likewise, the co-scholastic domain includes the desirable behavior related to learner's Life Skills, attitudes, interests, values, co-curricular activities and physical health. As per Senior School Curriculum CBSE(2019), the process of assessing the students' progress in achieving objectives related to scholastic and co-scholastic domain is called comprehensive evaluation.

As per Jayalakshmi (2011), the four main categories of New Media that share certain channel similarities are firstly interpersonal communication media that include the mobile and email. Secondly Interactive and play media, it includes computer-based video games and virtual reality devices. Third is the information search media because internet along with mobile telephone is used as a channel for information retrieval and fourth category of New Media is the collective and participatory media as this involves the use of the internet to communicate and exchange content, thoughts, experiences and to establish a personal relationship facilitated by mobile devices. The New Media also bridged the gaps between the two platforms (technology convergence) and this is now being used for public and private purposes, and for acquiring as well as self-development of contents. (McGrath,2012). The interactive approach of engaging with New Media learning has been widely used in school in all age groups, i.e., it encourages K-12 learning i.e., Kindergarten up to the 12th grade of school education. The application of New Media in education comprises Digital White Boards; designing and implementing digital content and Android or i-pad Tablets, Digital Interactive Classroom, Evaluation Software etc.th Program. Fiber optics and satellite systems work together to facilitate multimedia, which is a combination of several media forms in are integrated as a single medium and interactive media. The multimedia allows individuals, actively to participate in whatever they visualize or listen. The recent year's innovations in New Media technology have transformed telecommunications, the communication of text, sounds or images at a distance through a technological medium (Rego, 2017).

In higher education, mobiles with the help of internet can provide course material to students including due dates for assignments and information about timetable changes or room changes (Naismith et al., 2004).In their study Masoud-ul-Hassan et al. (2014), related to the use of Social media to maximize Student's learning outcomes, emphasized that, with the advent of different types of educational technology, the position of teachers has become more a facilitator rather than a lecturing system. Students today have access to various advanced New Media technologies and their use is gaining popularity as businesses and other institutions want students to be specialists in new technology.

1.1:New Media Consumption and impact on the Co-Scholastic areas of Students' education

Students prefer to use social networking sites (SNS) and apps like Facebook, twitter, YouTube and WhatsApp etc. for themselves. Paying attention to their academic performance and discussing problems would make it easier to stop affecting their education from the negative aspects of social media. Nevertheless, teachers and students are now pushing social networking toward learning beyond classroom boundaries. The fact that many educational institutions still block their access to these sites to avoid misleading information with other people; it becomes a hindrance in collaborating the use of Social media for academic learning. Every day, the numbers of student users are growing, who are addicted to the various New Media platforms. Students have many friends for the sake of numbers, but they're still deprived of good friends. Students are customized and have individualistic behavior.

Banerjee(2015),emphasized that the learning model process has changed from the classroom to a virtual environment based on the internet. Some classes either have an online element at the secondary and post-secondary level, or some are offered fully online. The advent of social media in the area of online learning has changed the learning environment for students like never before. Though most of the study contributes to the positive impact of Facebook and Twitter on the student learning engagement, only a few of the studies were able to address the impact

of Social Media apps on Student's grades and their demographics.

Hung Lin et al. (2017), in their study concluded that digital learning shows better positive effects on learning outcome of students than traditional teaching does. Learning motivation reveals significantly positive effects on learning effect in learning outcome and the learning motivation appears comparatively positive effects on learning gain in learning outcome.

Katz et al. (2011) indicated that the terms such as academic performance, learning outcome, academic achievement, or learning achievement expressed the same ideas, i.e., students' academic learning outcome, or the persistent result through learning history. Learning outcome is an indicator to measure learners learning effect (Lubega et al., 2014) as well as a major item for the evaluation of teaching quality. Learning outcome would be affected by learning mode, curriculum design, and teaching (Jude et al., 2014) that a lot of researcher discussed the effects of personal characteristics or learning behaviours on learning performance. For example, Mostafa & Esmaeel (2012) highlighted the effects of various types of learning style on the learning performance of medical students and the relationship. Kristen (2011) examined the effects of ability, self-efficacy and personal goal on effectiveness and discovered that learning outcome could indeed be affected by learner traits. Chesser (2011) envisaged the effects of training methods, computers self-efficacy and learning mode on learning outcome and observed higher learning performance of learners in favour of abstract concepts.

Martin & Herrero (2012) also found out the significant differences between learning mode and learning outcome. They pointed that the effect of learning mode on learning outcome became insignificant after using multimedia assisted teaching materials. Hsu (2012) highlighted the two dimensions in learning outcome. Firstly, the Learning gain containing learning satisfaction, achievement, and preference. The second dimension is Learning effect including test result, time for schedule completion, and academic achievement. So, the Learning effect and learning benefits are therefore utilized as the measure dimensions of teaching effectiveness in this study.

The collections of knowledge human being are used to-such as books and libraries, didn't exist earlier (Neuman, 2010). The use of mobile technologies for entertainment and other recreational purposes typically affects face-to-face interactions with strangers, acquaintances, and families alike in a negative manner (Drago, 2015). As per the study Technology has a negative effect on both the quality and quantity of face-to-face communication.

Virtual video games trend these days and students play online games. The online games inspire students to learn new things as well as effective educational purposes. The game also has a profound impact on student performance and if the student has to improve the level of in-game performance then failures will be prevented without penalization. Game-based learning (GBL) is being used regularly as an effective tool in Classroom. The Web and its innovative developments have changed how people search, extend and interact with information. One indication of this trend is the removal from the book-racks of scholastic and academic libraries of books and serial diaries which has proven suspicious for some scholarly institutions

The Mobile technology (Chang, M. et al. (Eds.), 2019) makes communication run fast in its application to learning, offers benefits to facilitate and accelerate the process of delivering information and interchanges between students, lecturers, and other implementers of learning, and provides a positive impact that can accelerate the level of student needs for mobile technology, unusually high cellular devices with an average usage time of more than five hours per day.

The impact of games and simulations with regard to achieving specific learning objectives was examined by Vlachopoulos & Makri(2017). The results of this research indicate that games and/or simulations have a positive impact on learning goals and support the positive attitude shown by students towards games and simulations. Three learning outcomes like cognitive, behavioral and affective were established by the researchers, when games were embedded into the learning process. Online games and simulations contribute to better effective outcomes such as behaviours, perceptions,

enthusiasm, emotional engagement, performance and happiness for students at universities.

The mobile application use is diverse but has not been used maximally for learning. That can be one of the foundations in the design and development of the mobile broadband model at universities. In this regard Pebriantika et al., (2019) conducted a study and concluded that 35% of students agree and 52% strongly agree on the adoption of a mobile learning model. The design of the mobile learning models must be adapted to the dominant mobile application used by students so that the utilization of the mobile learning model can be maximally utilized in learning.

Rithika & Selvaraj (2013), their research illustrated the success of the community's social networking sites. Study recommended that Students should use this, however, to make better use of it and a better future. Findings reveal that students should engage, share their thoughts, but without getting being addicted and losing time. In this analysis, the sample size was 100(hundred) students and a questionnaire was designed to recognize the various social media factors that influence the learning of students. Sex, age, social impact and academic achievement were the established variables in the study.

RESEARCH OBJECTIVES

- (i) To assess the influence of past academic performance on Co-scholastic area related learning outcomes for Senior secondary school students.
- (ii) To study the effect of past academic performance on New Media usage for Co-scholastic areas of Senior secondary school students.

METHODS

This exploratory research study based on Senior secondary school students of central board of Secondary Education(CBSE) board in North India, discusses the relevance of New Media technology used by Students in the development of Co-Scholastics areas as learning outcome of their School education. The study pertains to Pre-covid19 scenario during January'2020 to February'2020.

RESEARCH METHODOLOGY

The above-mentioned research objectives are based upon the study of literature review and secondary data. Methods used for locating the data include data from North India state capitals and union territories in North India state capitals, which included responses collected in the form of questionnaire from 785 students of both Gender and from Jammu, Dehradun, Chandigarh, Lucknow, Delhi, Gurugram, Faridabad. Various pre-defined data selection criteria were followed as depicted in figure no. 1. The responses received from Senior secondary school students class XII students of CBSE board, co-ed schools with all three academic streams viz. Humanities, Commerce and Science.

The researchers considered multiple dependent variables measured as metric data to in order to establish structural as well as measurement model the Smart-PLS was applied. For synthesizing the data the exploratory factor analysis(EFA) was used as data reduction method using statistical software SPSS 16.0 version programme and PLS-SEM 3.0 Version software program (Ringle, Wende, & Becker, 2005) structural equation modeling technique was applied on the factors which were concluded by applying Exploratory factor analysis (EFA) on the Likert scale based responses received from students using questionnaire which has various statements and out of those 23 statements were groups into 05 factors related to Non-academic areas and categorized as Co-scholastic factors.

The Smart PLS 3.0 version programming software is used for the purpose of analysis. Structural equation modeling is a multivariate technique used to interpret and analyses the covariance of observations (McIntosh, Edwards & Antonakis, 2014). The relationship between influence of New Media usage can be described using simple linear mathematic expression of the variance of expected learning outcome as influenced by the variance of another.

The reflective model is formulated in the study as the expected learning outcomes are ascertained due to the usage of New Media devices and technology by Senior secondary school students of academic schooling grade of class-XII.

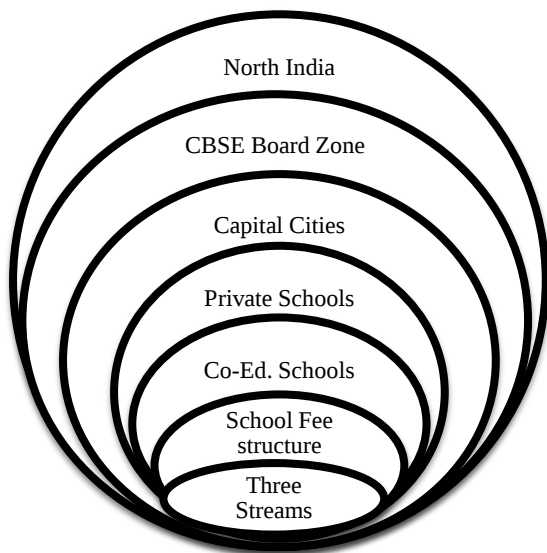


Figure no.1: Sample design criteria for the proposed model
Author's own model

Testing of Null-Hypothesis:

In order to test the Null-hypotheses related to study, the researchers have tried to assess the association between the independent variables (IDVs) i.e., Endogenous variable related to student respondent's demographics, New Media usage habits and 05 dependent variables (DVs) i.e., Exogenous variable was measured using various hypothesis as explained in this section. The figure no.2 represents the two sub-variables i.e. total usage duration of New Media devices and usage periodicity representing New Media usage, which is considered as Exogeneous variable for the purpose of the study. Similarly, the other independent variable(IDV) is the past academic performance of grade-XI of students.

The independent variable i.e., New Media technology consumption which includes all together usage periodicity of Internet enabled devices such as Computer (Desktop, Laptop or Netbook), Smartphone (Android or i-Phone), Tablet (or i-Pad), Smart TV, E-Reader (Kindle) devices by students in a day of 24 hours duration. To test that Null hypothesis (Ho1) that there is no significant influence of New Media usage on the expected Co-scholastic areas as deducted from EFA, researchers have established total of 05(five) sub-hypotheses.

Ho1 There is no significant difference between expected learning outcomes related to Co-scholastic areas and the New Media usage.

Ho1a There is no significant difference between Environmental awareness as expected learning outcomes and the New Media usage.

Ho1b There is no significant difference between Indoor gaming as expected learning outcomes and the New Media usage.

Ho1c There is no significant difference between Creative learning as expected learning outcomes and the New Media usage.

Ho1d There is no significant difference between Extra CCA(Co-curricular activities) as expected learning outcomes and the New Media usage.

Ho1e There is no significant difference between Social Wellbeing as expected learning outcomes and the New Media usage.

Similarly, to test Null hypothesis (Ho2) that there is no significant influence of past academic performance of grade-XI of students on the expected Co-scholastic areas as deducted from EFA, researchers have established hypothesis (Ho2), which was further used to established total of 05(five) sub-hypotheses on the basis of Environmental awareness, Indoor gaming, Creative learning, Extra CCA and Social Wellbeing factors.

Ho2 There is no significant difference between expected learning outcomes related to Co-scholastic areas by New Media usage and the past academic performance in grade-XI of students.

Ho2a There is no significant difference between Environmental awareness as expected learning outcomes and the past academic performance in grade-XI of students.

Ho2b There is no significant difference between Indoor gaming as expected learning outcomes and the past academic performance in grade-XI of students.

Ho2c There is no significant difference between Creative learning as expected learning outcomes and past academic performance in grade-XI of students.

Ho2d There is no significant difference between Extra CCA(Co-curricular activities) as expected learning outcomes and the past academic performance in grade-XI of students.

Ho2e There is no significant difference between Social Wellbeing as expected learning outcomes and past academic performance in grade-XI of students.

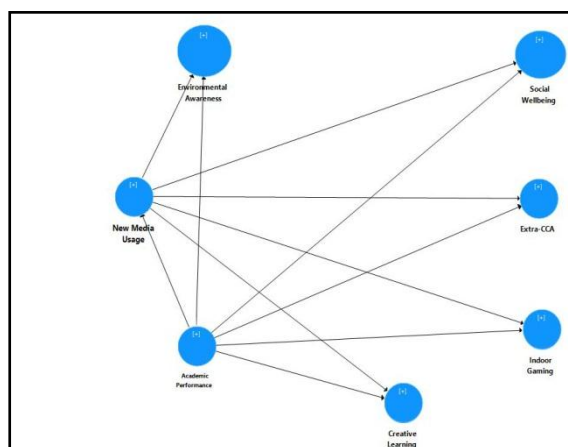


Figure no.2: Conceptual Model for expected Learning outcomes using New Media technologies
Author's own model

RESULTS

The twenty-three (23) indicator variable coding and actual construct used in Questionnaire are mentioned below in table no. 1. These indicator variables are the actual statements on which Student respondent were ask on respond on five-point Likert scale.

Table no.1: Indicator Variable Reference

EFA*	Variables	Actual construct in Questionnaire	Mean Score
Creative Learning	VAR00029	Q-33. Writing Skills Improvement	2.90
	VAR00031	Q-35. Internet Slangs	3.11
	VAR00041	Q-45. Creative Writing	3.25
Environmental awareness	VAR00055	Q-59. Gardening	2.58
	VAR00056	Q-60. Social community services	3.07
	VAR00057	Q-61. Environmental Pollution	3.34
	VAR00058	Q-62. Afforestation	3.22
Extra-CCA	VAR00059	Q-63. Neatness & Cleanliness	3.32
	VAR00038	Q-42. Vocal Music	2.76
	VAR00039	Q-43. Instrumental Music	2.69
	VAR00040	Q-44. Hobbies related	3.40
	VAR00042	Q-46. Listening to Motivational speeches	3.56
	VAR00043	Q-47. Dance & Aerobics	3.06
	VAR00044	Q-48. Drama or Debates	3.29
Indoor Gaming	VAR00045	Q-49. Art & Crafts	3.09
	VAR00053	Q-57. Indoor Games	2.90
Social Wellbeing	VAR00054	Q-58. Online & Virtual reality games	3.04
	VAR00046	Q-50. Travelling related info.	3.54
	VAR00047	Q-51. Team work development	3.25
	VAR00049	Q-53. Connectivity with classmates	3.72
	VAR00050	Q-54. Health Awareness	3.64
	VAR00051	Q-55. Improving Outdoor games	3.35
	VAR00052	Q-56. Watching games & sports	3.33

*Exploratory factor analysis(EFA) resulted in five factors with eigen value>1 & these factors were renamed as mentioned on the basis of the attribute they represent.

Author's own calculations

The data reduction method, Exploratory factor analysis(EFA) led to formation of 05 factors. These factors were renamed as per the characteristics of the sub-variables (statements). Subsequently the Smart PLS modeling was used to establish the relation of New Media usage sub-variables with these 05 factors.

Smart PLS Measurement model parameters:

The table no. 3 depicts the statistically significant (P values) and non-significant values for all of the eleven factors formed from EFA(Exploratory factor analysis).

The Summary table no.2 of Smart PLS measurement model parameters depicting P - values explains Construct Reliability and Validity. The Social wellbeing and Indoor gaming factors show significant results in term of R-square, Cronbach's alpha, Average variance extracted(AVE), Composite reliability and rho_A. The coefficient of determination, denoted R² is the proportion of the variance in the dependent variable(DV) that is predictable from the independent variable(IDV) in linear regression models. Cronbach's alpha is the Reliability and Internal consistency is considered to be a measure of scale reliability,

whereas Average variance extracted (AVE) is the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error. The Composite reliability is computed on standardized loadings and it assess convergent validity by measuring the average amount of variance in indicator variables that a construct is managed to

value is not statistically significant for Creative learning, Extra Co- curricular activities, Social Wellbeing and Linguistic skills. Cronbach's alpha values are significant for all dependent variables.

The AVE and Composite reliability values are not significant for Extra Co- curricular activities. The rho_A values are not significant

Table no. 2: Summary of Smart PLS Measurement model parameters

(Construct Reliability and Validity) depicting P values					
P Values	R Square	Cronbach's Alpha	Average Variance Extracted (AVE)	Composite Reliability	rho_A
Creative Learning	0.134	0	0	0.104	0.571
Environmental Awareness	0.289	0	0	0	0.085
Extra Co-Curricular activities	0.037	0	0	0	0
Indoor Gaming	0.029	0	0	0	0.989
New Media Usage	0.957	0	0	0	0.891
Social Wellbeing	0.001	0	0	0	0

Author's own calculations

explain. Similarly, rho_A is a composite reliability indicator computed on unstandardized loading.

for Learning by Modern Technology, Creative learning, Extra Co- curricular activities, Social Wellbeing, Indoor gaming, Linguistic skills and virtual learning.

Table no.3: Summary of Smart PLS Structural model parameters

	Path Coefficients	F Square
Academic Performance -> Creative Learning	0.367	0.465
Academic Performance -> Environmental Awareness	0.206	0.561
Academic Performance -> Extra Co-Curricular activities	0	0.062
Academic Performance -> Indoor Gaming	0.714	0.933
Academic Performance -> New Media Usage	0.777	0.958
Academic Performance -> Social Wellbeing	0.204	0.533
New Media Usage -> Creative Learning	0.185	0.322
New Media Usage -> Environmental Awareness	0.328	0.559
New Media Usage -> Extra Co-Curricular activities	0.689	0.921
New Media Usage -> Indoor Gaming	0	0.035
New Media Usage -> Social Wellbeing	0	0.019

Author's own calculations

Along with the tabular summary the figure no.3 mentioned below depicts the Smart PLS Model representation of R-Square with P-Values results, whereas figure no. depicts the Smart PLS Model representation of Composite Reliability with P-Values.

DISCUSSION

The table no.2 represents the results on the basis of five parameters in which R square

The conceptual model as depicted in figure no.3 represents the relationship of Exogenous variable i.e., New Media usage variable with the Endogenous variables i.e., 05 dependent variable factors, which were formulated using Exploratory factor analysis (EFA). The figure no.3 depicts the conceptual model using Smart PLS Model with reference to New Media and expected learning outcomes (with R-coefficients and with Latent variables).

Whereas the figure no.4 represents Composite Reliability with path coefficient and P-Value for proposed Model.

Results and summary using Smart PLS:
This section envisages the use of inferential statistics tools. The Structural equation

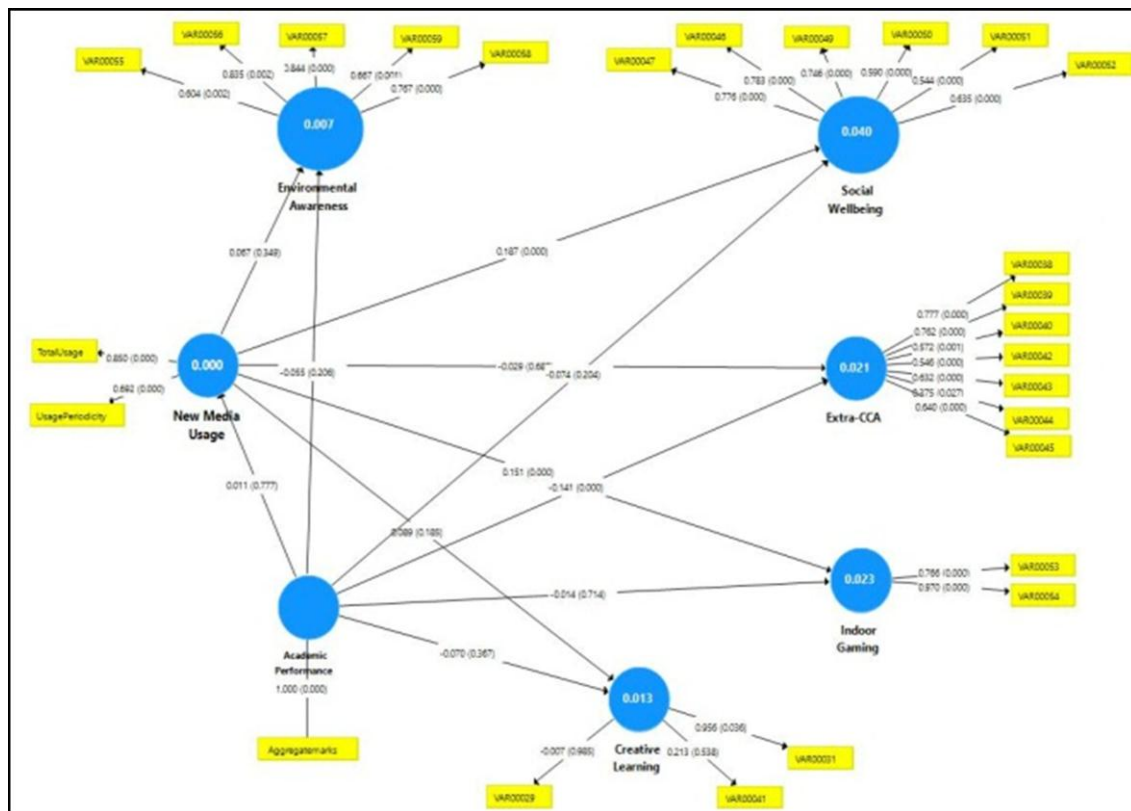


Figure no.3: R-Square with path coefficient and P-Value for proposed Model
Author's own model

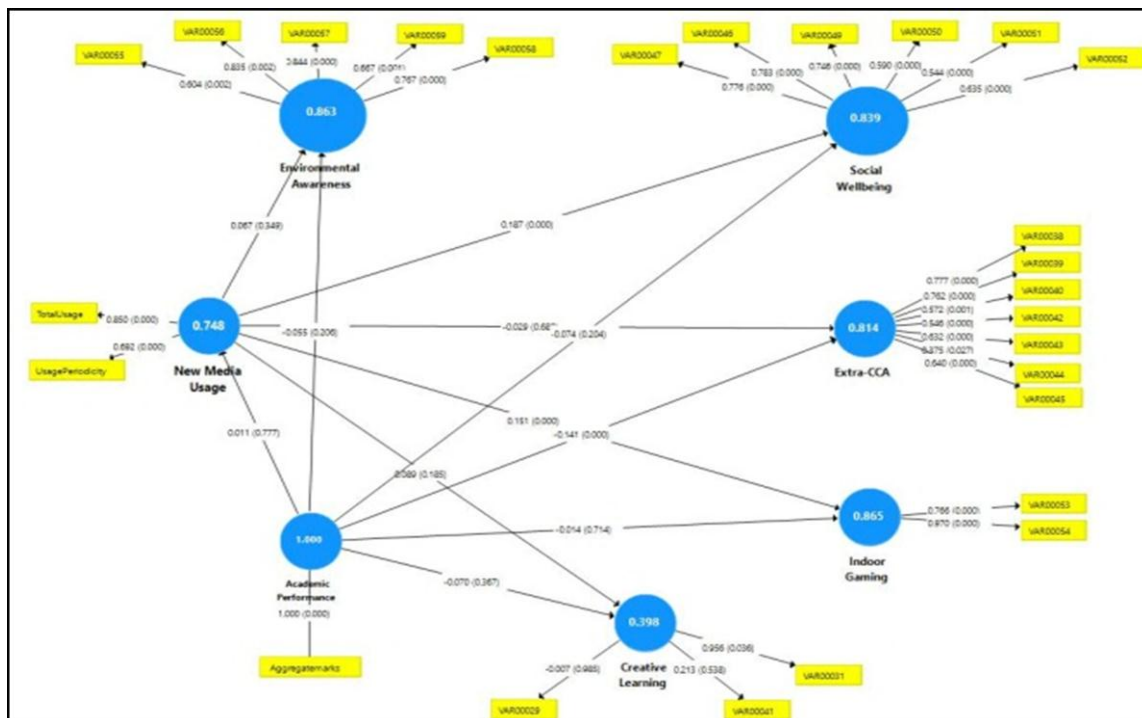


Figure no.4: Composite Reliability with path coefficient and P-Value for proposed Model
Author's own model

modeling, Smart PLS multivariate technique is used to interpret and analyse the covariance of observations and to prove the hypothesis to conclude the type of relationship between the expected learning outcomes of Student and the impact of New Media consumption.

The results and analysis involve the result values received by PLS Algorithm and Bootstrapping method to conclude and test various hypotheses.

The key parameter results are mentioned in table no. 2 and table no.3. All the key parameters of final results criteria involving Path Coefficients or Total Effects (with direct and indirect Effects), Outer Loadings, Outer Weights, R-square, f-square, determination of construct reliability and validity, determination of discriminant validity, checking collinearity statistics (VIF) and estimation of Model fit criteria (Ringle et al., 2015) were checked. Further the significance values of New Media usage and past academic performance by students' as

Exogeneous variables with five Endogenous (dependent) variables formed by EFA were tested.

The significant and insignificant P value results in term of total indirect and direct effects due New Media usage by senior secondary school students as mentioned in table no.4.

The summary of table no.5, Smart PLS Structural model parameters P Values depicts the Specific Indirect Effects. All the indirect effects are insignificant for each of five exogeneous variables.

CONCLUSION

Subsequently after applying exploratory factor analysis (EFA) and on the basis of Smart -PLS structural equation modeling, significant impact of New Media usage on Non-academic areas is observed for expected learning outcome factors such as Social Wellbeing and Indoor Gaming. The past academic performance i.e., marks secured by students in

Table no.4: Summary of Smart PLS Structural model parameters P Values with indirect and total effects

	Total Indirect Effects	Total Effects
Academic Performance -> Creative Learning	0.81	0.371
Academic Performance -> Environmental Awareness	0.848	0.215
Academic Performance -> Extra Co-Curricular activities	0.918	0
Academic Performance -> Indoor Gaming	0.784	0.75
Academic Performance -> New Media Usage		0.777
Academic Performance -> Social Wellbeing	0.789	0.231
New Media Usage -> Creative Learning		0.185
New Media Usage -> Environmental Awareness		0.328
New Media Usage -> Extra Co-Curricular activities		0.689
New Media Usage -> Indoor Gaming		0
New Media Usage -> Social Wellbeing		0

Author's own calculations

Table no.5: Summary of Smart PLS Structural model parameters P Values with Specific Indirect Effects

	P Values
Academic Performance -> New Media Usage -> Environmental Awareness	0.848
Academic Performance -> New Media Usage -> Social Wellbeing	0.789
Academic Performance -> New Media Usage -> Indoor Gaming	0.784
Academic Performance -> New Media Usage -> Creative Learning	0.810
Academic Performance -> New Media Usage -> Extra Co-Curricular activities	0.918

Author's own calculations

grade-XI do make a significant impact on the students' interest in extra Co-circular activities in term of total effect. Whereas no impact is observed in New Media usage due to past academic performance of students. This interprets like the usage of New Media is not related to the past academic performance but it may lead of motivate students to perform better in terms of Non-academic areas or Co-scholastic areas. The table no.6 envisages the hypotheses summaries of all five factors as concluded using exploratory factor analysis (EFA). All of these factors are the expected learning outcomes factors due to the usage of

others using Social Media applications and sites, they make new friends using New Media tools. They watch and listen motivational speeches and Success stories on Social Media applications and sites, learn more about hobbies like cooking and home science related updates by means of New Media. They prefer to play online and virtual reality games on New Media devices, learn Creative Writing from New Media apps, but students also believes that internet slangs (acronyms) used over social media adversely affects their communication skills.

Further as per the results the impact was not

Table no. 6: Hypotheses Summary (Ho1)

EFA	Dependent Variables (DV's)	Academic Performance	Ho1x (x=a,b.. k)	New Media Usage	Ho2x (x=a,b.. k)
Factor-1	Social Wellbeing	Accepted	Ho1a	Rejected	Ho2a
Factor-2	Environmental Awareness	Accepted	Ho1b	Accepted	Ho2b
Factor-3	Extra Co-curricular activities	Rejected	Ho1c	Accepted	Ho2c
Factor-4	Indoor Gaming	Accepted	Ho1d	Rejected	Ho2d
Factor-5	Creative Learning	Accepted	Ho1e	Accepted	Ho2e

Author's own calculations

New Media technology and devices . For both of the Environmental awareness (Factor-2) as well as Creative learning (Factor-5) factors neither the academic performance nor the New Media usage makes any significant influence on related learning outcomes. There is no influence of Academic performance on the learning outcomes related to social wellbeing, Indoor gaming also, but students learning about Extra co- curricular activities is influenced to a larger extend.

The table no.6 also depicts that New Media technology(devices) usage helps students in learning about social wellbeing and playing indoor game but, there is no significant influence on the expected learning outcome factors like Environmental awareness, Extra co-curricular activities and creative learning.

As per the student respondents' mean score on five-point Likert scale it is revealed that Students remain connected with classmates using New Media devices, they get Health Awareness tips on New Media, search about activities to control Environmental Pollution on New Media, Neatness and Cleanliness on New Media. Students speak freely among

significant for T values < 1.96 and P values > .05 for Creative Learning, Extra Co-Curricular activities and Environmental awareness. The responses received on five-point Likert scale for sub-variable of Creative learning i.e., Creative Writing with statement as "I learn Creative Writing from New Media apps." has higher mean score of 3.25 on Likert scale. For Extra Co-Curricular activities factor sub-variable Listening to Motivational speeches with statement as "I watch and listen motivational speeches and Success stories on Social Media applications and sites" has higher mean score of 3.56 on Likert scale. For Environmental awareness as expected learning outcome using New Media, the responses for sub-variable Environmental Pollution with statement as "I search about activities to control Environmental Pollution on New Media" has higher mean score of 3.34 on Likert scale.

The Social wellbeing with the sub-variable "Connectivity with classmates or friends is the most weighted Sub-variable with the mean score of 3.72 on Likert scale followed by Health awareness at a score of 3.64. Another factor Indoor gaming with sub-variable as

Online & Virtual reality games stands with average mean of 3.04.

In the situation arising similar to Covid-19 or compulsory social distancing the using of educational learning apps may become necessity due to non-availability of offline or face to face tuition classes. Hence, the role of New Media technology becomes more relevant as an effective tool in School Education especially due to compulsory social distancing in the situation, provided one can afford these devices. The limitations of using such technology have become more prudent for collaborative or group learning for Co-scholastic areas which play vital role for the holistic development of students in the form of mass education of a large group of students due to compulsory social distancing circumstances.

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