

Opportunities for career orientation as perceived by university students on Facebook

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Abstract. Social networking websites provide several kinds of educational support. The powerful capabilities of social media technologies are expanding the traditional education in many directions, from paper-based learning to web-based learning, from individual learning to social learning, from formal learning in class to informal and nonformal learning outside class and home. On the one hand, social learning entails various activities such as meetings, active participation, critical thinking, presentation, information and content sharing, collaboration, and debate. On the other hand, it brings in front new educational goals related to personal development and career orientation. This paper aims at exploring the usefulness of Facebook for personal development and career orientation. A structural model has been developed and tested that relates four kinds of educational support: finding information and resources, collaboration and socialization, personal development, and career orientation. The model testing results show that the opportunities for information sharing and for personal development have a direct and positive influence on career orientation.

Keywords: social networking websites, educational use of Facebook, personal development, career orientation, university students.

1. Introduction

Social networking websites provide several kinds of educational support by creating new opportunities for interaction, information and resource sharing, cooperative learning, informal, and non-formal learning (Selwin, 2009; Lamanuskas et al, 2013; Jong et al., 2014; Arteaga-Sanchez et al, 2014; Manea et al., 2015; Manca & Ranieri, 2016; Dhir et al, 2017). The popularity of social networking websites, especially Facebook, is continuously growing. Using social media technologies is now part of the everyday life of university students.

The powerful capabilities of social media technologies are expanding the traditional education in many directions, from paper-based learning to web-based learning, from individual learning to social learning, from formal learning in class to informal and nonformal learning outside class and home (Brown & Adler, 2008; Manca & Ranieri, 2016; Greenhow & Lewin, 2016).

On the one hand, social learning is broadening the educational process with various activities such as meetings, critical thinking, presentation, information and content sharing, collaboration, and debate. For the university student, this is favoring a more active participation and engagement with the curricula (Brown & Adler, 2008; Manca & Ranieri, 2016). On social networking websites, the student's participation goes beyond the formal curriculum and beyond class boundaries. Students have more opportunities to present themselves, to join groups of interests, and to take part in debates.

On the other hand, the educational support created by the development of social media technology is bringing in front new educational goals such as personal development and career orientation (Redecker et al., 2010; Josefsson et al., 2016; Rutten et al., 2016; Dhir et al., 2017, Abbas et al., 2019). Social networking websites transform students from content consumers into content creators. Social learning helps students to develop critical thinking and reflection. Last but not least, the students have the opportunity to meet professionals and to find out more about their future profession.

This paper aims at exploring the usefulness of Facebook for personal development and career orientation as perceived by college students from the University of Building Engineering in Bucharest. A structural model has been specified and tested that explains the relationships between the opportunities provided by Facebook for finding information & resources, socialization & collaboration, personal development, and career orientation.

2. Model conceptualization

2.1 Related work

Social learning is closely related to sharing information and resources. The study of Lampe et al. (2012) analyzed users' information-seeking behavior and found that participation in social networks is increasing the social capital which, in turn, has positive effects on having access to useful information and resources. Learning in a social context has a positive impact on finding

information and resources and leads to group collaboration and better student engagement (Wang et al., 2014).

According to the study of Redecker et al. (2010), more than 30% of the European population use the Internet with the purpose of learning. Their study shows that social media has been used for access to information, transparency of the institutional process, distribution of educational material, support for the exchange of knowledge and content. Social media has also been used for learning in social and collaborative contexts, by integrating learning into a wider community as well as for linking learners to experts and practitioners. Their research shows that social learning provides opportunities for personal development, by enhancing skills and competencies.

The study of Redecker et al. (2010) concluded that social media leads to innovation in learning along four dimensions (four C's of Learning 2.0): access to learning *content*, thus supporting learning and professional development, support learners to *create* content by themselves, *connect* learners with other learners, as well as to researchers and practitioners, and support *collaboration* between learners and with their teachers.

The comparative study of Lamanauskas et al. (2013) investigated the use of social networking websites by university students from five countries. The results show that the most important functions are information, learning, and exchanging information. Arteaga-Sanchez et al. (2014) tested the structural model of Mazman & Usluel (2010) on a Spanish sample in order to explain three dimensions of the educational use of Facebook: communication, collaboration, and educational material sharing. Based on their findings, the authors recommended integrating Facebook into the learning resources of the university.

Jong et al. (2014) analyzed the potential educational value of using Facebook and found that Facebook has been rated higher than other platforms in three aspects: convenience in sharing educational resources, the immediacy of learning the posting of teachers on the Internet, and interactions with others. They also found that students use Facebook to discuss course-related issues with their colleagues as well as to communicate with academic staff.

Manea et al. (2015) studied the educational potential of Facebook on a sample of 431 university students from Romania. They found that students are valuing the educational potential mainly for collaboration, information, and active participation. Pribeanu et al. (2017) analyzed country and gender differences as regards the educational usefulness of Facebook. The results

show that in both countries, university students valued more the collaboration usefulness than the information usefulness.

Several studies that targeted the use of Facebook for educational purposes argued for the integration of guidance on how to use social media applications into the curriculum. Josefsson et al. (2015) analyzed three types of social media use: student role in the university, a professional role for career-building purpose, and private role. Based on a qualitative study, they found that students are expecting advice from teachers on how to effectively use social media in education. The main reasons for integrating social media in education as mentioned by students were: engagement in the role of being students, active participation, getting a large network that could be used in the future, and career-building.

Donlan (2012) analyzed university students' perceptions of the educational use of Facebook. Although students reported the use of Facebook to discuss university work, access and posting links, they didn't seem enthusiastic to share resources. Another finding was the discrepancy between the interest in using Facebook for academic purposes and the actual behavior when asked to comment on educational material sent by a lecturer.

Thorell et al. (2015) analyzed the perception of 1116 university students at Health and Medical Sciences as regards four issues: the personal digital equipment, familiarity with software, online behavior, and expectations of students. They found that more than 50% of students considered that the information technologies incorporated in their study do not provide them with the skills needed in their future profession.

The study of Rutten et al. (2016) argued that schools should play an important role in teaching students how to use social media applications for career purposes. This prevocational guidance of students is based on the development and practicing online career skills, such as introducing oneself, interacting and connecting to people, and sharing experiences. In a similar vein, the study of Donelan (2016) shows that the lack of skills is a barrier to the career opportunities provided by social media. She recommended practical training and the sharing of good practice.

Greenshaw and Lewin (2016) analyzed the relationship between social media and education with respect to the impact of social media on the boundaries between formal and informal learning. Taking a constructivist and connectivism perspective, they conceptualized social media as a space for "learning with varying attributes of formality and informality". In this respect, they proposed a model of learning attributes structured on purpose,

the process of learning, location/context, and content. While in the formal settings learning is the primary purpose, in social media settings the purpose is multifold: communication, creating, sharing, connecting, playing, and consuming.

Another study concerning the use of Facebook as a technology-enhanced learning space has been carried on by Manca and Ranieri (2016). Based on the literature review, they distinguished between three types of educational scenarios: formal use in formal learning settings, informal use in formal learning settings, and use in informal learning settings. For each scenario, the authors analyzed three main pedagogical affordances of Facebook: mixing information and learning resources, hybridization of expertise, and widening the context of learning. They found that Facebook educational affordances are only in part exploited.

Dhir et al. (2017) analyzed the use of Facebook through the lens of uses & gratification theory. The purpose of the study was to analyze the extent to which these uses & gratifications are predicting intense Facebook use. As regards the educational use of Facebook, they found that the main students' preferences are Facebook groups, work assignments, exchange ideas with friends and teachers, information seeking, and communication.

2.2 Research model and hypotheses

The research model that includes four factors is presented in Figure 1. The relationships between the four dimensions are mirroring the path from social learning to personal and professional development.

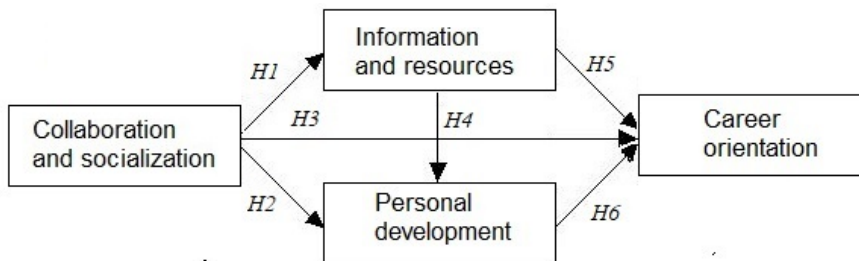


Figure 1. Research model

We hypothesized that the usefulness for career orientation (UP) is influenced by three factors: usefulness for finding relevant information and

resources (UI), usefulness for collaboration and socialization with colleagues (UCS), and usefulness for personal development (UD). The latter is influenced by the usefulness for finding information and resources (UI) and usefulness for collaboration and socialization with colleagues (UCS).

The following six hypotheses are tested in this study:

H1. Collaboration and socialization have a positive effect on finding useful information and resources (UCS → UI).

H2. Usefulness for collaboration and socialization has a positive effect on personal development (UCS → UD).

H3. Usefulness for collaboration and socialization has a positive effect on career orientation (UCS → UP).

H4. Finding useful information and resources has a positive effect on personal development (UI → UD).

H5. Finding useful information and resources has a positive effect on career orientation (UI → UP).

H6. Usefulness for personal development has a positive effect on career orientation (UD → UP).

The operationalization of constructs is presented in Table 1.

Table 1. Constructs and items

| | | |
|-----|------|--|
| UCS | UCS1 | The use of Facebook improves socialization with my colleagues |
| | UCS2 | The use of Facebook improves collaboration with my colleagues |
| UI | UI1 | Using Facebook, I can find useful information for my work |
| | UI2 | Using Facebook, I can find useful resources for my work |
| UD | UD1 | The use of Facebook opens new perspectives for learning |
| | UD2 | The use of Facebook stimulates critical thinking |
| | UD3 | The use of Facebook stimulates the debate |
| | UD4 | The use of Facebook stimulates the creativity |
| UP | UP1 | Using Facebook, I can find relevant information about my future profession |
| | UP2 | Using Facebook, I have a broader view of my future profession |

The measures are similar to the measures used in a previous study (Pribeanu et al. 2018), with two exceptions: the items for the second construct (UCS) have been changed and an item has been added to the third construct (UD).

3. Model testing results

4.1 Method

In order to assess the proposed model, a two-steps structural equation modeling (SEM) approach has been taken (Anderson & Gerbing, 1988). In the first step, the measurement model was evaluated with confirmatory factor analysis (CFA) using structural equation modeling (SEM) to test the overall fit of the model, as well as its validity and reliability. Second, the structural model was evaluated in order to test the hypotheses. The SEM estimation procedure used was the maximum likelihood.

Based on the recommendations from the literature (Hu & Bentler, 1998; Schermelleh-Engel et al., 2003; Hair et al., 2006), the following goodness-of-fit measures were used: chi-square (χ^2), normed chi-square (χ^2/df), comparative fit index (CFI), goodness-of-fit index (GFI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA).

The models were analyzed with Lisrel 9.3 for Windows (Mels, 2006), using a covariance matrix as input and maximum likelihood estimation method.

4.2 Model validation

4.1 Sample and data analysis

The evaluation instrument was administrated in May 2019 to 194 students from the University of Building Engineering in Bucharest. The students have been asked to answer several questions related to demographics (age, gender), enrollment (university, faculty, year of study), FB usage (size of their FB network, frequency of use, minutes per day), and to evaluate items on a 7-points Likert scale.

After a preliminary check, 12 questionnaires have been eliminated for incomplete data thus resulting in a working sample of 182 observations (127 male and 55 female). The age of participants ranged between 18 and 34 years, with a mean of 20.36 (SD=2.00).

The normality of each of the 10 variables has been analyzed in terms of skewness and kurtosis. All values were within the recommended threshold of

[-1, +1] for normality (Hair et al., 2006).

4.2.1 Measurement model

The measurement model estimation results are presented in Figure 2.

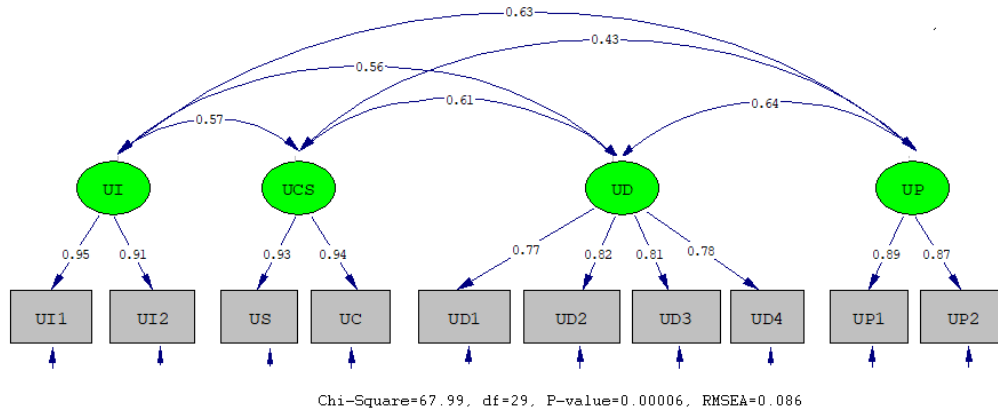


Figure 2. Measurement model estimation results

The descriptive statistics, item loadings, and items' reliability are presented in Table 2. All item loadings are over the threshold of 0.6 and statistically significant (t -values > 1.96). The item reliability (R^2) values are above the suggested standard of 0.50. The composite reliability (CR) values ranged from 0.833 to 0.933, above the minimum level of 0.70, indicating adequate reliability. The values of the average variance extracted (AVE) are all above the minimum level of 0.50, ranging from 0.632 to 0.874, confirming the convergent validity of constructs.

Table 2. Descriptive statistics and loadings

| Factor | Alpha | Item | Mean | SD | Loading | R ² |
|---------------------------------------|-------|------|------|------|---------|----------------|
| Collaboration and socialization (UCS) | 0.932 | UCS1 | 4.53 | 1.71 | 0.93 | 0.86 |
| | | UCS2 | 4.45 | 1.71 | 0.94 | 0.88 |
| Information and resources (UI) | 0.929 | UI1 | 4.27 | 1.73 | 0.95 | 0.90 |
| | | UI2 | 4.10 | 1.69 | 0.91 | 0.83 |
| Personal development (UD) | 0.873 | UD1 | 3.42 | 1.63 | 0.77 | 0.59 |
| | | UD2 | 3.66 | 1.81 | 0.82 | 0.67 |
| | | UD3 | 3.90 | 1.78 | 0.81 | 0.66 |
| | | UD4 | 3.69 | 1.69 | 0.78 | 0.61 |

| | | | | | | |
|-------------------------|-------|-----|------|------|------|------|
| Career orientation (UP) | 0.868 | UP1 | 3.94 | 1.78 | 0.89 | 0.79 |
| | | UP2 | 3.49 | 1.73 | 0.87 | 0.76 |

The reliability of constructs (Cronbach’s alpha) is very good, ranging from 0.868 to 0.932. The fit between the measurement model and the data is good, as shown by the goodness-of-fit (GOF) indices: $\chi^2=67.99$, $df=29$, $p=0.0006$, $\chi^2/df=2.344$, CFI=0.970, GFI=0.936, SRMR=0.0379, RMSEA=0.086.

4.2.2 Structural model

The discriminant validity of the model has been examined through the squared correlation test using the procedure outlined by Fornell and Larcker (1981). The results in Table 3 show that the square root of the AVE is greater than the correlations between constructs, which is evidence of discriminant validity.

Table 3. Results of convergent and discriminant validity

| | CR | AVE | UI | UCS | UD | UP |
|-----|-------|-------|--------------|--------------|--------------|--------------|
| UI | 0.928 | 0.865 | 0.930 | | | |
| UCS | 0.933 | 0.874 | 0.572 | 0.935 | | |
| UD | 0.873 | 0.632 | 0.564 | 0.614 | 0.795 | |
| UP | 0.873 | 0.775 | 0.632 | 0.431 | 0.638 | 0.880 |

Note: The bold diagonal numbers represent the square root of AVE

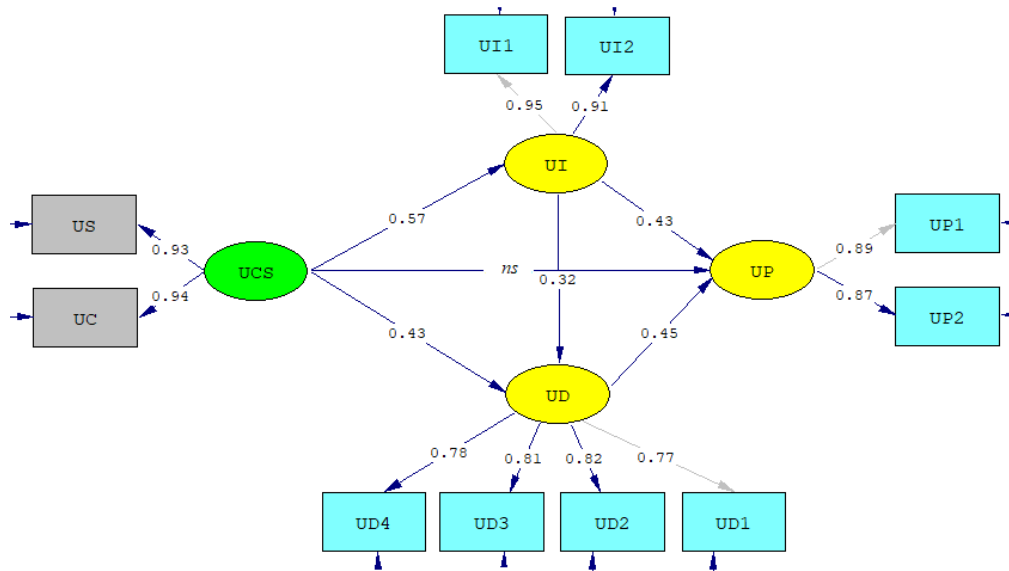
A structural equation modeling (SEM) approach was carried on to test the fit between the research model and the data. The model testing results are presented in Figure 3. The fit of the structural model with the data is also good, as shown by the GOF indices: $\chi^2=67.987$, $df=29$, $p=0.0006$, $\chi^2/df=2.344$, CFI=0.970, GFI=0.936, SRMR=0.0379, RMSEA=0.086.

The model testing results show that all hypotheses are supported except for H3 since the path from UCS to UP is not significant ($p=.297$).

Usefulness for collaboration and socialization (UCS) has a positive influence ($\beta=0.57$, $p=0.000$) on finding relevant information and resources (UI), thus supporting H1. The usefulness for collaboration and socialization (UCS) has a positive influence ($\beta=0.43$, $p=0.000$) on the usefulness for personal development (UD) thus supporting H2. UI has a positive influence on both UD ($\beta=0.32$, $p=0.000$) and UP ($\beta=0.43$, $p=0.000$) which shows that H4 and

H5 are supported. The usefulness for personal development has a positive influence ($\beta=0.45$, $p=0.000$) on the usefulness for career orientation (UP), thus supporting H6.

The model estimation results are presented in Figure 3.



Chi-Square=67.99, df=29, P-value=0.00006, RMSEA=0.086

Figure 3. Structural model estimation results

The model explains 32.9% variance in the usefulness for collaboration and socialization, 44.4% in the usefulness for personal development, and 52.1% in the usefulness for career orientation.

4.3 Discussion

The proposed model highlights the benefits of social learning in a technology-enhanced environment and highlights a path in university students' formation that is based on collaboration, socialization, and exchange of information and resources for personal and professional development.

The results confirms the findings of other studies (Redecker et al., 2010; Lampe et al., 2012) showing that in a technology-enhanced learning space the collaboration and socialization with colleagues facilitate the access to useful information as well as the sharing of educational resources (Wang et

al., 2014; Arteaga-Sanchez et al., 2014; Jong et al., 2014).

The results confirm that there is a strong relationship between personal development (skills and competencies) and career orientation (Josefsson et al., 2015; Rutten et al., 2016). Facebook provides students with possibilities to present themselves and what they know in a personal profile, to join groups of interest and to network with researchers and practitioners. Personal skills, including digital skills, enable effective use of social media applications and play an important role in taking advantage from career opportunities.

As regards the level of perceptions, the analysis of the observed scores show that students rated differently the four dimensions of the Facebook usefulness. In the first place in their preferences was the usefulness for collaboration and socialization, then the usefulness for finding information and resources. The items related to career orientation have been rated slightly below the neutral value. The items related to personal development have been rated surprisingly low, which may suggest that either the students are not aware of the importance of these skills and competencies or the interaction with colleagues and the university-related discussions are very rare.

The results of this study have several implications for researchers and practitioners. First, it provides useful insights into the educational potential of Facebook. Second, it shows that the educational potential of Facebook for personal development and carrier oriented is not exploited.

Teachers should find ways to integrate social media into the educational process. On the formal education side, they should provide educational content and moderate debates on critical learning topics. On the informal education side, they should raise awareness of the specific benefits of social media for skills development and carrier opportunities.

There are several limitations of this work. A limitation is related to the small number of items for three of the four constructs. Another limitation is related to the sample size. Last but not least, the sample includes mainly college students in the first year of study, which might explain the low awareness of the importance of personal development and career orientation.

5. Conclusion

The main contribution of this study is an empirically validated model that explains and sheds light on the relationships between four dimensions of the

Facebook usefulness for university students: information, collaboration & socialization, personal development, and career orientation.

The findings show that Facebook is a suitable tool to develop students' skills and competencies as well as to get them oriented towards the future profession. However, the relatively low perceptions of Facebook's usefulness for personal development and career orientation suggest that the informal use of Facebook is not enough as well as the fact that the Facebook educational potential is underexploited. The university curriculum should integrate guidance on how to effectively use social media for students' formation.

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