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# IMPACT OF UTILIZATION OF FACEBOOK GROUP PAGE AS AN INSTRUCTIONAL TOOL ON UNIVERSITY STUDENTS' ACADEMIC PERFORMANCE: A PRELIMINARY STUDY

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## Abstract

*The study aims to identify how the utilization of Face book group page affects the academic performance of university students. It is assumed that academic performance is affected by student engagement, independent learning, and critical thinking. The participants of the study were 81 Bachelor of Science in Business Administration major in Management and Entrepreneurship (BSBA M&E) of a higher education institution in Angeles City, Philippines who took Business Plan course in second semester, 2014-2015. Using correlation and multiple regression analyses the findings revealed that only student engagement has a statistically significant predictive impact or effect on respondents' academic performance. Moreover, the contributions of independent learning and critical thinking are not statistically significant and both are not significant predictors of academic performance.*

**Keywords**

Face Book, Group, Academic Performance, Student Engagement, Independent Learning, Critical

## 1. Introduction

One of the greatest developments in the recent years is the Internet. The arrival of the Internet dramatically changed people's way of life. The means of communication became much faster because of the technological advances in telecommunications industry and at the same time the birth of the social media. Technological developments transformed the different facets of human life.

According to Junco, Heibergert, & Loken (2010) as cited by Guy (2012), social media are a collection of Internet websites, services, and practices that support building communities, collaboration, participation, and sharing. It is generally used to describe any number of systems of technology related to collaboration and communities (Jostens, 2012). From the studies of Barnes and Lescault (2012) & McEwen (2012), some examples of social media include social networking sites, blogs, wikis, multi-media platforms, virtual game worlds, and virtual social world.

Academicians are now taking advantage of the use of the social media. Many of professors and teachers are using the social media as their partner is delivering knowledge to students. The rate of adoption of social media by faculty members is overwhelming, 90% of them are utilizing the social media in teaching their respective courses and career outside their academic life (Moran et al., 2011). For instance, Face book is now used as an instructional tool. Because of its popularity among students, educators are becoming acquainted to this social networking site, in order to supplement the learning environment of learners.

Because of the attractiveness of the social media to students, the researcher explored Face book group page to gauge the impact of this instructional tool to university students' academic performance. The undertaking analyzed the effect of the said instructional tool on the following variables: students' academic performance, engagement, independent learning, and critical thinking.

## 2. Literature Review

The social media is gaining tremendous popularity not only in the workplace but also in

the academe. Crook, et al., (2008) mentioned that social media tools offer students new opportunities to become independent with their study and research. Liu (2010) emphasized that social media tools can be used for educational purposes by integrating these tools into the current educational system as a teaching and learning resource and by making the said tools to compliment current curriculum delivery to enrich students' learning experiences.

The use of the social media in higher education and the impacts created by this technological innovation brought about many literatures and studies that are essential to educators. For instance, in the study of Tamayo & Deal Cruz (2014), they explored the relationship of the use of the social media and the academic performance of one higher education institution in the Philippines. The results revealed that there is a moderate relationship between the use of the social media and the students' academic performance. Furthermore, George and Dellasega (2011) evaluated the integration of new social media tools such as Twitter, YouTube, Flicker, blogging and Skype into the curricula of two (2) graduate-level medical humanities electives offered to Penn State College of Medicine 4th year students. The findings showed that there is high favorability rating among students to both courses the integration of social media into coursework augmented learning and collaboration. The results also proved that social media integration into class activities benefit students as compared to traditional classroom methods.

Kabila et al., (2010) investigated the potential of Face book as a useful and meaningful learning environment in enhancing and strengthening their students' learning of the English language. The study showed that students perceived Face book as a tool that can be used to facilitate learning of the English language.

Ophus & Abbitt (2009) studied the potential perceptions of social networking systems in university courses. The findings revealed that there is notable potential for social networking systems as an instructional tool and identified Face book and other social network systems as tools that provide an easy mechanism for large group of people to communicate through discussion topics, short posts, and media sharing. Moreover et al., (2012) examined the perception of students of using Face book as an interactive learning resource at university. The results magnified that most students anticipated that a Face book page would facilitate their learning. On the other hand, students' perceptions on the use of Face book page as a tool for learning were variable and showed only 51% of students stating it was effective.

One of the recent trends in the academe is the use of Face book and its features in delivering online learning environment. Coklar (2012) assessed students' perception of Face book as a learning tool. The respondents indicated a positive perception on Face book particularly in information dissemination, heightening interest, motivation, interaction opportunity. Di Vall & Kirwin (2012) also evaluated the impact of Face book as an instructional tool. The findings showed that the use of Face book page is an important tool and students find it as a mechanism that add learning. Estus (2010) further argued that Face book is a valuable tool in connecting students through a common platform and allow them to engage in discussion both in the classroom and on Facebook.

Rutherford (2010) also argued that there is a positive correlation between students' use of social media tools and their relationships with their classmates and instructors. Also, a positive correlation exists between students' use of social media tools and their overall quality of their educational experience. Bosch (2009) maintained that there are potential positive benefits on using of Face book as teaching and learning aids especially in developing educational micro-communities. Congruently, de Villiers (2010) discussed that the use of Face book group as an instructional tool enhanced the learning and insight of the students and improved they contact with fellow students. Moreover et al., (2012) investigated the use of Face book and blogs as tools in enhancing students' engagement. The study showed that appropriate use of blogs and Face book groups enhances students' engagement in learning activities.

Embi & Hassan (2012) examined the use of social networking sites among Malaysian students. The results indicated that, only half of the respondents get in touch with their lecturers in informal learning contexts. They further pointed out that students spent more time on socialization through social networking sites rather than learning and moreover believe social networking sites usage does not affect their academic performance.

From the literature and studies mentioned above, it is an imperative to come up with timely undertaking that deals with the possible impact of the utilization of the social media in the academic atmosphere.

## 3. Research Objectives and Paradigm of the Study

The study assesses the utilization of Face book group as an instructional tool and its impact on university students' academic performance. Face book groups are community-like

platforms for small group communication and for people who share and express common interests and opinions (Hicks, 2010). They can be used in the academe as a community for specific class or course.

The primary objective of the study is to identify whether the utilization of Face book group can affect the academic performance of the university students. It is assumed that academic performance is affected by student engagement, independent learning, and critical thinking. Based on the main research objective, the hypotheses were as follow:

- H1: There is no significant relationship between students' academic performance and engagement.
- H2: There is no significant relationship between students' academic performance and independent learning.
- H3: There is no significant relationship between students' academic performance and critical thinking.

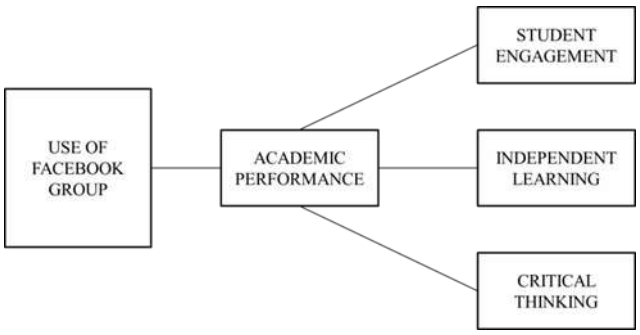


**Figure 1:** *Research Paradigm*

In the research paradigm as shown in figure 1, the use of Face book group may augment students' academic performance. *Academic performance* construct in the paradigm refers on how class discussion, requirements, interaction between student to student and student to professor improved student's learning outcome in a specified course. *Student engagement* on one hand refers to how a learner builds personal relationships with their fellow learners and mentor, the ease of interaction among class actors (students and professor), how he/she easily raises opinions or queries about the class topic, and how he/she does time management in responding to class requirements that add to meaningfulness on the learning environment. Moreover, *independent learning* refers to how a student easily follows and learns topics discussed on his/her own, how he/she can easily track the topics covered in a class session, and how he/she can effortlessly raise

his/her points of view on topics covered in class. And, *critical thinking* refers to student's ease of reflecting and justifying things he/she puts forth in the class, how he/she can simply understand the connection of one topic discussed to succeeding one, and how he/she can easily construct and evaluate class requirements well.

## 4. Method

A descriptive research was utilized in the undertaking to measure the impact of the utilization of Face book Group as an instructional tool in students' academic performance. Moreover, a causal research was also used to gauge how student engagement (SE), independent learning (IL), and critical thinking (CT) affect students' academic performance (AP).

**Table 4.1:** *Reliability Statistics*

| Cranach's Alpha | N of Items |
|---|---|
| .796 | 13 |

To measure the consistency of the constructs in the questionnaire, a Cranach's alpha test was used. The alpha coefficient revealed a 0.796 reliability which is above the acceptable coefficient of 0.70, thus the instrument used is said to be consistent and reliable.

## 5. Participants of the Study

The participants of the study were the 81 Bachelor of Science in Business Administration major in Management and Entrepreneurship (BSBA M & E) of a higher education institution in Angeles City, Philippines. These participants took Business Plan (BUSPLAN) course, a six (6) unit-course being taken senior/4th year BSBA M&E, in second semester, academic year 2014-2015.

Under the Business Plan course, a faculty-in-charge utilized Face book page as part of his instructional tool in delivering the said course. The course's duration started in November 2014 and ended in March 2015. At the end of the course, the participants were required to answer the survey questionnaire crafted by the researcher.

## 6. Measure

To measure the impact of Facebook utilization on respondents' academic performance, a

5-point Likert Scale was used. The four (4) variables – academic performance (dependent variable), student engagement, independent learning, and critical thinking (independent variables) were established by the research and were validated by selected educator-experts.

The hypotheses of the undertaking were tested using correlationand multiple regression analyses.

## 7. Results and Discussions

From the different statistical methods used in the undertaking, the following were the results

### 7.1 Relationship between Academic Performance (AP) and Student Engagement (SE)

Table 7.1.1 manifests the correlation between student engagement and academic performance. The Spearman's coefficient *rs* are .391. This means that the two variables, academic performance and student engagement, tend to increase or decrease together. Subsequently, the calculated *p* value is .000, which is lower than alpha = .01, the correlation between academic performance and student engagement is statistically significant at the 0.01 level of significance for a two-tailed prediction. In view of this, the null hypothesis is rejected in favor of the alternative hypothesis. It can be concluded that, with *rs* = .391, *N* = 81, *p*< .01, there is a statistically significant relationship between students' academic performance and their engagement.

**Table 7.1.1:** *Correlation between Academic Performance (AP) and Student Engagement (SE)*

| | | | SE |
|---|---|---|---|
| **Spearman's rho** | AP | Correlation Coefficient | .391** |
| | | Sig. (2-tailed) | .000 |
| | | N | 81 |
| **. *Correlation is significant at the 0.01 level (2-tailed).* | | | |

In order to check whether the significant correlation between academic performance and student engagement is not due to the unaccounted effects or influence of critical thinking, independent learning or both variables, a partial correlation can be performed. Partial correlation will remove the effects of another variable and gives partial correlation which is the "correlation of two variables after having removed the effects of a third variable from both" (Hinton,

McMurray & Brownlow, 2014, p. 315).

**Table 7.1.2:** *Partial Correlations between Academic Performance (AP) and Student Engagement (SE) and the Controlling Effects of the Other Variables*

| Control Variables | | | AP | SE |
|---|---|---|---|---|
| Critical Thinking (CT) | AP | Correlation | 1.000 | .262 |
| | | Significance (2-tailed) | . | .019 |
| | | *df* | 0 | 78 |
| | SE | Correlation | .262 | 1.000 |
| | | Significance (2-tailed) | .019 | . |
| | | *df* | 78 | 0 |
| Independent Learning (IL) | AP | Correlation | 1.000 | .283 |
| | | Significance (2-tailed) | . | .011 |
| | | *df* | 0 | 78 |
| | SE | Correlation | .283 | 1.000 |
| | | Significance(2-tailed) | .011 | . |
| | | *df* | 78 | 0 |
| Critical Thinking (CT) and Independent Learning (IL) | AP | Correlation | 1.000 | .233 |
| | | Significance (2-tailed) | . | .039 |
| | | *df* | 0 | 77 |
| | SE | Correlation | .233 | 1.000 |
| | | Significance (2-tailed) | .039 | . |
| | | *df* | 77 | 0 |

Table 7.1.2 shows that when the effects of critical thinking, independent learning, and the combined effects of CT and IL on the correlation between academic performance and student engagement are controlled, the correlation between academic performance and student engagement, CT: $r = .262$, $df = 78$, $p < .05$; IL: $r = .283$, $df = 78$, $p < .05$; and CT & IL:$r = .233$, $df = 77$, $p < .05$, remains statistically significant.

Therefore, the correlation between academic performance and student engagement is "genuine" (Hinton, McMurray & Brownlow, 2014, p. 314) and not due to effects or influences of critical thinking, independent learning or both variables.

### 7.2 Relationship between Academic Performance (AP) and Independent Learning (IL)

**Table 7.2.1:** *Correlation between Academic Performance (AP) and Independent Learning (IL)*

| | | | IL |
|---|---|---|---|
| **Spearman's rho** | AP | Correlation Coefficient | .364** |
| | | Sig. (2-tailed) | .001 |
| | | N | 81 |

***. Correlation is significant at the 0.01 level (2-tailed).*

Based on Table 7.2.1, the Spearman rho coefficient between academic performance and independent learning is .364. This indicates that the two variables tend to increase or decrease together. More specifically, an *rash* = .364 means that there is "evidence of strong association" or an "extremely interesting" (Babbie et al., 2007, p.229) association between respondents' academic performance and independent learning. Since the calculated *p* value is .001, which is lower than alpha = .01, the correlation between academic performance and independent learning is statistically significant. In view of this, the null hypothesis is rejected in favor of the alternative hypothesis. It can be concluded that, with*rs* = .364, *N* = 81, *p*< .01, there is a statistically significant relationship between respondent students' academic performance and independent learning.

To check whether the significant correlation between academic performance and independent learning is genuine and not due to the unaccounted effects or influence of student engagement, critical thinking or both variables, partial correlation was performed.

**Table 7.2.2:** *Partial Correlations between Academic Performance (AP) and Independent Learning (IL) and the Controlling Effects of the Other Variables*

| Control Variables | | | AP | IL |
|---|---|---|---|---|
| Student Engagement (SE) | AP | Correlation | 1.000 | .213 |
| | | Significance (2-tailed) | . | .058 |
| | | *df* | 0 | 78 |
| | IL | Correlation | .213 | 1.000 |
| | | Significance (2-tailed) | .058 | . |
| | | *df* | 78 | 0 |
| Critical Thinking (CT) | AP | Correlation | 1.000 | .171 |
| | | Significance (2-tailed) | . | .130 |
| | | *df* | 0 | 78 |
| | IL | Correlation | .171 | 1.000 |
| | | Significance(2-tailed) | .130 | . |

| | | | | |
|---|---|---|---|---|
| | | *df* | 78 | 0 |
| Student Engagement (SE) and Critical Thinking (CT) | AP | Correlation | 1.000 | .118 |
| | | Significance (2-tailed) | . | .302 |
| | | *df* | 0 | 77 |
| | IL | Correlation | .118 | 1.000 |
| | | Significance (2-tailed) | .302 | . |
| | | *df* | 77 | 0 |

Table 7.2.2 reveals that when the effects of student engagement, critical thinking, and the combined effects of SE and CT on the correlation between academic performance and independent learning are controlled, the correlation between academic performance and independent learning, SE: $r = .213$, $df = 78$, $p > .05$; CT: $r = .171$, $df = 78$, $p > .05$; and SE & CT: $r = .118$, $df = 77$, $p > .05$, becomes insignificant or it disappears.

From the partial correlation results shown above, the correlation between academic performance and independent learning is "not genuine" (Hinton et al., 2014, p. 314) and it is due to the effects or influences of the variables critical thinking, student engagement, or combined effects of the two (2) said variables.

**7.3 Relationship between Academic Performance (AP) and Critical Thinking (CT) Table 7.3.1:** *Correlation between Academic Performance (AP) and Critical Thinking (CT)*

| | | | CT |
|---|---|---|---|
| **Spearman's rho** | AP | Correlation Coefficient | .306** |
| | | Sig. (2-tailed) | .005 |
| | | N | 81 |

**. *Correlation is significant at the 0.01 level (2-tailed).*

Table 7.3.1 divulges that there is a correlation between academic performance and critical thinking. The Spearman rho coefficient between academic performance and critical thinking is .306. This indicates that the two variables tend to increase or decrease together. More specifically, an$rs = .306$ means that there is "evidence of strong association" or an "extremely interesting" (Babbie et al., 2007, p.229) association between respondents' AP and CT. Since the calculated $p$ value is .005, which is lower than alpha = .01, the correlation between academic performance and critical thinking is statistically significant. Therefore, the null hypothesis is rejected in favor of the alternative hypothesis. It can be concluded that, with $rs = .306$, $N = 81$,

$p < .01$, there is a statistically significant relationship between respondent students' academic performance and critical thinking.

To check whether the significant correlation between academic performance and critical thinking is genuine and not due to the unaccounted effects or influence of student engagement, independent learning or both, a partial correlation was performed.

**Table 7.3.2:** *Partial Correlations between Academic Performance (AP) and Critical Thinking (CT) and the Controlling Effects of the Other Variables*

| Control Variables | | | AP | CT |
|---|---|---|---|---|
| Student Engagement (SE) | AP | Correlation | 1.000 | .210 |
| | | Significance (2-tailed) | . | .061 |
| | | *df* | 0 | 78 |
| | CT | Correlation | .210 | 1.000 |
| | | Significance (2-tailed) | .061 | . |
| | | *df* | 78 | 0 |
| Independent Learning (IL) | AP | Correlation | 1.000 | .200 |
| | | Significance (2-tailed) | . | .076 |
| | | *df* | 0 | 78 |
| | CT | Correlation | .200 | 1.000 |
| | | Significance(2-tailed) | .076 | . |
| | | *df* | 78 | 0 |
| Student Engagement (SE) and Independent Learning (IL) | AP | Correlation | 1.000 | .113 |
| | | Significance (2-tailed) | . | .320 |
| | | *df* | 0 | 77 |
| | CT | Correlation | .113 | 1.000 |
| | | Significance (2-tailed) | .320 | . |
| | | *df* | 77 | 0 |

Table 7.3.2 magnifies that that when the effects of student engagement, independent learning, and the combined effects of SE and IL on the correlation between academic performance and critical thinking are controlled, the correlation between academic performance and critical thinking, SE: $r = .210$, $df = 78$, $p > .05$; IL:, $r = .200$, $df = 78$, $p > .05$; and SE & IL: $r = .113$, $df = 77$, $p > .05$, becomes insignificant or it disappears.

Based on the partial correlation results, the correlation between academic performance and critical thinking is "not genuine" (Hinton et al., 2014, p. 314) but due to the individual effects or influences of independent learning and student engagement and the combined effects of both variables.

### 7.4 Overall Impact of Student Engagement (SE), Independent Learning (IL), and Critical Thinking (CT) on Academic Performance (AP)

Using the Enter method of multiple regressions, table 7.4.1 shows the descriptive statistics of the first output.

Table 7.4.1 provides the second output which is the correlation matrix. The correlation matrix shows the correlation of each pair of variables under study. It further reveals that all pairwise correlations indicate evidence for a strong positive association (±0.3 r ±0.99), which are statistically significant at the .01 level of significance, *p*'s < .01.

**Table 7.4.1***Correlation Matrix of Each Pair of Variables*

| | | AP | SE | IL | CT |
|---|---|---|---|---|---|
| Pearson Correlation | AP | 1.000 | .432 | .395 | .406 |
| | SE | .432 | 1.000 | .541 | .584 |
| | IL | .395 | .541 | 1.000 | .696 |
| | CT | .406 | .584 | .696 | 1.000 |
| *p* value or Sig. (1-tailed) | AP | . | .000 | .000 | .000 |
| | SE | .000 | . | .000 | .000 |
| | IL | .000 | .000 | . | .000 |
| | CT | .000 | .000 | .000 | . |

Using the Enter method of regression; all independent variables (SE, IL, and CT) have been entered as predictor variables. None has been removed from the equation. Thus, one regression model was created.

**Table 7.4.2:** *Model Summary Using Enter Method*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .483[a] | .233 | .204 | .62707 |

*a. Predictors: (Constant), Critical Thinking, Student Engagement, Independent Learning*

In table 7.4.2, the*R* value (.483) is the multiple correlation coefficients between all the entered independent variables (SE et al) and the dependent variable (AP). This *R* value indicates that there is evidence of a strong positive correlation between the independent variables and the dependent variable. The *R* Square value (.233) shows the amount of variance in the dependent variable (AP) which can be explained by the independent variables (SE et al). The *R* Square

value of .233 means that 23.3% of the variance in the academic performance scores can be accounted for or can be explained by the three independent variables. This is quite a low value and implies that other factors have to be taken into account. The Adjusted *R* Square value (.204) adjusts for bias in the *R* Square value as the number of predictor variables increases. With the adjustment, 20.4% of the variance in the academic performance scores can be explained together by the independent variables [79.6% cannot be explained by these set of independent variables]. With fewer variables, the two values must be similar, which is true in this case. Finally, the Std. Error of the Estimate (.62707) is a measure of the accuracy of the prediction.

Table 7.4.3 presents the ANOVA table for the significance test of the regression model. The ANOVA table shows values for the Regression and Residuals or error.

**Table 7.4.3:** *ANOVA[s] of the Regression Model*

| Model | | Sum of Squares | *df* | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| *1* | Regression | 9.219 | 3 | 3.073 | 7.815 | .000[b] |
| | Residual | 30.277 | 77 | .393 | | |
| | Total | 39.497 | 80 | | | |

*a. Dependent Variable: Academic Performance*
*b. Predictors: (Constant), Critical Thinking, Student Engagement, Independent Learning*

It can be seen that the *Sig.* (*p* value) = .000. Since this *p* value is less than .01 (*p*< .01), it can be concluded that "the regression line predicted by the independent variables explains a significant amount of the variance in the dependent variable" (Hinton, McMurray & Brownlow, 2014, p. 331). Thus, with *F (3, 77) = 7.815*, *p* = .000, the independent variables (SE et al) can explain a statistically significant amount of the variance in the dependent variable (AP). However, it must be noted that the Regression can explain only a smaller amount of the variance (9.219) while the *error or Residual* can account for a bigger amount of the variance (30.277). This implies that other factors have to be considered.

Table 7.4.4 below shows the unstandardized coefficients B of the independent variables in the regression equation including the entered predictor variables. Thus, the regression equation using the unstandardized coefficients B is:

**AP = .673 + .414 SE + .206 IL + .203 CT**

**Table 7.4.4:** *Coefficients[a] of the Independent Variables*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | *t* | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .673 | .735 | | .915 | .363 |
| | SE | .414 | .197 | .265 | 2.100 | .039 |
| | IL | .206 | .198 | .148 | 1.039 | .302 |
| | CT | .203 | .203 | .148 | 1.002 | .320 |

*a. Dependent Variable: Academic Performance*

Note that the Enter method of multiple regression includes all the entered predictor variables in the regression equation. However, an examination of the *Sig.* (*p* values) shows that only the student engagement is a significant predictor of academic performance since its *p* value of .039 is less than .05. Independent learning with $p>.05$ and critical thinking with $p>.05$ are not significant predictors of academic performance.

The *standardized beta coefficients* column "shows the contribution that an individual variable makes to the model" (Hinton et al., 2014, p. 332). It serves as a "guide to the relative impact of the different variables" (Babbie et al., 2007, p. 318). Of the three independent variables, student engagement contributes the highest (.265) which is statistically significant at .05 level ($p = .039$ which is less than .05). Independent learning and critical thinking have the same contributions (.148) which are not statistically significant (their *p* values, .302 and .320, respectively, are greater than .05). Therefore, student engagement has the greatest impact on academic performance followed by independent learning and critical thinking, in either order.

## 8. Conclusions

Thus, based on the regression model created using the Enter method of multiple regressions, it can be established that only student engagement has a statistically significant predictive impact or effect on respondents' academic performance. Partial correlations tests also revealed that correlation between academic performance and student engagement exists and not because of the influences of critical thinking, independent learning, or both variables (CT and IL).

Moreover, the contributions of independent learning and critical thinking are not

statistically significant and both are not significant predictors of academic performance. Partial correlations tests further showed that there is no genuine correlation between academic performance and independent learning. The correlation between AP and IL is due to the effects of critical thinking, student engagement, or combined influences of both variables (CT & SE). Additionally, it also verified that there is no genuine correlation between academic performance and critical thinking. The correlation between AP & CT is due to the effects of student engagement, independent learning, or combined influences of both variables (SE & IL).

The results of the standardized beta coefficients also showed that student engagement contributed the highest impact on academic performance. On the other hand, independent learning and critical thinking confirmed that both variables were not statistically significant. These results can be accounted for by other factors not included in this study which can be a recommendation for further scrutiny in the future.

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## References

Bobbie, E., Halley, F. & Zaino, J. (2007).Adventures in social research: Data analysis using SPSS 14.0 and 15.0 for Windows. London: Pine Forge Press.

Barnes, N. G., & Lescault, A. M. (2012) The 2011 Inc. 500 social media update: Blogging declines as newer tools rule. Center for Marketing Research, University of Massachusetts, and Dartmouth Retrieved July 19, 2015.

Bosch, T. E. (2009). Using online social networking for teaching and learning: Face book use at the University of Cape Town. Communication: South African Journal for Communication Theory and Research, 35(2), 185-200.

Çoklar, A. N. (2012). Evaluations of Students on Face book as an Educational Environment Turkish Online Journal of Qualitative Inquiry, 3(2), 42-53.

Crook, C., Fisher, T., Harrison, C., Logan, K., Lufkin, R., Oliver, M., & Sharpies, M. (2008) Web 2.0 technologies for learning: The current landscape–opportunities, challenges and

tensions. Retrieved July 19, 2015 from http://dera.ioe.ac.uk/1474/1/becta2008web2currentlandscapelitrev.pdf

De Villiers, M. R. (2010). Academic use of a group on Face book: Initial findings and perceptions. Proceedings of informing Science & IT Education Conference, 173-190.

Di Vall, M. V., & Kirwin, J. L. (2012) Using Face book to facilitate course-related discussion between students and faculty member's American journal of pharmaceutical education, 76(2), 1-5

Embi, M., & Hassan, H. (2012) The use of social networking sites among Malaysian university students. International Education Studies, 5(3), 56-66.

Estus, E. L. (2010). Using Face book within a geriatric pharmacotherapy course American journal of pharmaceutical education, 74(8), 1-5

George, D. & Mallery, P. (2005).SPSS for Windows step by step: A simple guide and updated reference 12.0 update. Boston: Pearson.

George, D. R., & Dellasega, C. (2011). Use of social media in graduate-level medical humanities education: two pilot studies from Penn State College of Medicine. Medical teacher, 33(8), e429-e434

Guy, R. (2012). The use of social media for academic practice: A review of literature. Kentucky Journal of Higher Education Policy and Practice, 1(2), 1-20.

Hicks, M. (2010) Face book Tips: What's the Difference between a Face book Page and Group? Retrieved July 19, 2015 from https://www.facebook.com/notes/facebook/facebook-tips-whats-the-difference-between-a-facebook-page-and-group/324706977130

Hinton, R., McMurray, I. & Brownlow, C. (2014).SPSS explained. London: Rutledge.

Irwin, C., Ball, L., Desbrow, B., & Leverets, M. (2012) Students' perceptions of using Face book as an interactive learning resource at university .Australasian Journal of Educational Technology, 28(7), 1221-1232

Ivala, E., & Gachago, D. (2012) Social media for enhancing student engagement: the use of Face book and blogs at a university of technology. South African Journal of Higher Education, 26(1), 152-167.

Jostens, T. (2012).Social media for educators: Strategies and best practices. John Wiley & Sons.

Junco, R. & Mastrodicasa, J. (2007).Connecting to the Net Generation: What higher education

professionals need to know about today's students.Washington, DC, NASPA.

Kabilan, M. K., Ahmad, N., & Abidin, M. J. Z. (2010). Facebook: An online environment for learning of English in institutions of higher education?.The Internet and Higher Education, 13(4), 179-187.

Liu, Y. (2010). Social media tools as a learning resource. Journal of Educational Technology Development and Exchange, 3(1), 101-114.

McEwan, B. (2012). Managing boundaries in the Web 2.0 classroom.New Directions for Teaching and Learning, 2012(131), 15-28.

Moran, M., Seaman, J., & Tinti-Kane, H. (2011). Teaching, Learning, and Sharing: How Today's Higher Education Faculty Use Social Media. Babson Survey Research Group.

Ophus, J. D., & Abbitt, J. T. (2009). Exploring the potential perceptions of social networking systems in university courses.Journal of Online Learning and Teaching, 5(4), 639-648.

Rutherford, C. (2010). Using online social media to support preservice student engagement. MERLOT Journal of Online Learning and Teaching, 6(4), 703-711.

Tamayo, J.D. & dela Cruz, G.S.G. (2014).The Relationship of Social Media with the Academic Performance of Bachelor of Science in Information Technology Students of Centro Escolar University – Malolos. International Journal of Scientific and Research Publications, 4(5), 1-9.