

## **A COMPARISON ON LEARNING EFFECTIVENESS USING FACEBOOK BETWEEN DIPLOMA AND DEGREE STUDENTS FROM BERJAYA UNIVERSITY COLLEGE OF HOSPITALITY**

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### **ABSTRACT**

*Without doubt, the Web 2.0 technologies have influenced most of university students' lives. These students are from the 'Digital Generation' as their lives revolves around the Internet and explicitly in social media tools such as Facebook, YouTube and Twitter. The main aim of the study is to compare the learning effectiveness using Facebook as a learning tool between diploma and degree students from BERJAYA University College of Hospitality. In addition to traditional lectures and tutorials, an online group was created in Facebook to facilitate communication and sharing. As such, this research also explores the possibility of blending digital and physical learning experience among university students. Based on the findings, some challenges were highlighted and suggestions were provided on improving the implementation of Facebook within the classroom among degree and diploma students. This would allow fellow educators to emulate and enhance the teaching and learning environment using Facebook. By knowing the differences between diploma and degree students, it is beneficial to identify some key areas to improve learning skills of students from different levels.*

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**Keywords:** *Social networking sites, learning tool, higher education, learning skills.*

### **INTRODUCTION AND LITERATURE REVIEW**

The Internet has revolutionized our communication world since its humble beginnings in 1962. Back then, the early Internet was mainly used by computer experts, engineers, scientists, and librarians (Kahn, et al, 1997). However, the Internet usage and users have since evolved. The Internet technology that gave tones of information to its users has provided a platform to socialize instead. As the Internet has become ubiquitous, faster, and increasingly accessible to non-technical communities, social networking and collaborative services have grown rapidly, enabling people to communicate and share interests in many more ways. The Web 2.0 technologies saw a rapid growth in social networking sites like Facebook, Twitter, Linked-in, Youtube, Flickr, blogs, wikis and many more.

In higher education, today's students are predominantly made up of Generation Y whose lives are centred on the Web 2.0 technologies. The generally accepted range of

Generation Y are those born in between the years of 1978 to 2001 (Barron, 2008; Kueh & Boo, 2007; Chen & Choi, 2008). According to Prensky (2001), the Generation Y are also known as *Digital Natives* or *Netizens* spent their entire lives surrounded by computers, videogames, digital music players and cell phones and this has influenced their environment. Specifically in the learning environment, the Generation Y is hungry for stimulation and new challenges as opposed to structured classroom-based learning (Weyland, 2011). In a broad sense, web-based learning seems to be the most appropriate to engage these students.

Some of the existing e-learning systems are called Learning Management System (LMS), Course Management Systems (CMS), Learning Support Systems (LSS), e-Portal among many others. These e-learning software systems were implemented to facilitate lecturers in managing academic subjects and allowed the lecturers to track the students' progress. Some of these systems were linked to e-library resources and online forums to widen its usage. However, these e-learning systems do not seem to impress our students from Generation Y due to its limited ability and lack of connectivity with other learners unlike Facebook.

Facebook, created in 2004 is currently the most used global social networking website with over 400,000,000 active users (McCarthy, 2010). However, Facebook was not created with the purpose of education and hence the applications were not developed for learning purposes. Moreover, the function of Facebook is used more on a recreational basis for social interaction, gaming and entertainment purposes (Crook, et al. 2008). Yet, Facebook was selected as the learning support tool in this study because of the advantages of its functions compared to other social networking sites and its immense popularity among university students from Generation Y.

BERJAYA University College of Hospitality (BERJAYA UCH) specializes in Hospitality, Tourism, Culinary and Business programs that emphasize on experiential learning. This is coined as '*BERJAYA Immersion Methodology*', which is to engage the students with practical hands-on experience that addresses the industry standards. The 'Strategy and Innovation for the Service Industry' course is a compulsory subject offered during the second year of all the degree programs. This subject was pre-selected to implement the 'Immersion Methodology'. Instead of the common 2 hours lecture and 1 hour tutorial per week; the 2-hour lecture session was replaced with Strategic Meetings chaired by the students acting the roles of Chief Executive Officer (CEO), Vice Presidents etc. to discuss and implement strategically and operational plans for a troubled company.

The second group of students are diploma students who are currently also in the second year of their studies at BERJAYA UCH. The 'Introduction to Business' course is a compulsory subject for Diploma in Culinary programme and students undertaking this subject are also required to play the role as future entrepreneurs and develop a business plan by the end of the semester.

As such, a Facebook Group was set-up for these two particular subjects respectively to facilitate discussions among the students. As the privacy was set as '*Closed Group*', only approved members can see the other group members and their postings. These students, being in the second year of the diploma and degree programs are expected to be more focused and have the right mind frame to be exposed to such experiential learning setting.

According to Liu (2010), social media tools are wonderful communication tools that if integrated in teaching process can leverage students' technological skills and even cut back on local technological investment to a universal investment as students can take full advantage of this public resource to facilitate learning rather than relying on on-campus e-learning systems. However, many higher education institutions including BERJAYA UCH could have already invested in a professional e-learning system and they might find it difficult to use or switch to other system. From the academicians' point of view, many still believe that traditional classroom setting and teacher-centered teaching style is the most effective way to deliver knowledge to our students. Nonetheless, the challenges for higher education institutions are becoming more evident as the educational needs by Generation Y students nowadays are rapidly undergoing change. Thus, to keep abreast, it is imperative for higher education institutions to explore the usage of other supporting e-learning platforms such as Facebook.

For this study, the researchers would like to compare the effectiveness of using Facebook as an e-learning tool between diploma and degree students. Previous researches conducted concluded that students undertaking master's program tend to rely more on e-learning tools compared to degree students (Allen & Seaman, 2003). This is highly caused by the fact that most master degree programs are undertaken by working adults who ultimately requires more flexibility. Other comparison studies have indicated that there are significant differences between different types of learning modes (i.e. full time versus part-time students) and teaching outcome (Wong, 2010).

The Ministry of Education stipulated that in order for an applicant to enter into a degree programme, he or she needs to pass the foundation or 2 principal passes in Advance level (UTAR, 2014). However, for admission into the diploma programmes, applicants just need to have to have 3 Ordinary level passes which is significantly lower than a degree programme's entry requirement. In a study conducted by McCoach and Siegle (2001), high achievers and low achievers were different in their attitudes, perceptions and motivation in learning. Thus, this study is to identify the gap between degree and diploma students when using Facebook as a supporting tool for learning.

## **METHODOLOGY**

Through various literature reviews, the authors identified a range of influences that were likely to impact on Generation Y students' preference of using Facebook as a learning tool. Using this information as a guide, a questionnaire was developed. The paper adopted online questionnaire as the main research tool and hence, it was quantitative based. A total of *forty three* (43) students registered for the 'Strategy and Innovation for the Service Industry' and 'Introduction to Business' courses from September 2012 to March 2014 joined the Facebook learning group as members participated in this survey. The researchers adopted Google Form as the online questionnaire tool as its user friendly (Huang & Liaw, 2005). In the first section, respondents are asked to provide demographic information such as age, gender and their registered program. In the second section of the survey, questions are asked in the areas related to Facebook's effectiveness as well as limitations of using the Facebook learning group. Most questions asking the effectiveness of learning through Facebook required the respondents to indicate their level of agreement using the Likert Scale (on a scale of 1- Strongly Disagree to 5- Strongly Agree). Additionally, open-ended questions are included to encourage respondents to write freely about their opinions.

T-test is the analysis method used in this research to determine whether there is any significant difference between two groups towards the same numeric variable (i.e. diploma versus degree students). Besides, t-test can be used to compare whether the mean value of one group is significantly larger than the other or vice versa (Sanders & Smidt, 1999). In this case, the researchers using the t-test assume unequal variances because as discussed earlier diploma and degree students are different in admission requirements.

The researchers also analysed the questionnaire using descriptive statistics as such as graphs and summary statistics such as mean and standard deviation.

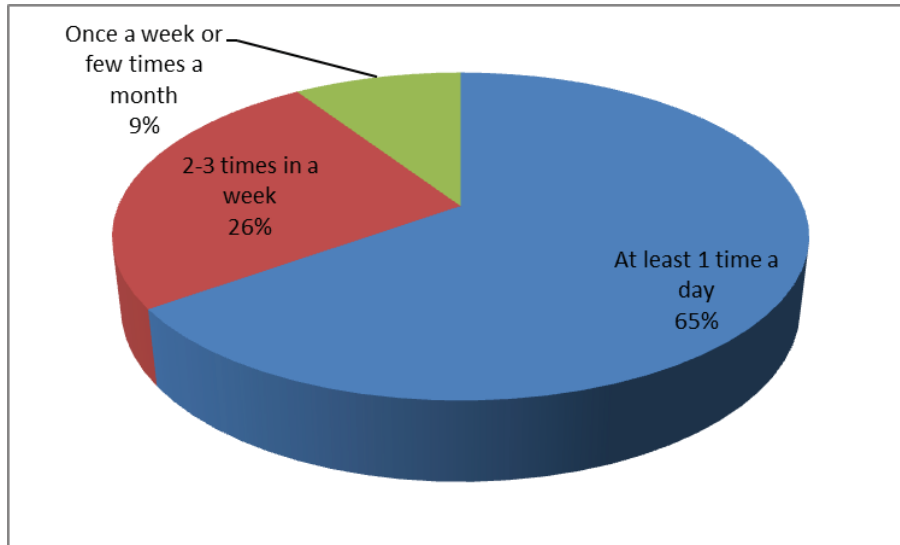
## FINDINGS

In total, 43 questionnaires were received. Basically, there are 21 (49%) male and 22 (51%) female students as shown in Table 1. Most students are Malaysians (88%) whereas the balance 12% is made up of foreign students. In total 29 students are from the Bachelor degree program (67%), followed by 14 students from diploma program (33%). Additionally, the respondents all fall into the Generation Y category with more than half of the students in the age group of 21 to 25 years (60%) and the rest are younger than 21 years (40%).

**Table 1: Respondents' Demographics**

Variable	Details	Number	Percentage (%)
Gender	Male	21	49
	Female	22	51
Age	17-20	17	40
	21-25	26	60
Student Type	Malaysian	38	88
	International	5	12
Degree or Diploma Programme	Degree	29	67
	Diploma	14	33

Figure 1 depicts the usage intensity and frequency of accessing the Facebook Group. Majority students- 28 of them (65%) access the Facebook group for interaction or learning purposes at least once a day, followed by 11 (26%) students access the group at 2 to 3 times a week. Only 4 (9%) students rarely access the Facebook group with either once a week or a few times a month.



**Figure 1: Frequency of accessing to Facebook’s Learning Group**

**Table 2: Reasons for Accessing to Facebook’s group**

Responses	Number	Percentage (%)
Upload photos/videos or other files	14	33
Ask questions	18	42
Post Comments	20	47
Read posts/comments	38	88
Download file(s)	21	49
Create events	4	9

*\*Respondents are allowed to answer more than 1.*

From Table 2 above, almost all students (88%) access the Facebook group to read posts and comments. Some respondents (47%) access the Facebook group to post comments while some download files (49%) and to ask questions (42%). Only 33% of the respondents use the Facebook group to upload files such as photos, videos and other related learning materials and 9% of them used it to create events. Based on the Facebook Group survey and observation, it can be concluded that students actively read each other’s posts and provided remarks when necessary. This is an interesting finding as the students showed response and connectivity. This is a positive aspect of blended learning as Facebook Group is able to help students that are shy or introverts by providing a more comfortable platform to connect with their peers. In contrast, this study indicated that some of the students still lack the initiative as many still prefer to download materials rather than to provide materials for their peers.

**Table 3: Analysis of Facebook’s Effectiveness and other benefits**

Questions	Mean (Degree)	Mean (Diploma)	P Value
Interaction in Facebook helps you to learn more	3.66	3.00	<b>0.03*</b>
Interaction in Facebook helps you to understand the subject	3.07	2.71	0.20
Interaction in Facebook helps you to get fast feedback about the subject	3.83	3.36	0.27
Interaction in Facebook helps you to get more materials about the subject	3.62	3.00	0.06~
Interaction in Facebook helps you to get up to date information about the subject	3.86	3.79	0.80
Interaction in Facebook helps you to remember the subject topic better	3.07	2.36	<b>0.04*</b>
Facebook has helped you in your assignment	3.72	3.86	0.70
Facebook helps you to learn faster	3.00	2.93	0.80
Facebook saves you time in learning	2.90	2.71	0.65
Facebook helps you to think critically especially in replying others' posts	3.41	3.36	0.88
sharing materials such as video and other files in Facebook increases your learning capability	3.76	3.36	0.29
Facebook enables you to learn from anywhere and anytime	3.83	3.00	<b>0.02*</b>
Facebook enables you to learn at your own pace	3.72	2.93	<b>0.03*</b>
Facebook enables you to repeat learning as many time as you like as postings/learning materials are always there	3.59	3.36	0.47
Facebook is good as we can track postings	4.10	3.29	<b>0.04*</b>
Facebook enables you to discuss more easily if compared to face to face discussion	3.17	3.07	0.82
Learning the subject more interesting through Facebook	3.28	2.57	0.05~
Facebook should be used for other subjects	3.72	2.86	<b>0.02*</b>

\*Significant at 0.05 level

~Almost significant at 0.05 level

In the second section of the survey, there are a total of 18 questions. Based on the response, there are 10 questions that reflected high mean value (Mean >3.5) for the degree students, which indicates that they generally agree on the learning benefits that the Facebook Group possess. Comparatively, there are only 2 questions which reflected relatively high mean value for the diploma students.

The first benefit variable that showed high mean value for the degree students is “Facebook is good as we can track postings”. One of the functions of the Facebook Group is it displays the list of members who have viewed the post. Degree students concur that this ability is very useful because of its traceability and ability to control others, as one respondent noted:



*“Can track posts or comments which also mean we can trace the date the comment was posted or other info. We can 'catch' members who are online, so members cannot escape from communication in Facebook. But, some people may dislike the idea of being 'watched' in Facebook (although it is good for control)”.*

Undeniably, one of the major advantages of using Facebook is the convenience because it is a borderless support learning tool. The survey also indicated that there is no difference between the degree and diploma students where both groups find that Facebook really helps them in getting up to date information (Deg M=3.86, Dip M=3.79), and helped them in the assignment (Deg M=3.72, Dip M=3.86). Since the materials are readily available to the Facebook Group members, most students find this favorable as they could access these materials and read them at their own pace while preparing their assignments. Both groups of students agree on Facebook's usage as a common platform for sharing information.

On other questions, the degree and diploma students moderately agreed that learning the subject through Facebook Group made it more interesting (Deg M=3.28, Dip M=2.57). Facebook also enabled them to discuss more easily compared to face-to-face method (Deg M=3.17, Dip M=3.07) and it provides them the opportunity to think critically especially in replying others' posts by their course mates (Deg M=3.41, Dip M=3.36).

Consistent with previous research done by Harris, C. (2012), revealed that students and teachers are accessing Facebook out of class hours and this enables continuous learning to take place, the degree students basically agree that Facebook enables them to learn from anywhere and anytime (Deg M=3.83, Dip M=3.0) and it also enables them to learn at their own pace (Deg M=3.72, Dip M=2.93). Based on the results concerning learning time, both the degree and diploma students generally agreed that Facebook helped them to save time in learning (Deg M=2.9, Dip M=2.71) and enables them to learn faster (Deg M=3.0, Dip M=2.93).

However, the diploma students do not perceive Facebook's ability to track postings as useful to help them in their learning process (p value=0.04). Although the degree students felt that interaction and discussion on subject matter will help them to remember the subject topic better (Deg M=3.07), the diploma student do not feel the same way (p value=0.04). In fact, there is a significant difference between the degree and diploma students when it comes to learning through interaction with course mates. Instead, the diploma students actually felt that the Facebook Group helped them the most only when it comes to their assignments. Though most of the degree students agree that the Facebook learning group should be applied on other subject (M=3.72), the research reflected that there is a significant difference with the diploma students (p value =0.02) who felt that they wouldn't want to use Facebook learning group for other subjects. In order to understand their underlying reasons, the limitations faced by the students are analysed in the following part of the research study.

**Table 4: Limitations of learning through Facebook**

<b>Responses</b>	<b>Number</b>	<b>Percentage (%)</b>
Must know how to use Facebook	<b>11</b>	<b>26</b>
Irrelevant Facebook posts	<b>25</b>	<b>58</b>
Lack of physical (face to face) interactions	<b>26</b>	<b>60</b>
Facebook does not have many learning tools	<b>20</b>	<b>47</b>
Cannot access to Facebook sometimes	<b>16</b>	<b>37</b>

In the last section of the survey, students were asked to provide response on some of the limitations that they felt existed. The results are reflected in Table 4. Most of the degree and diploma students (60%) felt that Facebook lack of physical interaction. In other words, they felt that some of the information must be conveyed face-to-face as the Facebook comment may not reflect their real emotions though it was easier to find their peers in Facebook than finding them in person. Additionally, poor writing skills or inconsistency of written and non-verbal cues may cause miscommunication as reviewed by Wong (2012).

Although the benefit of Facebook learning group is indisputable, other limitations posed include irrelevant posts from classmates that are not related to the subject and could distract their attention (58%), whereby most of the students felt that there is limited learning that happens in the Facebook group. As one of the student remarked:

*“The Facebook post may have junk post, irrelevant post”*

Other limitations of learning through Facebook that the students faced is that Facebook does not have many learning tools (47%) and access problem (37%) – could be due to server or Internet unavailability. In addition, 26% think that they must know how to use Facebook’s group interface first as some students may use a limited number of functions in Facebook (such as updating status and posting photos). All the above limitations could actually hinder both groups of students from fully utilizing the Facebook group’s interface to their advantage especially for academic purposes.

## **IMPLICATION AND SUGGESTIONS**

According to Aristotle, human beings are social animals that require constant interaction with others (Lear, 2013). The social media tools not only provided human beings with the arena to communicate but it has also transformed the way we learn. The educator’s role is not only to impart knowledge and experience but also to invent new strategies to deliver them. By integrating the results of this study, there are three specific suggestions that are provided for educators who are seeking to use Facebook as a supporting tool:

### **Know Your Learners**

Every technology requires some form of learning before implementation and the skill sets of learners and educators are vital to ensure smooth transition of knowledge. Although some researchers found that learners are moderately lacking in computer proficiency and technological skills (Evan & Hasse, 2001; Willging & Johnson 2004), it was clearly indicated in the survey that students from Generation Y felt that they are sufficiently



knowledgeable about the usage of Facebook. Moreover, the Generation Y students place high values on freedom and flexibility (Solnet, et.al, 2012), and classroom learning may eventually be boring for them. As a result of this generational shift, using the Facebook learning group as a learning tool really appeals to them especially the degree students as indicated in this research. Indeed, educators not only need to equip themselves with Information and Communication Technology (ICT) knowledge so that they are able to close the generational gap but by embracing this social media technology and integrating it in class, they are also able to provide the students with the opportunity to learn at their own time and pace. As this research pointed out that, there is a difference between the degree and diploma students' acceptance level and usage of Facebook in their studies. In general, the diploma students do not really perceive Facebook as an effective learning tool whereas the degree students felt that it was more beneficial for them to use Facebook as a platform to share and exchange information with their peers. Thus, the degree students who have a higher level of academic entry qualifications were able to adapt to a more comprehensive usage of Facebook as a learning tool. The diploma students on the other hand, are more prone of using Facebook for a short-term purpose. With this information, the lecturer can determine if Facebook is appropriate depending on the level of studies that they are teaching. Perhaps, the diploma students may need a higher level of motivation from the lecturer to fully adopt this learning tool.

### **Integration is the Key**

Reiterating from this research finding, both groups of students were able to gain speedy feedback in the Facebook Group and such interaction plays a major role in their learning progress. As Facebook was not created to be used for educational purpose, some learners often get distracted by other social activities while accessing the learning group. This is one of the major limitations discovered in this research. Nonetheless social network sites such as Facebook can become a potent supporting tool if it is properly integrated in the course. The Facebook group should be merged to complement the current curriculum delivery or linked to some sort of an assessment or learning outcome of the course. Since both degree and diploma students felt that using Facebook helped them tremendously in their assignments, then it should be integrated with their coursework. The method used in assessment should be reflective of quality information that transpired through Facebook rather than the quantity. All in all, students should be able to see the relevance of technology usage in the subject rather than just merely for the fun of it. In addition, the Facebook learning group is particularly useful for subjects that require practical approaches and critical thinking. Due to the integration of Web 2.0 technologies in the workplace of various industries like hospitality and banking, the practice of teaching also needs to change. This blended learning environment of virtual and physical world would encourage the students not only to learn academically but also develop social connections with others which in return enhance their employability. With this in mind, the lecturers' role here is to strengthen the link between theoretical concepts, virtual learning, real-world practices and how not to abuse the social networking sites during working hours.

### **Leverage on the Strengths**

The Facebook is often perceived as a platform for chatting, playing games and 'poking' others. Thus, the appropriateness of using Facebook as a learning platform has always been

questioned by fellow academicians. But, the functions of a Facebook group have other potential uses that are often overlooked by many people. Some of the least used functions include the 'Poll Options' (this function allows a member to pose a question, request other members to vote and tabulate the results) and 'Upload Revision' (this function is activated after a member has uploaded a learning file on a particular topic, a follow-up revision file can be added under the same topic). This will help students to do a self-check on what they have learnt so far. With the current e-learning system in most institutions, there is a lack of continuation of connection with existing friends from current cohort. In comparison, the Facebook allows students to maintain and grow their social circle with peers, junior and even senior students from various cohorts and across different academic programs. From one of the observation made, an announcement was sent through the e-portal and it was also posted in the Facebook Group. The e-portal was not able to guarantee that all the students have read the announcement but the Facebook Group displayed all the names of the students who have read the announcement or 'LIKED' the post. The obvious advantage is that students are logged-on to Facebook more often compared to the existing e-learning system. Students also find that it is easy for them to share information related to the subject from various websites or videos directly to Facebook. This is evident in the data collected on both diploma and degree students whereby both group of students strongly agreed that interaction in Facebook helps them to get up to date information about the subject.

## **LIMITATIONS AND FUTURE RESEARCH**

Beyond the findings, there are several limitations associated with this study. The findings of this study were based on a small sample size of respondents at a concentric geographical location. Besides, the number of degree students exceeded the diploma students in this sample (i.e. 29 versus 14). Based on this, future research may consider to include a larger sample size and also a comparison to measure the effectiveness of learning between Facebook and other social media tools like Youtube, Twitter, Linked-in, Flickr and blogs or with other academic-based learning management systems (LMS) such as Course Networking (CN) and Moodle. Moreover, a longitudinal research can be undertaken to provide a more substantial outcome. The age-period-cohort (APC) model could be adopted to control the age, period and generation effects in a single study (Mason, et al., 1973). Further quantitative tests can be carried out across various cohorts or subjects on the usage of Facebook. Similarly, a comparative study on the perspective of educators and learners could also elucidate specific differences among these two groups of users. The results could shed some light on the diversity of student population and point towards improvements in the curriculum design while considering the feedback from both parties. Last but not the least, the antecedents of Generation Y's behavior and attitude towards learning could be integrated in the study to highlight antecedent factors that could influence the effectiveness of Facebook as a learning support tool.

## **CONCLUSION**

As the world becomes more ubiquitous and transfer of information advances, educators are compelled to seek new ways to reach the learners. There are still very few valid researches on the effectiveness of social media as a learning tool, especially in the context of higher education in Malaysia. This paper hopes to hone in on this as the researchers explored the usage of Facebook to facilitate learning among students from two different levels in

BERJAYA University College of Hospitality. The findings were positive and indicated that the students benefitted in some way especially the degree students. Some of the more prominent benefits of using Facebook is in giving them the access to information anywhere and anytime, or as one student mentioned, it is '*learning on the go*'. Based on the findings, specific suggestions were provided for educators' consideration especially in view that Facebook were more effective for degree students compared to diploma students. Noteworthy that a successful fusion of classroom and web-based learning allows active learning that involves students to read, speak, listen, think deeply and write (Dodge,2001). This is not to say that the Facebook learning group is not without any flaws but if the technology is put to good use, educators are able to proffer information more effectively and efficiently. The privacy issues and cybercrime remains rampant and by having a closed Facebook group and active monitoring, this ensures that the virtual learning environment is conducive for all the students. As educators, undeniably it is a constant challenge for us to not 'teach' the students but equip them with skills to teach themselves. This is crucial for degree students who are expected to possess a higher level of maturity and mindset as they step into the working environment. The integration of social media as one of the learning tool is a direction that is inevitable for any higher education institution as students become more empowered to choose the way they learn. Even though the social media tools provided unlimited resources and instantaneous transfer of knowledge, such technologies have yet to replace physical education completely. In summary, using Facebook in an analogous form with the current e-learning system and curriculum design will be able to reach the new generation of learners especially the degree students.

## REFERENCES

- Allen, I.E., & Seaman, J. (2003). *Sizing the opportunity: The quality and extent of online education in the United States, 2002 & 2003*. USA: The Sloan Consortium.
- Barron, P. (2008). Education and talent management: Implications for the hospitality industry. *International Journal of Contemporary Hospitality Management, Vol. 20* (7), pp. 730-742.
- Chen, P.J., and Choi, Y. (2008). Generational differences in work values: a study of hospitality management. *International Journal of Contemporary Hospitality Management, Vol.20* (6), pp. 595-615.
- Crook, C., Fisher, T., Harrison, C., Logan, K., Luckin, R., Oliver, M., and Sharples, M. (2008). *Web 2.0 technologies for learning: the current landscape – opportunities, challenges and tensions*. Retrieved on November 5, 2012 from <http://dera.ioe.ac.uk/id/eprint/1480>.
- Dodge, B. (2001). FOCUS: Five rules for writing a great web quest. *Learning & Leading with Technology, Vol. 28*(8), pp. 6-9.
- Evans, J.R., and Haase, I.M. (2001). Online business education in the twenty-first century: an analysis of potential target markets', *Internet Research: Networking Applications and Policy, Vol. 11*(3), pp. 246-260.

- Harris, C. (2012). The uses of Facebook© technologies in Hospitality curriculum on an experiential learning platform for a new generation of students. *Asia Pacific Journal of Marketing and Logistics*, Vol. 24(5).
- Huang,H.H., and Liaw, S.S. (2005). Exploring users' attitudes and intentions toward the web as a surveytool , *Computers in Human Behavior*, Vol. 21 (5), pp. 729-743.
- Kahn,R., Leiner, B.M., Cerf, V.G., Clark, D.D., Kleinrock, L., Lynch, D.C., Postel, J., Roberts, L.E., Wolff, S. (1997). The Evolution of the Internet as a Global Information System. *The International Information & Library Review*, Vol. 29(2), pp. 129–151.
- Kueh, K., and Boo, H.V., (2007). Culture and service quality expectations: evidence from generation Y consumers in Malaysia. *Managing Service Quality*, Vol. 17 (6), pp. 656-680.
- Lear, G. R. (2013) *Aristotle. The International Encyclopedia of Ethics*. Blackwell Publishing Ltd.
- Liu, Y. (2010). Social media tools as a learning resource. *Journal of Educational Technology Development and Exchange*, Vol. 3(1), pp. 101-114.
- Mason, K.O., Mason, W.H., Winsborough, H.H., and Poole, K. (1973). Some methodological issues in cohort analysis of archival data. *American Sociological Review*, Vol. 38, pages 242-258.
- McCarthy, J. (2010). Blended learning environments: Using social networking sites to enhance the first year experience. *Australasian Journal of Educational Technology*, Vol. 26(6), pp. 729-740.
- McCoach, D. B., Siegle, D. (2001). A comparison of high achievers' and low achievers' attitudes, perceptions and motivation. *Academic Exchange*, Summer (2001), pp. 71-76.
- Prensky, M. (2001). Digital Natives, Digital Immigrants. *On The Horizon*, Vol.9 (5), pp. 1-5.
- Sanders, D.H., & Smidt, R.K. (1999). *Statistics: A first course*, (6th ed.). New York:McGraw-Hill.
- Solnet, D., Kralji, A., and Kandampully, J. (2012). Generation Y Employees: An examination of work attitude differences, *The Journal of Applied Management and Entrepreneurship*, Vol. 17 (3), pp. 36-54.
- Weyland, A. (2011). Engagement and talent management of Gen Y. *Industrial and Commercial Training*, Vol.43(7), pp.439-445.
- Willging, P.A., and Johnson, S.D. (2004). Factors that influence students' decision to drop out of online courses, *Journal of Asynchronous Learning Networks*, Vol. 8 (4), pp. 105-118.

Wong, D. (2010). *E-learning: An empirical study on perceptions of benefits and limitations towards E-learning between fulltime students and working adults in Klang Valley, Malaysia*. Germany: Lambert Academic Publications.

Wong, D. (2012). Reflections on student-university interactions for next generation learning. *Asia Pacific Journal of Marketing and Logistics*, Vol. 24 (2), pp. 328 – 342.