



## **Influence of Parents' Socio-Economic Status on Undergraduates' Attitude Towards Virtual Learning in Post Covid-19 Pandemic Era in a Nigerian Public University**

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**Abstract.** This study investigated the influence of parents' socio-economic status on undergraduates' attitude towards virtual learning in Covid-19 era in a Nigerian public university. Three research questions and two hypotheses guided the study. The study employed the survey research design. The targeted population was a total of 4,135 Undergraduates made up of 2020/21 session of 200 and 300 levels undergraduates of all the departments of the Faculty of Education in University of Benin. The sample size of 413 undergraduates, which consisted of 149 males and 264 females using multistage sampling procedure. Purposive sampling was used to select Year 2 and year 3 Undergraduates while stratified random sampling technique was adopted to divide the population into male and female subgroups as well 200 and 300 levels undergraduates' subgroups. The Virtual Learning Attitude Questionnaire (VLAQ) was administered to the sample. The instrument was validated by three experts in the Department of Educational Evaluation and Counselling Psychology (EECP). The reliability of the instrument was established using Cronbach alpha statistics which yielded a 0.84 coefficient. The descriptive statistics of mean and standard deviation and the inferential statistics of Pearson Moment Correlation Coefficient and Fisher-Z test of difference were used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that Parents' Socio-Economic Status has significant relationship with undergraduates' attitude towards virtual learning in Covid-19 era in a Nigerian Public University while it revealed no significant difference in the relationship between parents' socio-economic status and undergraduates' attitude towards virtual learning by age. Based on the findings of the study, it was concluded that undergraduates' attitude towards virtual learning, strongly correlate with their parents' socio-economic status and in this regard, it was

recommended that Guidance and Counselling services should be extended to parents/guardians, for them to understand the usefulness of effective communication skills in behaviour modification and using same to assist their children in developing the right attitude towards technological learning.

**Keywords:** Parents' socio-economic status, Undergraduates' attitude, Virtual learning and Post covid-19 pandemic

### **1. Introduction**

The importance of education to human development is well documented in literature. Dagbo (2014) stressed the importance of education as a vital instrument for the development and interaction of all elements in the society, for its economic, social and political growth. No meaningful socio-economic and political growth can therefore be achieved in a society, without education. In recognition of the importance of education therefore, any disruption of the academic programme consequently affects the education system of a nation and by extension, the growth and development of that nation. This goes to explain why the world was greatly agitated by the disruption on the education programme, caused by the outbreak of COVID-19 virus and its attendant consequences on the world's social-economic activities. The pandemic brought an unprecedented disruption on the education system worldwide as the world was apparently unprepared for such invasion. Education was inadvertently threatened like no other time in history. Meyer (2020) reported that Covid-19 is probably the event in our lifetime that possibly has the greatest potential to drastically affect and change the system of education. Corona virus indeed wreaked havoc on

mankind as several millions of people worldwide were infected and millions killed by the ravaging contagion.

Attitude is generally described as a person's learned tendency to respond positively or negatively towards an object, situation, a concept, or a person, and also as a belief held by individuals, that reflects their opinions and feelings which manifest in their behaviour. Typically, attitude could be favourable or unfavourable, it could be positive or negative, hence Delgado and Kassim (2019) concluded that attitude has come to be considered as the level of positive or negative effect related with a specific object or belief. Attitude is thus, double edged. Human beings are not born with attitude, but learn attitude afterwards as they begin the journey through life. Attitude forms as a product of an individual's direct experience, or from their observation. Studies on attitude and its formation show that attitude and belief are connected, as well as attitude and behaviour. Attitude, behaviour, and feeling are interrelated in a way that people's attitudes determine their behaviour towards objects, situations, and people. Attitude is both a psychological and hypothetical constructs. The result of a study carried out by Khalilia (2020) to determine students' attitudes and difficulties towards online learning during the times of crisis, and to also assist teachers, students and the educational institution in taking appropriate decisions when such difficult situations arise, revealed that the participants had positive attitudes towards online learning. It also showed that the participants encountered some obstacles while using the e-learning process related to computer skills, gender, and internet connection.

In a bid to mitigate the exponential spread of the contagion which is through person to person in close proximity, the Health Organisation (WHO) in the year 2020, proposed some preventive measures which included total or partial lockdown and social distancing among others. These stringent rules were instantly implemented by governments of sundry nations and the implementation resulted in the global short down of socioeconomic activities and consequently, affected the education system worldwide. Several schools across all levels of education, in approximately 188 affected countries of the world, an estimated figure of 1.6 billion affected students worldwide, were compulsorily sent out of school premises, in order to mitigate the incessant spread of the virus (Azevedo et al., 2020).

Virtual learning is seemingly an encompassing term as it describes all forms of learning experiences that are strengthened through the use of computers and internet, within and or outside the educational

facilities, such as e-learning, online learning, distance/remote learning, mobile learning among others. According to Kesim (2011), e-learning is also known as computer-aided, Internet-based, network-based and virtual learning. Schlosser and Simonson (2006) defined virtual learning as a learning paradigm that can functionally and effectively occur in the absence of traditional classroom environments. It is a distance learning conducted in a virtual learning environment with electronic study contents, designed for self-paced (asynchronous) or live web-conferencing (synchronous) online teaching and tutoring (Racheva, 2017). She expounds further, that virtual learning is usually associated with online programmes or online settings with much broader dimensions to other forms of online learning platforms. The instruction often occurs in an online setting where the teaching-learning activities are done online with the teacher and learners physically separated in terms of place and time. The realization of virtual learning is through enriched virtual learning environments, such as online learning, web-based training and technology delivered instructions. Virtual learning is operated in virtual learning environments, being computer-based environments which are relatively opened systems that effectively function through interactions and encounters with other participants who equally have access to the computer-based environments (Downes, 2009; Merritt, 2009; Fournier & Kop, 2011; Pelet & Lecarte, 2013). There is a consensus among these authors that virtual learning environments provide tools that are customize for education and these tools have become very popular for learning among students in higher education because of the increase in internet technology.

There is a growing awareness of the need for tertiary institutions to effectively integrate virtual learning into their programmes as the world is becoming more technologically driven. It is in this regard that Oye et al., (2012) called the new technological trend an e-driven world, which has undoubtedly, created unimaginable changes in almost all aspects of mankind. Students are to be well equipped through virtual learning therefore, to provide them with the necessary experiences for personal growth and development. Mamattah (2016), states that the majority of students see online learning as groundbreaking for education. Virtual learning indeed, maybe a major breakthrough in the educational sector where the gap created by distance is being logically bridged owing to technological advancement. It has unarguably defy all sorts of barriers that are caused by long distance location in the learning process as the need for students to leave their respective homes,

especially in COVID-19 pandemic era, no longer arises. Virtual learning would obviously put a check on the problems of overcrowded lecture halls and dearth in manpower, which are major features of the traditional face-face teaching-learning method.

COVID-19 pandemic, no doubt, has caused devastating effects on the socio-economic milieu and the education programme worldwide was grossly disrupted. COVID-19 has come to change the way things were previously done, it has come to change conventions and this has a far-reaching effect on the continuity of education without safety being compromised. Bao et al. (2020) argued that school closures have affected not only the students, but also the teachers and families alike, while it also has far-reaching consequences on economic and society. The United Nations Development Programme (UNDP) (2020) reported that COVID-19 has the potential to create devastating social, economic and political effects that will leave deep and longstanding scars in the passage of time. Education suffered severe disruptions and schools' closure affected over one billion students worldwide (WHO, 2020).

In a study carried out by Olaitan et al. (2020) to assess the impact of COVID-19 on education in Sub-Saharan Africa, the result from their descriptive analysis revealed that as of June 2020, Sub-Saharan Africa has reported 382,190 cases of COVID-19 and in reaction, several Sub Sahara African governments resolved to temporarily shut down institutions of learning in order to mitigate the infection, and as a result, advanced schooling institutions tended to reorganise their system and embrace online platforms. Olcott (2020) carried out a study on 'going online' and the result revealed that the interruption of education in the pandemic era indicates the significance of the need for an alternative pedagogy to be made available. Onyema et al. (2020) conducted a study on the impact of COVID-19 on education in Nigeria, Bangladesh, India and Saudi Arabia, using structured questionnaires to obtain responses from 200 respondents that consisted of teachers, students, parents, and policy makers selected from these countries. The data collected were analyzed with the use of STATA/Regression and the findings revealed that COVID-19 had adverse effects on education, causing learning disruptions and decreased access to education and research facilities. Their findings also indicated that many educators and students will rely on technology to ensure continued learning online during the COVID-19 pandemic era. However, they also indicated that online education was hindered by poor infrastructures including, network, power, inaccessibility and unavailability of digital issues, and poor digital skills. The availability

of up-to-date internet facilities cannot be over-emphasized to guarantee the successful implementation and sustainability of virtual learning paradigm in COVID-19 era. Robust hardware and a broad band internet connection are indispensable for effective participation in virtual learning.

Sarı and Nayır (2020) carried out a study in which they found that parents and teachers who were taken unaware by the COVID-19 outbreak experienced difficulties in creating, maintaining, and developing distance learning as they were caught unprepared for distance education and e-teaching. Also, teachers and students were found deficient as their level of technological use was below expectations. Similarly, Deshmukh (2020) found that the digital competence and skills needed during the pandemic wave could not be obtained. It was observed that educators, students and parents, experienced panic in using online platforms. What this implies is that COVID-19 pandemic brought digital learning to the frontline whereas teachers, learners and parents alike, were unprepared for it. These investigations relate to the present study which concerns itself with parents' socio-economic status as it influences the undergraduates' readiness to embrace virtual learning by way of their disposition towards it.

In a similar study, the impact of Covid-19 on learning was carried out on Ghanaian scholars, Owusu-Fordjour et al. (2020), used descriptive survey design in a study involving 214 respondents from tertiary institutions of Ghana. The findings revealed that students encountered some challenges during the school's close down due to the outbreak of the COVID-19 pandemic which includes students' inability to study effectively from their homes, thus making the online system of learning very ineffective. They also found that parents are incapable of assisting their children on how to access online learning platform, neither were they able to entirely supervise the learning of their children at home with little or no difficulties. The study revealed that the pandemic really had a negative impact on their learning as many of them are not used to effectively learn by themselves. In addition, the e-learning platforms which is rather novel to Africa students, also poses a challenge to majority of the Ghanaian students because of the limited access to internet and lack of knowledge in the technicalities of internet technologies.

In a related study carried out by Ogunode et al., (2020) to examine the impact of COVID-19 pandemic school closedown on higher institutions in Nigeria. Secondary data was used to analyse the study and the findings revealed that reduction of international

education, disruption of academic calendar of higher institutions, cancellation of local and international conferences, creating teaching and learning gap, loss of manpower in the educational institutions, and cut in budget of higher education in Nigeria, were the impacts of COVID-19 on higher institutions. In contrast to the above investigation and findings, this present study has put all the above-mentioned issues into perspective when it chose to address attitude towards virtual learning, rather than investigating the pitfalls caused by COVID-19 eruption. Several studies conducted in 2020 revealed that there are still deficiencies in the appropriate use of technology in the education sector during the COVID-19 pandemic. Dempsey and Burke (2020), via e-mails and phone conversations, observed that students, parents, teachers and other personnel had deficiencies in maintaining communication from distance and argued that measures should be taken in this regard.

Goni and Bello (2016) referred to the socioeconomic status of parents as the conditions in the family that are concerned with, or related to the interaction of social and economic factor. Kapinga (2014) indicated that there are four indicators to determine parental socio-economic status, which are; parents' education level, parental occupation, parental income and home environment. His viewpoint highlights the home environment as an indicator of socioeconomic status, as people's residential areas can actually speak volume for their position in the society and the attitude they display. Across all definitions, the central idea is that socio-economic status encompasses a combination of income, education level and occupational status of an individual's parents. Ahmad and Khan (2012) carried out a study and found that a significant relationship existed between parental income and academic performance of students in secondary examination in Pakistan. Students whose parents have high income performed better in secondary examination than those whose parents have low income. Olayiwola et al. (2011) conducted a study which revealed that a unit increase in parental financial status brings about 10.28% increments in student academic performance. Likewise, 2.63% increase in students' academic performance is brought about by a unit increase in the improvement of the hostel facilities.

Kapinga (2014) conducted a study which found that parents who reached a certain level of education have the ability to assist their children in doing school given homework. The findings also showed that parents who had secondary education or attained higher education level, knew the need of buying books, models, and maps for their children. Educated parents therefore, tend to motivate their children in matters related to

schooling and support them academically. Ahmad and Khan (2012) conducted a study where a significant relationship was found to exist between father's level of education and academic achievements of the children in secondary examination. The study revealed that majority of children with well-educated parents, performed better in secondary examination, compared to those with less educated or illiterate parents. Memon et al. (2010) carried out an investigation which also revealed that students with well-educated parents performed better than those with less educated parents. Rana (2015) carried out a study on the relationship between the parents' level of education and academic performance and the result revealed that a significant positive relationship existed between parents' level of education and students' academic performance. Similarly, Singh and Singh (2014) found that students whose parents have higher educational level differed significantly from those whose parents are either illiterate or are unable to observe the educational activities of their children. Akhtar (2012) particularly found that educated mothers play a significant role in their children's academic achievement.

Mudassir and Abubakar (2015) carried out a research on the impact of parents' occupation on academic performance of secondary school students in Malaysia and the result revealed that students from parents with formal occupation performed better than those from parents with informal education. Kainuwa (2013) examined the influence of parents' socio-economic status and educational background of parents on their children's education in Nigeria and the findings revealed that parents' personal educational backgrounds and economic backgrounds have a significant effect on their children's education. Okioga (2013) investigated the impact of socio-economic background on academic performance amongst university students in Malaysia, regression and ANOVA statistics were used to analyse the collected data and the result showed that there is a relationship between socio-economic background and students' academic performance. In a study conducted in Calabar in Nigeria, to evaluate the influence of parental socio-economic background on students' performance, Udida et al. (2012) used the multiple regression statistics to analyse data from a sample of 114 students from five public schools and the study revealed that parental socioeconomic background significantly influences students' academic performance. The study recognised parental profession and occupation as the most important predictive variables that influence students' academic outcomes. Conversely, Ogunsola and Adewale (2012) carried out a study which revealed that parents' socio-

economic status has no significant effect on students' academic performance.

Age is presumed to be a variable that correlates significantly with the use of computers digital materials. Okiki (2011) stated that younger generations often referred to as 'digital natives', are people who have grown up under the massive influence of internet and other digital technologies and as such, are very conversant with the use of computer and modern technology. Conversely, this may not be said of older people who may not have been opportune to have such exposure to digital materials and this disadvantage could create increased computer anxiety among this group. Tenopir (2003) study on the issue of age and usage of digital materials, reported the existence of some evidence revealing younger users as being more enthusiastic adopters of digital materials than the older users. The younger users were found to depend more heavily on digital materials and rate themselves as more skilful in using them than the older users.

Waldman (2003) argued that age is one variable that significantly correlates with computer comfortability and usability of electronic resources. Students' demographic variables do not have to create obstacles to the use of digital materials. Rather, students of all ages ought to strive to acquire the requisite knowledge needed for them to make effective use of online digital resources, at any given time and place (Quadri, 2013). Students of all age ought to be very well informed on the benefits accruable to the use of online resources.

**2. Research Methodology**

This study employed the Survey Research Design. The population of this study was four thousand, one

hundred and thirty-five (4,135) undergraduates, being the total number of registered 200 and 300 levels undergraduates of 20/21 session in all the departments of the faculty of education, University of Benin, Benin City. A sample of four hundred and thirteen (413) 200 and 300 level students were selected using multistage sampling procedure of purposive and stratified random sampling techniques. The instrument used in this study is the questionnaire on Virtual Learning Attitude Questionnaire (VLAQ). The instrument is divided into two sections; Sections A consists of the demographic variables which include; age and parents' socio-economic status and section B, contain 39 items on positive and negative statements bordering on undergraduates' attitude towards virtual learning. The respondents were required to respond to each item along a 4-point scale of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). The instrument was validated by the three experts, two counselling psychologist and one expert in test construction, of the department of Educational Evaluation and Counselling Psychology (EECP) University of Benin. The reliability of the instrument was determined using Cronbach alpha statistics and it yielded a correlation coefficient of 0.84 as a measure of consistency. The instrument was administered to the respondent with the aid of three assistants and were retrieved within two days. A total of 319 instrument were retrieved from the respondents and used for the analysis. The data collected from the respondents were analysed with both descriptive and inferential statistics. The Pearson's Correlation Coefficient was used to test hypothesis 1, while the Fisher-Z Test of Difference statistic was used to test hypothesis 2 at a 0.05 level of significance.

**Research Question 1:** What is the attitude of undergraduates towards virtual learning in Covid-19 pandemic era in a Nigerian Public University?

**Table 1:** Descriptive in Mean and Standard Deviation of Attitude of Students towards virtual learning in Covid-19 Pandemic Era

Variable	N	Sum	Mean	Std. Dev	Scale Mean	Remarks
Attitude	319	33958	106.45	13.25	97.50	Positive

Table 1 contains the descriptive data with respect to Attitude of Students towards virtual learning in Covid-19 Pandemic Era. Total respondents N = 319 the sum of their responses is 33958 and they have a mean of 106.45 ± 13.25 Standard Deviation. The mean value 106.45 is greater than the scale-mean of 97.50 (Mean of 39 items of four point scale: - 2.5 multiply by 39 = 97.50) this implies that the Attitude of Students towards virtual learning in Covid-19 Pandemic Era is positive, having scored above (106.45>97.50) the scale mean.

**Hypothesis 1:** There is no significant relationship between Parents' Socio-Economic Status and undergraduates' Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University

**Table 2:** Pearson’s test of Relationship between Parents’ Socio-Economic Status and Undergraduates’ Attitude towards Virtual Learning

Variables	N	R	p-value	Remarks
SES	319	.230	.001	Significant
Attitude	319			

$\alpha = .05, p < .05r^2 = 0.0529 (5.3\%)$

Table 2 shows the Pearson’s coefficient of correlation between Parents’ Socio-Economic Status and Undergraduates’ Attitude towards Virtual Learning. From the table the correlation coefficient ( $r$ ) = .230, this is an indication of a positive relationship (the higher their SES the better their attitude) between SES and Attitude towards Virtual Learning. The correlation coefficient is significant, testing at .05 alpha levels, because the p-value is less than .05. Therefore, the null hypothesis “There is no significant relationship between Parents’ Socio-Economic Status and undergraduates’ Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University” is hereby rejected for the alternative hypothesis. This implies that there is a significant relationship between Parents’ Socio-Economic Status and undergraduates’ Attitude towards Virtual Learning in COVID-19 pandemic era. Parents’ Socio-Economic Status accounts for 5.3% (coefficient of determination) of changes in their attitude.

**Hypothesis 2:** There is no significant difference in the relationship between Parents’ Socio-Economic Status and undergraduates’ Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University by Age

**Table 3:** Fisher-Z test of difference in the Relationship between Parents’ Socio-Economic Status and Undergraduates’ Attitude towards Virtual Learning by Age Brackets

Variables	Less than/= 20yrs			Above 20yrs			Zcal	Decision
	N	R	Zr	N	r	Zr		
SES	162	.269	.278	157	.205	.213	0.65	Not Significant
Attitude								

$\alpha = .05, 0.65 < 1.96$

Table 3 shows the Fisher-Z of difference in the Relationship between Parents’ Socio-Economic Status and Undergraduates’ Attitude towards Virtual Learning by Age Brackets. From the table the number respondents within the age brackets 20years and below (N) = 162 and above 20 years = 157 their correlation coefficient ( $r$ ) = .269 and .205 respectively. Both show positive relationship between Parents’ Socio-Economic Status and Attitude towards Virtual Learning. The calculated Z-value = 0.65, this value is not significant, testing at .05 alpha levels. The calculated Z-value (0.65) falls within the Acceptance Region of the standard normal curve ( $0.65 < 1.96$ ) Therefore, the null hypothesis “There is no significant difference in the relationship between Parents’ Socio-Economic Status and undergraduates’ Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University by Age” is hereby retained. Hence any observed difference in the relationship between the two variables (SES and Attitude towards Virtual Learning) for respondents within both age brackets is a mere chance occurrence, without any statistical consequence.

**3. Discussion of Results**

Based on the results of the findings discussion were made:

In response to research question one, which sought to know the attitude of undergraduates towards virtual learning in a Nigeria public University, the attitude of undergraduates towards virtual learning is positive. The undergraduates sampled in the Nigeria public University, generally have positive attitude towards virtual learning. The findings in hypothesis 1 revealed that a significant relationship exist between Parents’ Socio-Economic Status and undergraduates’ Attitude towards Virtual Learning in COVID-19 pandemic era, in a Nigerian Public University. The findings corroborate with study conducted by Añover & Pellicia, (n.d.) in California State University which revealed that economically disadvantages students are expose to higher chances of experiencing difficulties accessing materials online. The findings of the study also agrees with the result of a study carried out by the Institute for Fiscal Studies (IFS) and Institute of Education (IoE) in England which showed that children from low socio-economic backgrounds suffered severe deprivation compared to their counterparts from high socio-economic background, as they had to spend less time learning at home during the lockdown due to the lack of accessibility to digital

materials and the non-availability of conducive virtual learning environments (Andrew et al., 2020). This result is also in congruence with the findings of the study carried out by Cuisia-Villanueva and Núñez (2020) to investigate the impact of socioeconomic status on emergency electronic learning during the Corona virus lockdown, which revealed that socioeconomic factors such as accessibility to resources and parental support both affected the students' e-Learning experience. The result of this study, also agrees with the study conducted by (Brown et. al., 2016) which revealed that prospective college students from low-SES backgrounds are less likely to have access to information and communication technological tools, compared to their counterparts from high-SES background who are much likely to access to informational technological resources.

The findings of hypothesis 2 of this study revealed that age does not significantly influence the relationship between parents' socio-economic status and undergraduates' attitude towards virtual learning in COVID-19 pandemic era, in a Nigerian Public University. The result showed that there is no significant difference in the relationship between parents' socio-economic status and undergraduates' attitude towards virtual learning by age and that any difference observed in the relationship between the dependent and independent variables for respondents below 20 years and those at the other divide of 20 years and above, is only an occurrence by chance. This finding is in conformity with the result from the study by Fleming et. al., (2017) which found that age is not a significant factor impacting either future use intentions or satisfaction with e-learning. The result of this study also agrees with the result of the research conducted at the Kyambogo University Uganda, by Ndawula and Ayikoru (2013), which found that there is no significant relationship between age difference and undergraduate students' attitudes towards the academic use of Internet, as the study failed to reject the null hypothesis, and this means that the undergraduate students' attitudes towards the academic use of Internet is not dependent on the age difference. The result also confirms the study of Suri and Sharma (2013), carried out with students of a university in India, and the study of Adewole-Odeshi (2014) on the participation of the students studying at universities in Nigeria which concluded that no difference existed in attitudes towards e-learning in terms of age. However, the result of the study conducted by Peytcheva-Forsyth et. al., (2018) does not agree with the result of this study as their finding revealed otherwise. They found that age difference significantly correlated with computer attitude as younger people tend to be more proactive in using

technologies in their learning, which is most likely due to their earlier contact with technology and also to the way they perceive the technology as an instrument both for entertainment and learning.

#### 4. Conclusion

Based on the findings of this study, it can be deduced that undergraduates' attitude towards e-learning is dependent on their parents' socio-economic status as undergraduates from advantaged background tend to have much higher positive attitude towards virtual learning as against their counterparts from socio-economically deprived background who have less positive attitude towards e-learning, which could be pinned down to the high cost of accessing technological learning tools. However, age difference did not show any significant variation in the attitude of both younger and older undergraduates towards virtual learning experience. The younger undergraduates as well as older ones, desire to use e-learning mode on their courses and anxiety is also experienced across all ages used in the experiment.

#### 5. Recommendations

Based on the results of the present study, the following recommendations were suggested:

- 1) Counselling interventions should be put in place and made effective, to encourage and assist undergraduates develop the right attitude towards virtual learning.
- 2) Guidance and counselling services should be extended to parents/guardians for them to understand the usefulness of effective communication skills in behaviour modification and use same to assist their children in developing the right attitude towards technological learning.
- 3) Virtual learning environments, being the inevitable future of education and learning, is in dire need of acceptance by the society as a whole. Essentially, it would require a positive attitude from all quarters of the society for it to hold sway. The government should embark on a nationwide advocacy to create the awareness of the all important virtual learning pedagogy, on why it should be encouraged by everybody.
- 4) If e-learning would sustain as the learning paradigm of the new era, the activities must commence at the primary school level so that the right attitude towards the nascent learning mode will be developed early in life and ingrained.
- 5) Finally, the government should work closely with the education managers and the staff union of universities, by meeting with their recommendations

and demands to properly revitalise the tertiary institutions system which would further enhance the workability of virtual learning in the universities.

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