

Effect of Time Spent on Facebook Social Networking Platform on Learner Academic Achievement in Computer Studies in Public Secondary Schools, Nairobi County, Kenya

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ABSTRACT

The use of Facebook Social Networking Platform (FSNP) boost pedagogical interactions between students and teachers which impacts on learner academic achievement. The purpose of the study was to establish the effect of time spend on FSNP on learner academic achievement in Computer Studies in public secondary schools, Nairobi County, Kenya. The objective was to establish the difference in learner academic achievement between learners who spent different amounts of time on FSNP and those who did not. The study targeted form three students taking Computer Studies. Quantitative data was obtained using pre-test and post-tests scores and qualitative data using a questionnaire and lesson observation. Purposive sampling was used to obtain 250 students from 3 boys' and 3 girls' public secondary schools which offer Computer Studies. Descriptive statistics computed included frequencies, means, variances and standard deviation. Inferential statistics included ANOVA and t tests. Findings shown a statistically significant differences in learner academic achievements between learners who spent different amount of time on FSNP and those who did not; t statistic $[t(110) = 10.10, p = .00]$ and $[t(145) = 11.37, p = .00]$ for the post-test mean scores of the students who spent regulated time (less than 3) and unregulated time (more than 3) hours per day on the platform respectively for five weeks. The study concluded that time spend on FSNP has a positive effect on learner academic achievement among Computer Studies students and that regulating the time students spend on the platform enable them to post higher achievement.

Keywords: Facebook social networking platform, Time spend on facebook, Pre-test, Post-test, Learner academic achievement, Computer studies.

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Highlights of this paper

- Time students spend on Facebook has an effect on their academic achievement.
- Students who spend regulated time on Facebook post higher achievement than those who spend unregulated time.
- Students who spend regulated time on Facebook have self-control and concentrate more on learning than those who spend unregulated time.

1. INTRODUCTION

Time spend by a learner in an online learning platform has a bearing on his or her achievement. The outcome of this interaction varies depending on whether a learner spend the time on the platform for learning or entertainment purposes. The ability to balance the time spend on social networking platforms (SNPs) for learning or entertainment purposes is the main challenge among learners which may result in declining academic achievement. This is because of the interruptive and addictive nature of the platforms which may make learners not to concentrate with learning but on other purposes such as entertainment, chatting with friends or getting updated with what is happening around them. In a survey study involving undergraduate and graduate students in a public Midwestern university that explored the use of Facebook for academic purposes and its impact on academic performance, [Kirschner and Karpinski \(2010\)](#) in supporting this viewpoint concluded that learners who used Facebook spent less time studying and got lower GPAs. However, [Kirschner and Karpinski \(2010\)](#) did not point out on whether regulating time student spent on use of Facebook would give different results. [Datko \(2015\)](#) alluded to this through a meta-analysis study of the potential benefits and drawbacks of SNPs in higher education by opining that spending a lot time on FSNP may have negative effect on learner academic achievement. On the contrary, in a survey study to establish a model for understanding educational Facebook use among undergraduate students in the College of Education at an Anatolian university in Turkey, [Celik, Yurt, and Sahin \(2015\)](#) found out that learners who prudently manage time spend on FSNP report positive gain in academic achievement. In agreeing to this viewpoint, in a study to investigate the influence of self-regulation of Facebook usage on academic performance among university students in Kenya, [Wanjohi, Mwebi, and Nyang'ara \(2015\)](#) revealed that students with high level of self-regulation control the time they spend on FSNP and have a likelihood of posting high academic achievement.

Conversely, while [Moghavvemi, Aziz, Sulaiman, and Wai \(2017\)](#) in a study on the impact of SNP usage on learner academic achievement among undergraduate students in TATI University College in Malaysia contended that time spend on FSNP has no effect on learner academic achievement. On the contrary, in a related study that analyzed on the effects of Facebook usage by undergraduate students at Luleå University of Technology in Sweden ([Rouis, Limayem, & Salehi-Sangari, 2017](#)) observed that extensive use of FSNP by students with extraverted personalities led to poor academic achievement while students with self-control and self-regulation ably controlled the amount of time they spend on the platform, had better cognitive absorption that led to high academic achievement. This indicated that, while time spend on FSNP may have a negative or positive effect on learner academic achievement, there is need for teachers to closely supervise learning through FSNP to moderate multitasking by learners on the platform which inhibit cognitive absorption. Lack of supervision may lead to low academic achievement irrespective of whether the access time is regulated or not. In agreeing to this position, [Muthui and Sirera \(2017\)](#) in a study to establish the implications of time spend on social media on academic performance by adolescents in public day secondary schools in Nakuru East constituency observed that most adolescents spend most time on social media including FSNP for social interactions which had the potential of contributing to their low academic achievement. [Muthui and Sirera \(2017\)](#) further observed that learners resisted school rules and regulations to sneak mobile devices to use for social interactions instead of academic use. [Muthui and Sirera \(2017\)](#) opined that to avoid this resistance, schools should allow learners to carry such devices and train them on responsible use of FSNP to avert negative effect

on their academic achievement, however, the use of such devices should be supervised by teacher. Similarly, a study to investigate the relationship between self-regulated learning and academic achievement among undergraduate medical students of Universitas Warmadewa by [Ningrum, Kumara, and Prabandari \(2018\)](#) revealed a positive correlation between self-regulated learning and academic achievement. [Ningrum et al. \(2018\)](#) opined that students who have good self-regulated learning traits and are well supervised post high academic achievement because they are able to concentrate with the content being learned.

Further, while examining the impact of FSNP usage on college student involvement in studies, [Mathur, Nathani, Sharma, Modi, and Arora \(2019\)](#) affirmed that FSNP has positive effect of learner academic achievement, however, they observed that if not regulated, students would use the platform for entertainment, relaxing and passing time but not for academic purposes which result to a negative effect on their academic achievement. [Mathur et al. \(2019\)](#) proposed that teachers and other educationists should regulate the usage of FSNP to guarantee optimum utilization of the platform academic purposes and improved academic achievement. In a related study to examine the connection between students' teamwork experience, self-regulated learning, technology self-efficacy and performance in an online educational technology course, [Oyelere, Olaleye, Balogun, and Tomczyk \(2021\)](#) emphasized on the need to regulate time learners spend online. [Oyelere et al. \(2021\)](#) observed that right self-regulated learning strategies in online courses motivate students to strive for a good teamwork experience, leading to increased interest in online learning and increased academic achievement. Similarly, while [Alwreikat, Zaid, and Shehata \(2021\)](#) in a study to investigate the determinants of Facebook use among students and its impact on collaborative learning hold the opinion that the more time spend on FSNP the better learner academic achievement students achieve, the learning activities should be closely monitored by the tutors. [Alwreikat et al. \(2021\)](#) emphasized on the need for teachers to regulate the time to control learner concentration on the content learnt. The findings from the reviewed studies inform on the potential effect of FSNP on academic achievement among higher education learners. However, the findings cannot be generalized to inform the effect of FSNP on learner academic achievement among Computer studies learners in public secondary schools. Therefore, carrying out this empirical study was paramount.

1.1. Statement of the Problem

Computer Studies students have consistently posted poor performance in the final Kenya Certificate of Secondary Education (KCSE) on the compulsory questions drawn from the form three topic on "Elementary Programming Principles". The annual reports by the Kenya National Examinations Council (KNEC) indicate that learners consistently performed poorly in this question in section B of Computer Studies Paper 1 (451/1) in the KCSE examinations for five years ([KNEC Report, 2015, 2016, 2017, 2018, 2019](#)). While Computer Studies syllabus recommend teachers to use innovative instructional resources to teach the subject, there are no existing studies that point out how the Facebook Social Networking Platform (FSNP) can be utilized to improve the learner academic achievement in Computer Studies on the poorly performed questions drawn from the "Elementary Programming Principles taught in form three and the effect the use of the platform would have on learner academic achievement. This study sought to empirically establish the effect of time spend on FSNP on learner academic achievement in Computer Studies among students in public secondary schools in Nairobi County, Kenya.

1.2. Purpose of the Study

The purpose of the study was to establish the effect of time spend on Facebook social networking platform on learner academic achievement in computer studies in public secondary schools, Nairobi county, Kenya.

1.3. Objective

The specific objective of this study was to establish the difference in learner academic achievement between learners who spend different amount of time on FSNP and those who do not.

1.4. Hypothesis

Based on this objective, the null hypothesis; “ H_{01} : *There is no significant difference in learner academic achievement between learners who spend different amount of time on FSNP and those who did not*” was formulated and tested.

2. METHODOLOGY

2.1. Research Design

This study adopted the quasi-experiment research design involving non-equivalent groups. The non-equivalent groups design is the common type of quasi-experimental designs because it is similar to the classic experimental design except that the groups are not randomly assigned (Rubin & Babbie, 2017). The non-equivalent groups design was adopted because the form three Computer Studies students who participated in the study differed in numbers and characteristics in terms of gender and entry behaviors. White and Shagun (2014) state that in a quasi-experimental study, a control group that is as similar as possible in baseline characteristics to the treatment group in terms of baseline characteristics is considered and one is able to manipulate the control and treatment groups to determine the causal effect. A pre-test and post-tests were used to collect data for the study.

2.2. Target Population

This study targeted a population of two thousand five hundred (2,500) form three computer studies students from thirty-seven (37) boys' and twenty-eight (28) girls' public secondary schools offering Computer Studies in Nairobi County, Kenya. Most schools in Nairobi County have robust information and communication technology (ICT) infrastructure including reliable Internet connectivity required to implement the Computer Studies curriculum, thus found suitable for the study unlike others located outside the capital city of Kenya.

2.3. Sampling Size and Sampling Technique

The study employed purposive sampling to obtain about two hundred and fifty (250) Computer Studies students from three (3) boys' and three (3) girls' public secondary schools in Nairobi County which offer computer studies as an examinable subject by the Kenya National Examinations Council (KNEC) in form four. Form three students were selected to participate in this study because at this level they take computer studies as an elective subject and usually not busy preparing for the final national examinations like their colleagues in form four. In order to meet the objectives of this study, students who participated in the study were from the public boys' and girls' secondary schools that: offer computer studies as KNEC examinable subject, have reliable Internet connection, have a student to computer ration of at least 1:2 and have reliable electricity supply.

2.4. Validity and Reliability

In order to ensure internal validity in this study, the same pre-test was used as post-test with reorganization of the test items done so that the learner could not easily notice the similarity of the tests. For external validity, matching method was used to purposely sample schools that guaranteed similar learning conditions for both control and experimental groups. Piloting of the tests, the questionnaire for students and lesson observation schedule was done in three schools to determine the difficulty level of the questions. To test for internal consistency of the research

instruments used in this study, the results obtained from the student achievement tests (pre-test and Post-test) and the data from the questionnaire for students were used to compute the correlation coefficient using the split-half technique to eliminate chance error. The resulting split-half averages were used to compute Cronbach's Alpha (α) reliability coefficient. The achievement tests had an r value of 0.81 and the questionnaires for students had an r value of 0.86. According to Kothari (2019), a reliability coefficient of more than 0.5 is considered adequate enough for instruments to be used in social research. This implied that the instruments were highly reliable.

2.5. Data Collection

To establish the difference in learner academic achievement between learners who spend different amount of time on FSNP and those who do not, Computer Studies students who participated in this study were grouped into two; the control group and the treatment group. Students in both groups were taught the topic on “Elementary programming principles”, a form three topic in the Kenya Computer Studies syllabus. The students in the treatment group were split into two groups and exposed to FSNP for different amounts of time to interact, collaborate and learn while those in the control group were not exposed. One group of the students in the treatment group (boys and girls) spent regulated time of less than three (3) hours per day to learn Computer Studies on FSNP and the second group (boys and girls) spent unregulated time of more than three (3) hours per day on FSNP. All the students participating in the study sat for a pre-test before the teaching began and post-test after the teaching and exposure of the treatment to FSNP ended. After the experiment, a questionnaires were administered to the participating Computer Studies students to collect data about their views on the effect of the amount of time spend learning through FSNP on learner academic achievement. During the experiment, lesson observations were made to establish whether learners were interested and enthusiastic to spend more time on the platform.

3. FINDINGS AND DISCUSSION

3.1. Findings

Before the start of the experiment, a pre-test was administered to the students in both the control and treatment group and marked to establish whether they were in the same baseline knowledge of the content that was to be taught. A statistical analysis of pre-test scores was done to compute the mean scores of the control group and the treatment group as shown in Table 1. The mean scores helped to determine whether the students in both the control and treatment groups had similar baseline academic achievement before the teaching and the experimental intervention began.

Table 1. Analysis of the pre-test mean scores for the control and treatment groups before the start of the experiment.

Pre-Test Mean Scores					
Groups	Frequency	Sum	Mean	Variance	Std Dev (σ)
Pre_Test_Control_Group	77	1117	14.512	55.442	7.442
Pre_Test_Treatment-Group	126	1750	13.893	35.011	5.923

Table 1 shows that the mean of the pre-test for students in the control group was 14.512 with a standard deviation $\sigma = 7.442$ and that of those who participated in the treatment group was 13.893 with a standard deviation of $\sigma = 5.923$. This indicated that the students in the control group and the treatment group posted low and different academic achievement before quasi-experiment started. The variability of test scores for the two groups, control group $\sigma = 7.442$ and treatment $\sigma = 5.923$ were low and indicated that the scores from the two tests were normally distributed. Table 1 also shows the treatment group posted lower mean score than the control group which could be attributed

to different factors among them; teacher characteristics, learner characteristics, number of learners, gender of learner and the learning environment and some students reading ahead of others. However, this implied that the learners had low baseline knowledge of content under the topic that was to be taught.

To determine whether there was statistically significant difference in learner academic achievement between the two groups in the pre-test, inferential statistics was computed using the analysis of variance (ANOVA) as shown in Table 2.

Table 2. One-way ANOVA comparing the pre-test scores of the students before students spent time of FSNP.

One-Way ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	18.230	1	18.230	0.427	0.514	3.888
Within Groups	8587.691	201	42.725			
Total	8605.921	202				

Note: Confidence level $p = 0.05$.

Table 2 shows that the p-value was higher than the confidence level of $p = .05$ indicating that there was no statistically significant difference in learner academic achievement between the learners in the control group and those in the treatment group before the quasi experiment was started as demonstrated by the one-way ANOVA statistic [$F(1,201) = .427, P=.514$]. This could be attributed to different factors among them; teaching methods used, teacher characteristics, learner characteristics, number of learners, gender of learner and the learning environment.

After the teaching and exposure of students of the students in the treatment group to FSNP, a statistical analysis of the post-test scores was done to determine the mean scores of the control group and treatment group's two sub-groups of the students who were exposed for regulated time of less than three (3) hours per day and those who were exposed for unregulated time of more than three (3) hours as shown in Table 3.

Table 3. Mean scores for students who spent different amount of time learning on FSNP and those who did not.

Pre-Test Mean Scores	N	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Std. Error
Post_Test_Control_Group	77	33.271	13.274	0.441	0.274
Post_Test_Less_3hrs	52	57.212	13.156	-0.154	0.330
Post_Test_More_3hrs	74	55.653	10.819	-0.070	0.279

Table 3 show that the students who did not spend time on FSNP (control group) posted a mean, $M=33.271$ and standard deviation $\sigma =13.274$; those exposed to interact and learn on FSNP for regulated time of less than three $M = 57.212$ and standard deviation $\sigma = 13.156$ and those exposed for unregulated time of more than three hours posted means of and $M = 55.653$ and standard deviation $\sigma = 10.819$. This indicates that students who were exposed to FSNP posted higher learner academic achievement than those who were not. However, those exposed for less than three hours (regulated) posted a higher mean than those exposed for more than three hours (unregulated). This implied that the intervention of exposing the students in the treatment group to spend time interacting, collaborating and learning through FSNP contributed to higher academic achievement than those who were not exposed. The results further imply that the students who were exposed for regulated (less than three hours) posted higher mean than those exposed for unregulated amount of time (more than three hours) indicating that the later spent lost self-regulation and concentration on learning content, thus spending time accessing other Internet sites.

To test the hypothesis "*H0: There is no significant difference in learner academic achievement between learners who spend different amount of time on FSNP and those who did not*", the means of the post-test scores were subjected to inferential statistical analysis. A t statistic was computed to compare the means of the post-test scores of the students

who spent different amounts of time on FSNP (treatment group) and those who did not spend any time on FSNP to learn (control group) as shown in Table 4.

Table 4. Paired t-test comparing the mean scores for students who spend different amount of time learning on FSNP and those who did not.

t-Test Statistic	Post-Test Control Group	Post-Test Time<3 Hours	Post-Test Control Group	Post-test Time >3 Hours
Mean	33.271	57.212	33.271	55.653
Variance	176.20	173.071	176.202	117.052
Observations	77	52	77	74
Hypothesized Mean Difference	0.000		0.000	
df	110.000		145.000	
t Stat	-10.100		-11.373	
P(T<=t) one-tail	0.000		0.000	
t Critical one-tail	1.661		1.661	
P(T<=t) two-tail	0.000		0.000	
t Critical two-tail	1.982		1.982	

Note: Confidence value = 0.050.

Table 4 shows t-statistic ($t(110) = 10.100, p = 0.000$) for the post-test mean scores of the students who spent regulated time of less than three (3) hours per day on FSNP and those who did not (control group). Table 4 also show t-statistic ($t(145) = 11.373, p = 0.00$) for the post-test mean scores of the students who spent unregulated time of more than three (3) hours per day on FSNP and those who did not (control group). The p-value for the two groups that spend different amounts of time on FSNP ($p = 0.000$) was less than the confidence value $p = .050$. The t-test revealed that there was a statistically significant difference in learner academic achievement between learners who spend different amounts to time learning on FSNP (treatment group) and those who did not (control group). Thus, the hypothesis “*HO: There is no significant difference in learner academic achievement between learners who spend different amount of time on FSNP and those who did not*” was rejected and the alternate hypothesis accepted. This implied that students who spend time on Facebook for learning purposes would record high learner academic achievement than those who do not. This also implies that FSNP offers technology affordances that facilitate learner engagement, make learners be involved in active learning, enjoyable learning, enable learners to share knowledge, ideas and help one another in problem-solving. The findings further imply that learners who spend regulated amount of time on FSNP post better results than those who spend unregulated amount of time. This can due to the fact that learners on regulated time tend to optimize on the available time on learning activities, have self-control and avoid time wasting activities like side chatting colleagues and visiting irrelevant sites.

To verify the finding from the quasi-experiment in this study, the qualitative data collected using questionnaires for students and lesson observation schedule were analyzed and discussed to triangulate the findings. Firstly, responses were sought from the Computer Studies students on the degree to which they agreed with the statement that regulating time spend on FSNP would enable them to concentrate on learning content, avoid access to distractive sites on the Internet and control social interactions with colleagues during the lesson and what effect that would have on the students’ academic achievement. The responses on whether regulating students’ access time on FSNP would enable learners to concentrate with learning activities were indicated in Table 5.

Table 5 show that majority of the students, that is, 54.8% agreed that regulating FSNP access time enabled learners to concentrate only on learning content, 24.7% strongly agreed while those who disagreed, strongly disagreed and not sure were each 6.8%. This indicated that regulating time the students spent on FSNP helped them to concentrate with interactive and constructive activities that facilitated mastery of the content taught. This implied

that, while spending time on FSNP would have a positive effect on learning, time that learners spend on it should be regulated to enhance learner concentration and attention in the learning process.

Table 5. Student’s responses on whether regulated access time to FSNP enabled learners to concentrate only on learning content.

Statement	Students	
	f	%
Strongly Disagree	5	6.8
Disagree	5	6.8
Not Sure	5	6.8
Strongly Agreed	18	24.7
Agreed	40	54.8
Total	73	100.0

The responses on whether regulating students’ access time on FSNP would enable learners to avoid accessing destructive sites on the Internet during class rime indicated in [Table 6](#).

Table 6. Student’s responses on whether regulated access time to FSNP enabled learners to avoid distractive sites on the Internet.

Statement	Students	
	f	%
Strongly Disagree	3	4.1
Disagree	2	2.7
Not Sure	2	2.7
Strongly Agreed	46	63.0
Agreed	20	27.5
Total	73	100.0

[Table 6](#) shows that a majority of the students, that is 63.0% strongly agreed that regulating FSNP access time enabled them to avoid accessing distractive sites on the Internet while 27.5% agreed, 4.1% strongly disagreed 2.7% were not sure respectively. FSNP is awash of social and entertainment posts that may serve as time wasters to the learners if the usage in not regulated and closely monitored. Regulating the amount of time spend on FSNP enabled learners to void accessing such posts and other sites that would disrupt learning. Teachers should therefore engage learners on the platform for regulated time and activities that are enough to make learners remain focused.

This implied that regulating the amount of time learners spend on FSNP enable them to utilize the platform only for learning purposes which contribute positively to their academic achievement.

The responses on whether regulating students’ access time on FSNP would enable learners to control social interactions with colleagues were summarized in [Table 7](#).

Table 7. Student’s responses on whether regulated access time on FSNP enabled learners to control social interactions with colleagues.

Statement	Students	
	f	%
Strongly Disagree	4	5.5
Disagree	4	5.5
Not Sure	10	13.7
Strongly Agreed	10	13.7
Agreed	45	61.6
Total	73	100.0

[Table 7](#) show that a majority of the students, that is, 61.6% agreed that regulating FSNP access time enabled learners to control social interactions with colleagues, 13.7% strongly agreed, 13.7% were Not Sure while 5.5%

disagreed and 5.5% strongly disagreed respectively. FSNP is a social networking platform and students would always wish to have social interactions on the platform. While the students would still learn when having the social interactions, the responses in [Table 7](#) imply that, there is need for teachers to regulate the time their students spend on FSNP to enable them optimize the platform for learning purposes other than for mere social interaction. If allowed to have unregulated time, students like anybody would be tempted to lose self-control and spend more time socializing on the platform other than learning. Further, the findings in this study were verified through data collected through lesson observations which showed that during the online lessons, over 80% of the learners in all groups would occasionally multitask by engaging in non-learning activities like side-chatting their friends, viewing friends' profile pictures and videos, accessing other websites not related to the content learnt and downloading music and videos from You-tube channels. This indicated that, teachers should keenly supervise learning through the FSNP and indeed any other social networking platform. The observations further revealed that learners did not prefer to interact specific partners, were not able to complete tasks within the allocated time, they were interested in learning through FSNP and yearned for extra time. This indicated that, teachers should allocate tasks that can be completed within the allocated time or allocate time commensurate to the tasks to be covered.

3.2. Discussion

The findings in this study verify the conclusion by [Celik et al. \(2015\)](#) who in a study involving university students in Turkey examined the variables that affect the educational use of FB and their relationships. In the study using a survey design, [Celik et al. \(2015\)](#) concluded that learners who use Facebook for learning purposes post high academic grades than those who not. [Celik et al. \(2015\)](#) observed that such learners use Facebook frequent but responsibly by spending less time on it. The findings in this study are echoed by [Wanjohi et al. \(2015\)](#) in a study that investigated the influence of self-regulation of Facebook usage on academic performance among university students in Kenya. The study by [Wanjohi et al. \(2015\)](#) revealed that students with high level of self-regulation control the time they spend on FSNP thus the possibility of registering high academic achievement. While the study by [Wanjohi et al. \(2015\)](#) involved University students who had self-regulation, the findings in this study that involved secondary school students concurred with the view that when students spend regulated amount of time on FSNP, the post high academic grades than those who do not. This implies that, teachers and parents may need to regulate the time secondary school students spend on FNSP for its productive use. The findings in this study corroborated with the findings by [Rouis et al. \(2017\)](#) who in a study to analyze of the effects of Facebook usage by undergraduate students at Luleå University of Technology in Sweden observed that extensive use of FSNP by students with extraverted personalities led to poor academic achievement while students with self-control and self-regulation ably controlled the amount of time they spent on the platform, had better cognitive absorption that led to high academic achievement. [Rouis et al. \(2017\)](#) emphasized on the need for teachers to closely supervise learning through FSNP in order to moderate multitasking by learners on the platform which inhibit cognitive absorption which may lead to low academic achievement irrespective of whether the access time is regulated or not. The findings in this study also affirmed the observations made by Universitas Warmadewa, [Ningrum et al. \(2018\)](#) in a study to investigate the relationship between self-regulated learning and academic achievement among undergraduate medical students which revealed a positive correlation between self-regulated learning and academic achievement. In a similar vein, [Ningrum et al. \(2018\)](#) opined that students who have good self-regulated learning post high academic achievement because they are able to concentrate with the content being learned. Further, while examining the impact of FSNP usage on college student involvement in studies, [Mathur et al. \(2019\)](#) opined that spending time on FSNP has positive effect of learner academic achievement, however, they observed that if not regulated, students would use the platform for

entertainment, relaxing and passing time but not for academic purposes which result to a negative effect on their academic achievement. Mathur et al. (2019) proposed that teachers and other educationists should regulate the usage of FSNP to guarantee optimum utilization of the platform academic purposes and improved academic achievement. Further still, the findings in this study uphold the findings by Alwreikat et al. (2021) who in a study to investigate the determinants of Facebook use among students and its impact on collaborative learning held the opinion that the more time spent on Facebook the better learner academic achievement students achieve through collaborative learning. Alwreikat et al. (2021) emphasized on the need for teachers to regulate the time to control learner concentration on the content learnt. Affirming this view point, in a study to examine the connection between students' teamwork experience, self-regulated learning, technology self-efficacy and performance in an online educational technology course Oyelere et al. (2021) observed that right self-regulated learning strategies in online courses motivate students to strive for a good teamwork experience, leading to increased interest in online learning and increased academic achievement. This further implies that if learners are engaged on FSNP for regulated amount of time, they have a likelihood of posting high academic achievement than those who are not or are exposed to the platform for unregulated amount of time. The findings in this study imply that time is a key determinant of the academic achievement attained by Computer Studies students learning online through FSNP, however the time spent online should be regulated for high academic achievement. The observations further imply that Computer Studies students who have self-control and ability to self-regulate are able to concentrate and avoid multitasking during learning through the platform hence post high academic achievement. The study's findings further confirm the observations by Muthui and Sirera (2017) who in a survey study to establish the implications of time spent on social media on academic performance by adolescents in public day secondary schools in Nakuru East constituency penned that most adolescents spend most time on social media such as FSNP for social interactions which had the potential of contributing to their low academic achievement. Muthui and Sirera further argued that students resisted school rules and regulations to sneak mobile devices to use for social interactions instead of academic use. Muthui and Sirera (2017) opined that to avoid this resistance, schools should review the existing policies to allow students to carry such devices and train them on responsible use of SNPs to avert negative effect on their academic achievement. This implies that students would strike a balance between using the SNPs for learning, entertainment and socializing with being worried of breaking school rules. As such, students would benefit from the technology affordances offered by FSNP and other SNPs for academic benefits, thus yielding to high achievement.

4. CONCLUSION

This study revealed that there was a statistically significant difference in learner academic achievement between learners who spent different amounts to time learning on FSNP and those who did not. Thus, the study concluded that the time spent on FSNP has a positive effect on learner academic achievement among Computer Studies students in public secondary schools in Nairobi County, Kenya. The study also concluded regulating the time students spend on the platform enable them to post higher academic achievement unlike when not regulated. Regulating the time controls the learner deviating from learning activities on the platform and engaging on socialization and accessing other entertainment sites.

5. RECOMMENDATIONS

This recommended that: Teachers should allow students to interact and collaborate on FSNP other than denying them the access to the platform, regulate time students spent on the platform, engage their learners on structured activities that can be completed within the time allocated for learning through FSNP and closely supervise learners

interacting and collaborating on the platform to ensure concentration on the given learning activities and optimum use of the allocated time. The study recommended further studies to establish how gender and time spend on FSNP influences learner academic achievement in Computer Studies and other subjects. The study further recommends that the government of Kenya to develop relevant educational policies that provide guidelines on integration of social networking platforms in teaching and learning.

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