# University Students' Perceptions of Social Media as a Learning Tool: A Science Discipline Perspective

## K. Hashim
King Abdulaziz University, Saudi Arabia

## I. Kutbi
King Abdulaziz University, Saudi Arabia

## L. Al-Sharqi
King Abdulaziz University, Saudi Arabia

### ABSTRACT
**Social media can have a considerable impact on students' learning. Studies indicate promising use of social media in improving learning environments. This study investigates King Abdulaziz University (KAU) science discipline (including engineering and computer science) students' perceptions of social media as a learning tool. Data were compiled through a specially designed survey. The sample size was 1461 students of different ages and genders representing KAU science discipline colleges. The results indicate that a moderate majority of KAU science discipline students are using social media tools in their learning at university and have the preference to integrate social media as a tool in their learning. The paper also documents gender significant differences on preferred social media tools, purposes of social media usage and dominant issues relating to use of social media in learning. The findings reinforce the notion that adoption of social media as a learning tool is advantageous and do not reveal any obvious disadvantages. Such findings can encourage academic planners and instructors to endorse and implement social media tools in the learning context of students within the science discipline.**

Keywords: Social media; learning; student perception; student preference; science discipline; gender difference.

## INTRODUCTION
In recent years, social media tools have become progressively popular amongst students particularly at the college level. Overuse of these tools has led to debate over whether social media has altered the nature and structure of students' social behavior and academic practices. This has triggered leading educators to rethink pertaining to their comprehension of interpersonal communication and study dynamics (Junco, Merson & Salter, 2010).

Students use social media tools for many reasons such as access to information, group discussion, resource sharing and entertainment (Wang, Chen & Liang, 2011). This has generated conjecture on their use and possible positive and negative implications, in both the short and the long terms. As several studies indicate, social media interaction could have positive and negative consequencesfor students. They can facilitate learning and boost interpersonal relationships among students and instructors. These tools, however, can have adverseimpacts to students as they might impairstudents' attention from the process of learning, decrease their physical social interaction and be addictive.

Nowadays, the majority of college students are regularly exposed to many types of social media. Abdelraheem (2013) examined undergraduate students' use of social networks sites (SNSs) and its relation to gender, grade point average (GPA) and other variables. Investigation of survey responses of 120 students indicated that they use these sites to a larger extend for social compared to academic purposes. Alshareef (2013)investigated the effects of Web 2.0 and social networks on students' performance in online education at KAU. Using data from 100 students obtained through an electronic questionnaire, the study revealed a significant positive impact of social learning on the students' education compared with the traditional approach.

Valjataga, Pata and Tammets (2011) investigated college students' perspectives on personal and distributed learning environments in course design. The authors found that students' perceptions of their personalized learning environment (PLE) changed dynamically as they navigated the course landscape of social media tools to establish and engage in learning activities. They advocated fostering new pedagogical approaches to augment students' abilities to establish and personalize their own learning environments. Ahmed and Qazi (2011) studied students' perspectives of the academic impacts of SNSs.The study revealed that students generally used such sites for non-academic purposes. However, high use of SNSs did not seem to negatively affect students' academic performance.

Junco et al. (2010) investigated the effect of using Twitter for various types of academic discussion on the engagement and grades of college students. They studied 125 students (70 in the experimental group and 55 in the control group) using a 19-item scale adopted from the National Survey of Student Engagement (NSSE). The authors asserted that Twitter can motivate both students and faculty's engagement in non-traditional learning interactions. Similarly, Ellison, Steinfield and Lampe (2007) found that Facebook is able to support college students' academic learning objectives through instructor-student and student-student course communications.

Liu (2010) conducted a study through an online questionnaire on221 students pertaining to usage, attitudes and perceptions of 16 different social media tools. The top four reasons that motivated students' use of social media tools were found to be social engagement (85%), direct communications (56%), speed of feedback/results (48%), and relationship building (47%). A proportion below 10% used social media tools for academic purposes.

Although many studies have been conducted to study the impact of social media on college students, few have given focus on Saudi Arabia. Studies (Furnham, Batey, Booth, Patela & Lozinskaya, 2011; Hartley & Greggs, 1997; Williamson, 2011) have indicated that there are differences in preferences and abilities of arts and science students relating to matters such as learning and thinking styles. Hence, this study should contribute useful findings. Its purpose is to examine the impact of social media on science discipline students at King Abdulaziz University (KAU). This quantitative study focuses on the common factors influencingscience discipline students' preferences and perceptions of the impact of social media on their learning. Through analysis of the data, the study attempts to identify the positive and negative impacts on preferences and perceptions, and to uncover key themes, trends or perceptions that can be used as foundation for more in-depth research.

The major contribution of the study lies in identifying science discipline (which includes those from the fields of engineering and computer science) students' usage and perception of social media as a learning tool which can assist in adoption of social media tools in the learning context. Given the scarcity of available data on students' use of social media at the university

level in Saudi Arabia, the data gathered provide a clearer and valuable insight into science discipline students' association with the new media.

## METHODOLOGY

This study utilized both primary and secondary sources of data. The primary data were obtained through a questionnaire administered to randomly selected respondents representing a sample of science discipline university students from various faculties of KAU. The research team designed and fine-tuned the survey instrument, and conducted a workshop to gather the opinion of administrators, instructors and students on which topics to include.

The survey included a total of 1461 full-time undergraduate students who were randomly selected from various science-based colleges of KAU. The target students represented a homogeneous mix (male or female) and different age groups (20 years and over or under 20 years of age) to sufficiently maintain optimal diversity within the collected data needed for subsequent analysis.

The questionnaire was pre-tested on a number of university students from various science-based majors. The questionnaire wasrevised by several senior university faculty members, who, specializing in sampling and questionnaire design, made alterations to ensure clarity. The questionnaire was then pilot tested using a variant that contained the questions in both English and Arabic languages, to provide a survey questionnaire in dual languages in making sure items within the questionnaire were understandable. Copies of the questionnaire were distributed to college personnel trained in facilitating data collection.

The questionnaire was divided into four sections. The first sectioncovered general and demographic questions pertaining to gender, age, and field of specialization. Students were also asked pertaining to their level of association with the Internet and social media use. The second sectioncomprised of more specific questions on the types of social media students' use, the purpose for which they use social media, and their preference on the integration of social media in learning. The third sectionfocused on questions related to students' perspectives on the benefits of social media use in learning. While the fourth sectionaddressedstudents' views on the adverse aspects related to social media use in learning.

A statistician was assigned to ensure that processing of data was done properly. Data were coded and processed using a statistical package system. The data were explored both for their descriptive statistics (i.e. calculation of percentage distributions, calculations of averages, frequency distributions, and coefficient of variation) and inferential statistics (i.e. level of significance, t-test, z-test, ANOVA, correlation and regression and classification analysis). Cronbach's Alpha was also utilized to provide indications of the reliability of measurement scales. Results were analyzed, interpreted and summarized, in order to draw conclusions and make recommendations.

## RESULTS AND DISCUSSION

The total sample size of 1461 students meant an acceptable error of ±4% at 95% confidence level for the university student population.In investigating significant difference, the Pearson Chi-square test of independence is used. If chi-square results are significant, post-hoc analysis is then conducted for detecting significant differences at the 0.05 level through column proportions z-tests approach (adjusted p-values for multiple comparisons Bonferroni method).

## Sample breakdown based on demographic factors

The sample included 867 males and 594 females of science discipline students. In terms of gender and age, the population comprised 59.3 percent male and 40.7 percent female students. The majority of student respondents (76%) were aged 20 years and above. The sampled gender and age cohorts provide a consistent representation of the ratios of the overall KAU student population.

## Science discipline students' background on the Internet and social media

The survey comprised of some questions designed to provide information about KAU science discipline students' background in using the Internet and social media. These questions are shown in Table 1, together with their corresponding responses. The responses indicated that KAU science discipline students are very much familiar with the Internet and social media use.

The majority of students from the Science colleges are using the Internet for 15 hours or more per week. More than 90% of students have a personal social media account. On the average number of hours students spend using social media per week, the majority of students use social media for 6 hours or more per week. The major category is the '10 hours or more' category. More than 50 percent of students have been using social media tools for more than 3 years.

**Table 1. KAU science discipline students' background in Internet and social media**

| Question | | Count | % |
|---|---|---|---|
| On average how many hours do you spend using the Internet per week? | less than 5 | 358 | 24.5 |
| | from 5 to less than 10 | 342 | 23.4 |
| | from 10 to less than 15 | 348 | 23.8 |
| | 15 hours or more | 413 | 28.3 |
| Do you currently have a personal social media account? | Yes | 1381 | 94.5 |
| | No | 80 | 5.5 |
| On average how many hours do you spend using social media per week? | none | 80 | 5.5 |
| | less than 3 | 277 | 19.0 |
| | from 3 to less than 6 | 311 | 21.3 |
| | from 6 to less than 10 | 363 | 24.8 |
| | 10 hours or more | 430 | 29.4 |
| Using social media for? | none | 83 | 5.7 |
| | less than 1 year | 180 | 12.3 |
| | 1-3 years | 430 | 29.4 |
| | more than 3 years | 768 | 52.6 |
| Which language do you prefer when you visit Social Media? | English | 104 | 7.3 |
| | Arabic | 542 | 38.2 |
| | Both | 771 | 54.4 |

These findings reflect the maturity of KAU science discipline students pertaining to use of the Internet and social media. It also concurs with findings from previous studies (Alshareef, 2013;

Pempek et al, 2009). Pempek and his research team found that college students' social networking experiences are high. The study conducted by Alshareef (2013) on the effects of Web 2.0 and social networks on students' performance in online education at KAU showed a good level of experience in social media usage.

On the preferred language when visiting or using social media, the majority of students selected category 'both' (English and Arabic languages). This indicates that science discipline students are predominantly bilingual in their use of social media.

Table 2 gives the result distribution for questions covering use of social media as a tool by science discipline students in their studies and preference to integrate social media as a learning tool. A moderately high (69.6 percent) majority of students use social media in their studies for one or more courses at KAU, with a similar proportion having an inclination to integrate social media as a tool in their learning.

**Table 2. Distribution pertaining to use of social media and preference to integrate**

| Question | | Count | % |
|---|---|---|---|
| In how many of courses in your study at this university are you using social media? | None | 429 | 30.4 |
| | One course | 185 | 13.1 |
| | Two courses | 249 | 17.6 |
| | Three courses or more | 550 | 38.9 |
| Would you like to integrate social media as a tool in your learning? | Yes | 942 | 66.5 |
| | No | 196 | 13.8 |
| | I don't know | 279 | 19.7 |

**Science discipline students' preferred social media tools**
We sought to answer the questions related to types of social media most commonly used by science discipline students. Table 3 gives the overall and gender distribution of social media tools. From the table, the top 5 most commonly utilised social media tools in descending order are YouTube, Twitter, Facebook, Instagram and Wikipedia. The survey question was of multiple response type. This finding contradicts the findings of a recent survey (Guimaraes, 2014) where Facebook remains the top social network for the U.S. Fewer students use other options such as slide sharing tools, 3D social networks and social bookmarks.

**Table 3. Overall and gender distribution of social media tools**

| Social Media Tool | Male | | Female | | Overall |
|---|---|---|---|---|---|
| | Count | % | Count | % | %* |
| Facebook | 653 | 80.9 | 344 | 58.1 | 68.2 |
| MySpace | 69 | 8.6 | 34 | 5.7 | 7.0 |
| Twitter | 600 | 74.3 | 440 | 74.3 | 71.2 |
| Meme | 20 | 2.5 | 5 | 0.8 | 1.7 |
| Blogger | 128 | 15.9 | 74 | 12.5 | 13.8 |
| Wordpress | 71 | 8.8 | 65 | 11.0 | 9.3 |
| Wikipedia | 406 | 50.3 | 292 | 49.3 | 47.8 |
| Wikispaces | 40 | 5.0 | 23 | 3.9 | 4.3 |
| YouTube | 621 | 77.0 | 511 | 86.3 | 77.5 |
| Vimeo | 51 | 6.3 | 14 | 2.4 | 4.4 |
| Flickr | 63 | 7.8 | 43 | 7.3 | 7.3 |
| Instagram | 358 | 44.4 | 371 | 62.7 | 49.9 |
| Slideshare | 96 | 11.9 | 102 | 17.2 | 13.6 |
| Prezi | 69 | 8.6 | 37 | 6.3 | 7.3 |
| Secondlife | 68 | 8.4 | 36 | 6.1 | 7.2 |
| Activeworlds | 63 | 7.8 | 45 | 7.6 | 7.4 |
| Delicious | 66 | 8.2 | 46 | 7.8 | 7.7 |
| Netvouz | 45 | 5.6 | 37 | 6.3 | 5.6 |

* - multiple response type

### Gender breakdown and significant differences on social media tools

With reference to Table 3, amongst the male science discipline students, the descending order from the top has Facebook followed by YouTube and then Twitter. Amongst the female science discipline students the top three social media tools are YouTube, followed by Twitter and then Instagram. It is worth noting that Facebook does not take a position at the top three categories of the female groups. These findings are in contradiction with findings of the survey conducted by Guimaraes (2014) on adoption of social network which state that women in the U.S. are more skewed to Facebook than men by about 10 percentage points. Furthermore, Instagram has a higher preference level compared to Facebook for the female students group, unlike the male group. Amongst the male science discipline students, the top three social media tools are Facebook, followed by YouTube and then Twitter.

Post-hoc analyses indicate that categories 'Facebook', 'Myspace', 'Meme' and 'Vimeo' have greater proportion of responses by the male group than the female group. Categories 'YouTube', 'Instagram' and 'Slideshare' have greater proportion of responses by the female group than the male group.

### Purposes on usage of social media

Table 4 indicates the overall and gender distribution on purposes for using social media. It shows the distribution of students sample as per the most common purposes. The survey question was of multiple response type. The table reveals that KAU science discipline students use social media tools for a blend of academic and non-academic purposes. Category 'entertainment' represents the highest category with about 76 percent. Second highest is category 'information searching' and the third highest is category 'learning'. It is also worthwhile to note that the responses for categories 'information searching' and 'learning' are both above 60 percent. This indicates a moderately high percentage of science discipline students use social media for learning. These findings are in contradiction to the conclusion

made by Ahmed and Qazi (2011) which states that social network sites are mainly used for non-academic purposes by students.

**Table 4. Overall and gender distribution on purposes for using social media**

| Purpose for using Social Media | Male | | Female | | Overall Count | Overall % |
|---|---|---|---|---|---|---|
| | Count | % | Count | % | | |
| Making Friends | 477 | 58.5 | 249 | 42.1 | 726 | 49.7 |
| Exchange ideas | 468 | 57.4 | 382 | 64.5 | 850 | 58.2 |
| Entertainment | 627 | 76.8 | 488 | 82.4 | 1115 | 76.3 |
| Sharing Resources | 210 | 25.7 | 86 | 14.5 | 296 | 20.3 |
| Community discussion | 355 | 43.5 | 272 | 45.9 | 627 | 42.9 |
| Searching for information | 488 | 59.8 | 454 | 76.7 | 942 | 64.5 |
| Learning | 450 | 55.1 | 430 | 72.6 | 880 | 60.2 |
| Professional Networking | 226 | 27.7% | 199 | 33.6% | 425 | 29.1 |

### *Gender breakdown and significant differences on purposes of social media usage*

With reference to Table 4, the most popular category on purpose for using social media by science discipline students is category 'entertainment' followed by 'information searching' category with the female group dominating the male group on both categories. Third highest category for female students is 'learning' while it is category 'making friends' for the male group. This indicates that the female science discipline group leans positively towards learning more than the male group. These findings concur with the outcome of a study conducted by Mazman and Usluel (2011) which states that females are more dominant in using social networks for academic purposes compared to the males. The proportion for the male science discipline group is larger than the proportion for the female group for categories of 'making friends' and 'sharing resources' and that these differences are significant at the 0.05 level. The finding of males being in favor of the category 'making friends' is also in alignment with the outcome of the same study which states that males are more dominant in using social media for making new friends compared to females.

Post-hoc analyses indicate that for categories 'making friends' and 'sharing resources', the proportions for the male science discipline group are larger than the proportions for the female group. Categories 'information searching' and 'learning' have greater proportion identified as significant difference on the female science discipline group.

### Evaluating science disciplinestudents' perceptions on use of social media in learning

The remaining portion of the questionnaire was designed to investigate science discipline students' perceptions regarding the following: a) rating 19 statements as benefits (advantages) that encourage the use of social media for learning; and b) rating 11 statements as problems (disadvantages) that prevent students from using social media for learning. Cronbach's alpha (α) was utilised to test for reliability of results. The study factors results are reliable as shown in Table 5 by a Cronbach's alpha values of greater than 90 percent.

**Table 5.Cronbach's alpha for the study factors**

| Study factor | No. of items | Cronbach's alpha |
|---|---|---|
| Advantages of using social media in learning | 19 | 0.957 |
| Disadvantages of using social media in learning | 11 | 0.909 |

Table 6 provides the list of sub-factors pertaining to advantages of using social media in learning. Table 7 gives the list of sub-factors pertaining to disadvantages of using social media in learning. The variation in opinions is low based on the coefficient of variation for all statements. This indicates that science discipline students are aware of the advantages and disadvantages of using social media in learning.

**Table 6. Sub-factors on advantages of using social media in learning**

| | |
|---|---|
| 1. | Help me exchange opinions regarding subjects |
| 2. | Learn collaboratively with others |
| 3. | Make my learning more convenient |
| 4. | Improve my group-problem solving skills |
| 5. | Improve my interaction with my classmates |
| 6. | Improve my communication with instructors |
| 7. | Help me co-create knowledge |
| 8. | Help me increase my leadership skills |
| 9. | Help me become an independent learner |
| 10. | Makes my learning more interesting |
| 11. | Help gain more info on different subjects |
| 12. | Make learning more competitive |
| 13. | Give better chance for access to new resources |
| 14. | Improve ability to be creative and innovative |
| 15. | Broaden my global views of world issues |
| 16. | Improve my research skills |
| 17. | Help me in taking initiatives |
| 18. | Improve my interest in lifelong learning |
| 19. | Reduce the cost of learning |

**Table 7. Sub-factors on disadvantages of using social media in learning**

| | |
|---|---|
| 1. | Cause intrusion on my privacy |
| 2. | Cause misuse and domination |
| 3. | Raise my parents' concerns |
| 4. | Require formal training |
| 5. | Require more work and preparation |
| 6. | More time consuming |
| 7. | Difficult to manage learning activities |
| 8. | Raise concerns over direct contact with instructors |
| 9. | Distract me from studying |
| 10. | Increase my addictive potential |
| 11. | Raise my financial expenses |

**Table 8. Mean distribution over factors for advantages and disadvantages**

| Study factor | Mean |
|---|---|
| Advantages of using social media in learning | 3.75 |
| Disadvantages of using social media in learning | 3.00 |

Table 8 shows the overall rating of responses on the two factors, advantages and disadvantages. Based on Table 9 which provides the mean and corresponding agreement attitude, the mean value for factors on advantages is of attitude 'agree' while the mean value for factors on disadvantages is of attitude 'unsure'. This indicates that science discipline students agree with the advantages but are unsure of the disadvantages.

**Table 9. Mean and corresponding agreement attitude**

| Mean Range | Agreement Attitude |
|---|---|
| 1 to 1.79 | Strongly Disagree |
| 1.80 to 2.59 | Disagree |
| 2.60 to 3.39 | Unsure |
| 3.40 to 4.19 | Agree |
| 4.20 to 5 | Strongly Agree |

*Investigating dominant issues on advantages of using social media in learning*
Out of the items under each factor, we selected the top five perceptions by mean values. These help identify support factors in using social media as a learning tool. The top 5 perceptions in descending order on advantages are given in Table 10.

**Table 10.Top 5 perceptions on possible benefits (advantages) on the use of social media in learning**

| Factor | Mean |
|---|---|
| Help me gain more information on different subjects | 4.03 |
| Give better chance for access to new resources | 3.97 |
| Help me co-create knowledge | 3.91 |
| Improve my communication with instructors | 3.90 |
| Broaden my global views of world issues | 3.90 |
| Improve my research skills | 3.88 |

Science discipline students believe that they are able acquire more information and have access to learning resources through the use of social media in learning. They also believe that through the use of social media in learning, they are able to co-create knowledge, communicate better with instructors and improve their research skills.

*Investigating dominant issues on disadvantages of using social media in learning*
Out of the items under each factor, we selected the top five perceptions by mean values. These help highlight potential problems in using social media as a learning tool. The top 5 perceptions in descending order on disadvantages are given in Table 11.

**Table 11.Top 5 perceptions on possible problems (disadvantages) on the use of social media in learning**

| Factor | Mean |
|---|---|
| Raise my financial expenses | 3.42 |
| Distract me from studying | 3.28 |
| Increase my addictive potential | 3.28 |
| More time consuming | 3.24 |
| Require more work and preparation | 3.04 |

With reference to Table 11, it is interesting to note that major concerns of science discipline students in descending order are rising of financial expenses, distraction from study and potential addiction. The item of concern on being addicted highlighted as a major concern in our survey has also been highlighted by Thompson and Lougheed (2012).

**Evaluating science discipline students' gender perceptions on use of social media in learning**
*Investigating gender dominant issues on advantages of using social media in learning*
Out of the items under each factor, we selected the top five sub-factors by mean values from both science discipline gender groups and combine them into a comparison list. This helps identify gender-based advantageous factors in using social media as a learning tool. The summary for sub-factors on advantages is given in Table 12.

**Table 12. Summary table for combined top five sub-factors on advantages of using social media in learning**

| Factor | Male | | Female | |
|---|---|---|---|---|
| | Mean | Top 5 Position | Mean | Top 5 Position |
| Help me exchange opinions regarding subjects | 3.675 | | 4.143 | 3 |
| Improve my communication with instructors | 3.737 | 5 | 4.126 | 4 |
| Help me co-create knowledge | 3.765 | 4 | 4.103 | |
| Help me gain more information on different subjects | 3.873 | 1 | 4.253 | 1 |
| Give better chance for access to new resources | 3.833 | 2 | 4.146 | 2 |
| Broaden my global views of world issues | 3.736 | | 4.120 | 5 |
| Improve my research skills | 3.766 | 3 | 4.047 | |

The above table highlights the combined top five perceptions of the two science discipline gender groups with mean values and dominant gender information pertaining to advantages to learning. The table highlights three common factors listed below in decreasing priority (order of means):

- Help me gain more information on different subjects
- Give better chance for access to new resources
- Improve my communication with instructors

It is also worth noting that four uncommon factors in the top five list of both gender groups of science discipline students are the factors 'improve my research skills' and 'help me co-create knowledge' of the male group while for the female group, the factors are 'help me exchange opinions regarding subjects' and 'broaden my global views of world issues '. Here we can see the difference in emphasis and priority of the two science discipline gender groups with the male group having interest in improving research skills and co-creation of knowledge while the female group emphasizes exchanging opinions and broadening global view. It is also worth noting that the female group has dominant perceptions over the male group relating to the combined top five sub-factors on advantages of using social media in learning.

### *Investigating dominant gender issues on disadvantages of using social media in learning*
Out of the items under each factor, we selected the top 5 sub-factors by mean values from both science discipline gender groups and combine them into a comparison list. This helps identify potential gender-based problems in using social media as a learning tool. The summary for sub-factors on disadvantages is given in Table 13.

**Table 13. Summary table for combined top five sub-factors on disadvantages of using social media in learning**

| Factor | Male | | Female | |
|---|---|---|---|---|
| | Mean | Top 5 Position | Mean | Top 5 Position |
| Cause intrusion on my privacy | 2.873 | | 3.076 | 4 |
| Raise my parents' concern | 2.812 | | 3.049 | 5 |
| Require formal training | 2.986 | 5 | 3.021 | |
| Require more work and preparation | 3.037 | 4 | 3.034 | |
| More time consuming | 3.121 | 3 | 3.409 | 3 |
| Distract me from studying | 3.182 | 2 | 3.424 | 2 |
| Increase my addictive potential | 3.280 | 1 | 3.611 | 1 |

The above table highlights the combined top five sub-factors of the two gender groups with mean values and dominant gender information pertaining to disadvantages on teaching and learning. The table highlights three common factors listed below in decreasing priority (order of means):
- Increase my addictive potential
- Distract me from studying
- More time consuming

It is interesting to note that the top two concerns relate to addiction and distraction, respectively. The item of concern pertaining to addiction has also been highlighted by Thompson and Lougheed (2012). Two uncommon factors in the combined top five list of both gender groups include the factors 'raise my financial expenses' of the male group and 'raise my

parents' concern' of the female group, reflecting concern over increase in financial cost and parental anxiety, respectively.

It is also worth noting that the female science discipline group has dominant perceptions (higher means) over the male group relating to the combined top five sub-factors on disadvantages of using social media in learning except for factor 'require more work and preparation'.

## CONCLUSIONS

Findings indicate that KAU science discipline students are familiar with and use social media. Different categories of the social media tools are used for academic and non-academic purposes. There is positive inclination towards use of social media for learning. This is supported by the fact that survey results indicate a moderately high majority of science discipline students use social media in their studies for one or more courses at KAU and have the preference to integrate social media as a tool in their learning. Furthermore, two of the top three categories of purposes for social media tool usage relate to learning; the third highest category being 'learning' while the second highest category is 'information searching'.

Science discipline students positively support the notion that adoption of social media as a learning tool is advantageous. However, they are uncertain about its disadvantages. On gender significant differences, survey outcomes reveal that the female science discipline students group has a stronger inclination towards usage of social media for learning compared to its male counterpart. These findingscan help in strategizing piloting option for adoption and phased implementation of social media tools in the learning context of students within the science discipline.

## References

Abdelraheem, A. Y. (2013, 14–16 January 2013). *University Students' Use of Social Networks Sites and their Relation with Some Variables.* Paper presented at the WEI International Academic Conference, Antalya, Turkey.

Ahmed, I., & Qazi, T. (2011). A Look Out for Academic Impacts of Social Networking Sites (SNSs): A Student Based Perspective. *African Journal of Business Management, 5*(12), 5022–5031.

Alshareef, M. (2013). Evaluate Student Satisfaction for Social Learning Network at King Abdulaziz University. *Advances in Internet of Things, 3*, 41–44.

Ellison, N., Steinfield, C., & Lampe, C. (2007). The Benefits of Facebook "Friends": Social Capital and College Students' Use of Online Social Network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143–1168.

Furnham, A., Batey, M., Booth, T. W., Patela, V., & Lozinskaya, D. (2011). Individual difference predictors of creativity in Art and Science students. Thinking Skills and Creativity, 6, 114–121

Guimaraes, T. (2014). Revealed: The Demographic Trends For Every Social Network. Retrieved from http://www.businessinsider.com/2014-social-media-demographics-update-2014-9.

Hartley, J., & Greggs, M. (1997). Divergent thinking in arts and science students: Contrary Imaginations at Keele revisited. *Studies in Higher Education*, 22(1) , 93–97.

Junco, R., Merson, D., & Salter, D. W. (2010). The Effect of Gender, Ethnicity, and Income on College Students' Use of Communication. *Cyberpsychology, Behavior and Social Networking, 13*(6).

Liu, Y. (2010). Social Media Tools as a Learning Resource. *Journal of Educational Technology Development and Exchange, 3*(1), 101–114.

Mazman, S. G., & Usluel, Y. K. (2011). Gender Differences in Using Social Networks, *Turkish Online Journal of Educational Technology, 10*(2), 133-139.

Pempek, T. A., Yermolayeva, Y. A., & Calvert, S. L. (2009). 'College students' social networking experiences on Facebook'. *Journal of Applied Developmental Psychology, 30*(3), 227–238.

Thompson, S. H., & Lougheed, E. (2012). Frazzled by Facebook? An exploratory study ofgender differences in social network communication among undergraduate men and women. College Student Journal, 46(1), 88-98.

Valjataga, T., Pata, K., & Tammets, K. (2011). Considering Students' Perspectives on Personal and Distributed Learning Environments in Course Design: Applying Social Informatics for Tertiary Teaching *Information Science Reference*. New York: Hershey.

Wang, Q., Chen, W., & Liang, Y. (2011). *The Effects of Social Media on College Students.* Johnson & Wales University. Retrieved from http://scholarsarchive.jwu.edu/cgi/viewcontent.cgi?article=1004&context=mba_student.

Williamson, P. K. (2011). The creative problem solving skills of arts and science students—The two cultures debate revisited. *Thinking Skills and Creativity*, 6(1), 31-43.