

Role of Internet Dependency on Online Social Capital among Graduate Students in University of Putra Malaysia

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Abstract

This study examined to study how respondents rely on the Internet to fulfill the various life goals dimensioned into understanding, orientation and playing goals, and how this dependency relates to the generation of social capital. Further, it examined the resources of social capital in terms of bonding social capita and bridging social capital. In this study quantitative research approach was applied. To achieve the purpose of this study, the cross sectional research design was used. In this study a questionnaire was used as instrument for data collection. The population of this study is graduate science and social science students in University Putra Malaysia (UPM). One of the major assumptions that this study focuses on is that Internet understanding dependency, orientation dependency, and play dependency and news attention influenced the online social capital. The structural equation model analysis showed that use of Internet with goals of the understanding and orientation as latent constructs, were found to be significant in relationship with online social capital. The structural equation model analysis showed that use of Internet with goal of play as latent construct no positive significant relationship with social capital online.

Keywords: Internet dependency, Understanding dependency, Orientation dependency, Online social capital.

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1. Introduction

One of the most outstanding concepts in social science is social capital. It is also a salient concept in recognizing the social network resources which can be used to facilitate the process of society development and to improve the quality of life. Social capital develops in the form of individual asset that should be explored through a community or collective lifestyle (Marzuki et al., 2014).

This concept is linked to the available resources in a community or an individual. The Organization for Economic Co-operation and Development (OECD) defined the social capital as “Networks together with shared norms, values and understandings that facilitate co-operation within or among groups” (OECD, 2001). The significance of social capital can be understood when international bodies such as OECD, World Bank, Inter-American Development Bank and Asian Development Bank consider social capital as one of the key strategies because of its great potential in materializing the enactment of any certain policy.

Investment is important to turn Malaysia into the forefront of knowledge, because the E-economy necessitates innovation, creativity, and knowledge of human force. Malaysians request opportunities for social mobility, career improvement, self-development and a better work-life balance. Furthermore, Malaysia should improve its community capacity and social capital by strengthening social unity and decreasing social segregation (Mustapha, 2013). In the 11th and 12nd Malaysian Development Plans, social capital is deemed so important along with the economic and human capitals that, the Prime Minister, Najib stated: “Human capital, private capital and social capital are very necessary for the success of the New Economic Model (NEM), Malaysia Plans and Vision 2020”. (Najib, 2010).

Recently, there has been an increasing attention to the Internet use among Malaysian society, particularly the students. In Malaysia, the number of Internet users increased from 3,700,000 in the year 2000 to 20,596,847 in 2015. Consequently, the effect of this application is much more substantial. The research on the effect of Internet on social capital revealed that Internet use can bring about changes in individuals’ behaviors and attitudes including public attendance and volunteerism (Shah et al., 2002), group membership,

civic engagement (Jennings & Zeitner, 2003), political activity (Taveesin & Brown, 2006) and community involvement.

Recently, motivation of people for the Internet use (San José et al., 2008) and getting online information (Jepsen, 2007; Park et al., 2009; Westerman et al., 2008) were examined; nevertheless, this study examined how the relationship between individuals and the Internet influenced two indicators of online social capital: bonding and bridging, while there may be many other tenable models on social capital. The model specified in this study attempted to clarify whether the Internet dependency could play a role in re-energizing the online social capital. The social capital has been studied, focusing on type of activity and the time of Internet use (Jung et al., 2012, Neves, 2013). This study focuses on Internet dependency in the present situation of Malaysian society, having influence on the online social capital.

This research contributed to combine earlier research frameworks and empirical findings. Explicitly, it merged two main theoretical frameworks into a single model: social capital theory and media system dependency theory. Principally, this research aimed to fill the hypothetical gap in the knowledge related to the online social capital by integrating the arbitrary role of Internet dependency on online social capital.

The novelty of this study is regarding its population as university student. Indeed, university students are the main Internet users; thus, this viewpoint offers improved knowledge of the internet dependency effects on online social capital as well as a more profound understanding of this phenomenon. In line with the emphasis of the Malaysia's 10th development plan on social capital, the outcomes of this study can be helpful to the country strategy for the improvement of social capital level.

2. Theoretical framework

Technology development has changed the single-function model to multiple functions. Modern technology is popular mostly due to meeting different requirements of the users rather than meeting a specific requirement optimally. Therefore, multiple-function technologies have various impacts. Thus, it has become important for the enthusiastic researchers to study the consequences of

developments and the relevant applications. It is, in fact, a trend in Internet social demands to investigate the influential position. This realm is influenced by the studies investigating the mutual impacts of media applications in terms of theoretical insights and research strategies, so it is placed in the field of media studies. One of the common frameworks to study the consequences of media behavior is the dependency theory which is able to investigate the impacts of the Internet on social behaviors. The main principle of this theory is that the public media is so necessary and crucial for the society that the individuals depend on them to perform some social actions. This theory is rooted in the theories of functions. Such theories state that the audiences depend on the media for exchanging cultural value in their environment, for recreation and pleasure, shopping, and also for changing basic social subjects. In fact, these functions form the role of the media in modern societies.

The term 'media dependency' was originally used by Ball-Rokeach (1976) DeFleur and Ball-Rokeach (1975); the theory describes dependency as a "relation between individuals' goals and the extent to which these goals are contingent upon the resources of the media system [in which] those resources have the capacities to create and gather, process and disseminate information" (Ball-Rokeach, 1993). Individual media dependency theory derives from media system dependency theory and provides some concrete means to assess individual-level dependency relations with regard to a specific media (Carillo et al., 2014).

Individual media dependency is composed of three dimensions: understanding, orientation and play (Ball-Rokeach, 1989, 1985), which are divided into social and personal dimension, providing six dependency relation levels of the individual with the medium: self-understanding, social understanding, orientation to action, orientation to interaction, solitary play and social play. Based on individual media dependency propositions and their empirical findings, Internet dependency is conceptualized as the extent to which individuals depend on the Internet to fulfill their social and personal goals (Patwardhan & Yang, 2003a, 2003b). This construct focuses on individuals' relational experience with the Internet assuming that the Internet's

rich resources of information (such as news, products, and entertainment) facilitate individual pursuit of understanding, orientation and play goals.

Media dependency theory is selected as one of the underlying theories of this study based on media system dependency's propositions and empirical findings. Internet dependency relations are conceptualized as the extent to which individuals depend on the Internet to fulfill their social and personal goals. This theory also provides a framework which can guide sociologists and researchers in social and communication contexts in their approach to directing and focusing on the Internet usage. In this study, it will be used to explain the extent to which Internet dependency relations through three indicators i.e. understanding dependency, orientation dependency and play dependency influence social capital in online environments.

Social capital theory is selected as one of the underlying theories of this study due to its importance in defining, describing, measuring and explaining of intrapersonal and quantity of interpersonal interactions in online environment. Also, this theory has considered the structure and content of aspects as dimensions of social capital and a necessary precondition for interaction. Furthermore, conceptual model for social capital as one of the well-known models among researchers and sociologists is the best for this research in the context of social networks. Before this, most studies used this conceptual model to interact in offline environments. Therefore, this study describes social capital theory as an extension of individual media dependency theory, and framework of this research is expected to become an extended version of the media dependency to the online environments of communication context.

The dependency level and types of using the Internet in forming and developing interpersonal relationships have been taken into account in this period. This model also indicates a certain type of the Internet use which means news application is considered to be a complement for behavior change and online social capital. It is one of the factors influencing this model.

3. Methodology

In this study quantitative research approach was applied. The present study uses cross sectional design to fulfill its aims. For the purpose of this study the survey method was used and a questionnaire was distributed among the respondents as the tool for gathering data. A survey was conducted in the public university of Kuala Lumpur in Malaysia. About 365 questionnaires were randomly distributed to seven faculties/ Institutes in UPM.

3.1. Research Hypotheses and Questions

This study specifically designed to answer the following research questions:

1. Is there any significant relationship between understanding dependency of internet and students' online social capital?
2. Is there any significant relationship between orientation dependency of internet and students' online social capital?
3. Is there any significant relationship between play dependency of internet and students' online social capital?

Based on the above research conceptual framework, this study assumes the relationship between understanding dependency, orientation dependency and play dependency and online social capital. Therefore, the research hypothesized that:

H1. There is a significant relationship between understanding dependency and online social capital.

H2. There is a significant relationship between orientation dependency and online social capital

H3. There is a significant relationship between play dependency and online social capital.

4. Results and Findings

4.1. Demographic Profile of Respondents

This section describes the general profile of the respondents which consists of gender, age, educational level, marital status, ethnic, rate comfort level with the Internet. As presented in Table 4.1, more than half (52%) of respondents were female and 48. % were male. In terms of respondent's marital status, 81.7%

them were single, followed by 17.4, married, and only.9% were divorced and separated. With respect to respondent's educational level, majority (80.9%) of them was doing their masters, and only 19.1% of the respondents were students of PhD. The respondents were predominantly Malay (60.4%). The rest belonged to the minority ethnic groups such as Chinese (26.7%) Indian (9.8%) and others ethnic groups (3.1%).

Table 1. Distribution of respondents by Gender, Educational level, Marital Status (n=356)

Variables	Frequency	Percentage
Gender		
Male	185	52.0
Female	171	48.0
Total	356	100
Educational status		
Master	288	80.9
PhD	68	19.1
Total	356	100.0
Marital Status		
Single	291	81.7
Married	62	17.4
Divorced	2	.6
Separated	1	.3
Total	356	100
Ethnic		
Malay	215	60.4
Chinese	95	26.7
Indian	35	9.8
Others Ethnic	11	3.1
Total	356	100

4.2. Age

Out of 356 respondents, more than half (55.1%) were in the younger age group (below thirty six years old) followed by 22.2% were in (26-29) age group, only 2.0% were in the 42 and above age group, and the average of respondent's age was 27 years (See Table 2) .

Table 2 .Distribution of respondents by Age (n=356)

Age Variable	Frequency	Percentage	Mean	SD
22 - 25	196	55.1		
26 - 29	79	22.2	27.25	5.68
30 – 33	41	11.5		
34-37	17	4.8		
38-41	16	4.5		
42and above	7	2.0		
total	356	100.0		

4.3. Specifying the Structural Model

To test the hypotheses of the study and the relationships between the independent exogenous variables (understanding dependency, orientation dependency and play dependency) and dependent endogenous variable (online social capital). The research model of this study was analyzed by using SEM technique.

The structural model is specified by the relationship between one variable to another variable to represent the hypothesis of study. The first to third objective of this study was to identify the relationship between the independent variables (understanding dependency, ordination dependency, and play dependency) and social capital among students of UPM University in Malaysia.

The goodness of fit indices of the structure model set the acceptable structural path fitness as all the absolute fit measures completely satisfy their cutoff value (RMSEA = .078, CMIN/DF = 43.965, RMR = .070, and all the incremental fit indices reach the respective acceptable threshold values (CFI= .942, IFI= .943, TLI=.884, GFI= .970).

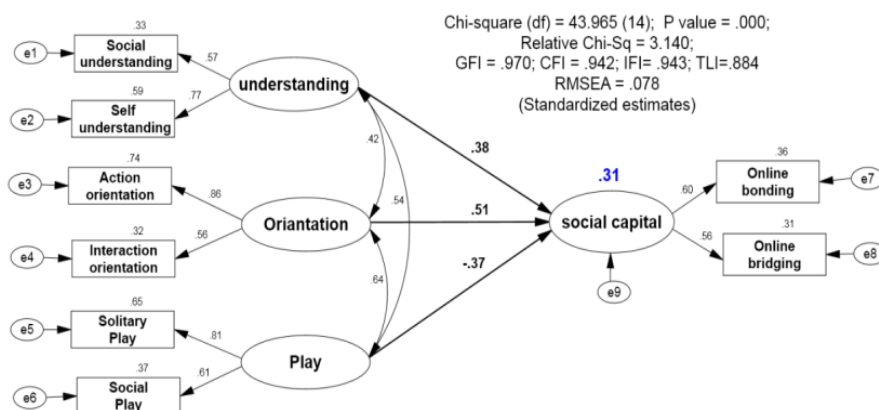


Figure 1. Direct structural path model with standardized estimates

The unstandardized and standardized regression weights for direct structural model are shown in Table 4.8. The estimates of the path coefficients showed the strengths of the relationships between the dependent and independent variables of study (Hair et al., 2010). Based on the result computed, the three paths coefficients of the proposed research model were significant based on critical test (C.R >+_{1.96}, P<.05).

Table 5. Regression weights in direct structural model

Hypothesized Path	Estimate	S.E.	Standardized Regression Weights	C.R.	P
Understanding → Social capital	.340	.120	.379	2.827	.005
Orientation → Social capital	.467	.140	.507	3.333	.000
Play → Social capital	-.228	.107	-.368	-2.121	.034

SE: Standard error of regression weight; C.R: critical ratio for regression weight; p: level of significant; *** p <.001

Table 5 showed the significance of structural relationships among the research variables and the standardized path coefficients that can answer to 3 hypotheses with the first to third objectives:

H1: There is a significant relationship between understanding dependency and online social capital.

H1 assumed that there is a significant relationships between student's understanding dependency and students' online social capital. As depicted in Figure 1 and Table 5, understanding dependency latent construct consist of two indicator of self- understanding and social understanding which was found to have positive relationship with online social capital ($\beta = .379$, C.R = .2.827 P = .005). Thus, H1 is accepted.

H2: There is a significant relationship between orientation dependency and online social capital.

H2 assumed that there is a significant relationship between student's Orientation dependency and students' online social capital. As portrayed in Figure 1 and Table 5, the orientation dependency latent construct including two indicator of active and inactive orientation was found to have linear positive relationship with online social capital ($\beta = .507$, C.R = 3.333, P = .000). Thus, H2 is accepted.

H3: There is a significant relationship between play dependency and online social capital.

The H3 assumed that there is a significant relationship between play dependency and online social capital. The result of the structural model, according to Figure 1 and Table 5, indicated that there is not a linear positive relationship between the play dependency latent construct including two indicators of solitary play and social play with online social capital ($\beta = -.368$, C.R = -2.121, P = .34). Therefore, the H3 was rejected.

5. Discussion

One of the major assumptions that this study centers on it is that Internet understanding of dependency relation, orientation dependency relation, and play dependency relation and Internet news attention influenced the online social capital. Also, the research framework was developed to explain how

Internet news attention serve to mediate the relationship between independent variables and online social capital .In order to test these assumptions three hypotheses were developed. Specifically, the first group of hypotheses predicted a relationship between the independent variables associated with the understanding dependency (H_1), orientation dependency (H_2), and play dependency (H_3).

The first hypothesis (H_1) examined the relationship between the understanding dependency and online social capital. The structural equation model analysis showed that use of Internet, with the goal of the understanding as latent construct, was found to have significant relationship with online social capital. This study produced results which corroborate the finding of a great deal of the previous work. The finding of the current study, about the effect of social understanding on online social capital, is consistent with Jung et al., (2012). He argues that the informational use of television news has been found to directly or indirectly influence political and civic participation in a positive manner. Also this findings support previous research (Prior, 2005) that people who like news take advantage of abundant political information to become more knowledgeable. Beaudoin and Thorson (2006) conclude that the more Internet users are gratified by being recognized, understanding the world, helping them to socialize and being entertained through online content creation. The second hypothesis (H_2) examined the relationship between the orientation dependency and online social capital. The structural equation model analysis showed that orientation dependency of latent construct was found to have significant relationship with online social capital. The finding of the current study is to study the effect of orientation understanding on online social capital which is consistent with Ball-Rokeach (1985). These objectives range from the need to find the product or service best suited to their needs, to obtain as much information as possible on a product/service or world events, or the need to get away from everyday problems and tensions. Also this finding supports previous research of Patwardhan and Yang (2003) which claimed that the Internet to be a medium that attracted active audiences who sought a specific purpose or goal. They found Individuals seeking action orientation goals were more likely to make online purchases (Patwardhan & Yang, 2003).

Guo and Poole (2009) points out that Internet use is related to flow the experience of online shopping. The third hypothesis (H_3) examined the relationship between the play dependency and online social capital. The structural equation in model analysis showed that play dependency of latent construct has no positive significant relationship with online social capital. Thus, the H_3 is rejected. Wellman (2000) cites two kinds of Internet use: social use, such as emailing and chatting, and non-social use, such as web browsing and downloading music and games. Being involved in anti-social activities can take people away from society and family life even more than when they are watching TV. In contrast, when people use the Internet to communicate with friends, family and organizations, it acts as a tool for creating and maintaining social capital. The findings of this study were consistent with the numerous previous studies' results (Beaudoin & Thorson, 2006; Fleming et al., 2005; McLeod, et al., 2001; Brehm & Rahn, 1997; Norris, 1996). Also online gaming was proved to be positively correlated with poor interpersonal relationships (Kwon et al., 2011; Punamaki et al., 2009; Lo et al., 2005). In another study, the online gaming dependency was positively related to the lower levels of social engagement and thereby greater degrees of social isolation. In brief in many major past studies the play dependency was associated with poor interpersonal relationships.

6. Conclusion

Researchers have consistently identified the influence of mass media on social capital. Internet plays an important role in online social capital. This study attempted to investigate the validity of media dependency theory in individual level and social capital theory regarding to the perspective of use of Internet with verity of goal as understanding, orientation and play among graduate students. Through the comprehensive and extensive discussion, several significant findings have emerged from this study. Each variable (understanding, orientation) appeared significant in contributing to students' online social capital. Based on the findings, this study is consistent with the other studies and confirmed that Internet usage with understanding and orientation goals affects the online social capital. The finding also reinforced

the negative effect of Internet usage with play goal as the fundamental variable in predicting the student's online social capital. It is noteworthy that future researchers consider the impact of the Internet on the framework of dependency theory in other types of capital including economic, cultural and social capital. In addition to cognitive researches, such as the current study, it's worth mentioning that creating necessary conditions whose most important ones are technical infrastructures facilitate citizens' access to such equipment. Development of education and technical skills with social cohesion requires the development of the Internet infrastructures that would define a priority for the government officials. Although Internet dependency relations were found insignificant in predicting online social capital, the results may differ if this variable is used to examine other old media such as newspapers and radio or TV. It is also interesting if this study framework can be used to test other media in the near future. Thus, future research also can investigate the other media which can further improve social interaction such as offline bonding of social capital and offline bridging of social capital. This study adopted Internet individual dependency of the media system dependency theory; therefore, there is an opportunity for the future research to test cognitive Internet dependency relations. Future research will provide insight or information on the best sub-model sequences in relation to social capital. In Addition, there is also a possibility of testing for moderating this effect based on this sub-model sequence.

References

- Ball-Rokeach, S. J., & DeFleur, M. L. (1976). A dependency model of mass-media effects. *Communication Research*, 3(1), 3-21.
- Ball-Rokeach, S. J., Grant, A., & Horvath, A. (1995). *A scale for measuring the media dependency*. CA: Annenberg School of Communication.
- Ball-Rokeach, S.J. (1985). The origins of individual media-system dependency: A sociological framework. *Communication Research*, 12(4), 485-510.
- Beaudoin, C. E. & E. Thorson. (2004). Testing the cognitive mediation. *Communication Research*, 31(4), 446-471.
- Beaudoin, C. E. & Thorson, E. (2006). The social capital of Blacks and Whites: Differing effects of the mass media in the United States. *Human Communication Research*, 32(2), 157-177.
- Beaudoin, E.C., & Thorson, E. (2004). Social capital in rural and urban communities: Testing differences in media effects and models, *Journalism and Mass Communication Quarterly*, 81, 372- 378.

- Bosancianu, C. M., S. Powell, et al. (2013). Social capital, online and offline pro-social behavior. *International Journal of Internet Science*, 8(1), 49-68.
- Brehm, J., & Rahn, W M. (1997). Individual-level evidence for the causes and consequences of social capital. *American Journal of Political Science*, 41(3), 999-1023.
- Carillo, K., Scornavacca, E., & Za, S. (2014). *An investigation of the role of dependency in predicting continuance intention to use ubiquitous media systems: combining a media system perspective with expectation-confirmation theories.*
- DeFleur, M. L., & Ball-Rokeach, S. J. (1989). *Theories of mass communication.* NY: Longman.
- Jepsen, A. L. (2007). Factors affecting consumer use of the Internet for information search. *Journal of Interactive Marketing*, 21(3), 21-34.
- Jung, J. Y., Lin, W. Y., & Kim, Y. C. (2012). The dynamic relationship between East Asian adolescents' use of the internet and their use of other media. *New Media & Society*, 14(6), 969-986.
- Jung, N., & Valenzuela, S. (2012). Social media use for news and individual's social capital, civic engagement and political participation. *Journal of Computer-Mediated Communication*, 17, 319-336.
- Loges, W. E. & Ball-Rokeach, S.J. (1993). Dependency relations and newspaper readership. *Journalism & Mass Communication Quarterly* 70(3), 602-614.
- Marzuki, N. A., Ahmad, N. A., Hamid, A. S. & Ishak, M. S. (2014). Social capital in Malaysia: A pilot study. *Asian Social Science*, 10(12), 202-210.
- Neves, B. (2013). Social capital and Internet use. *Sociology Compass*, 7(8), 599-611.
- Norris, P. (1996). Does television erode social capital? A reply to Putnam. PS: *Political Science & Politics*, 29, 474-480.
- Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the Internet worldwide.* Cambridge: Cambridge University Press.
- Patwardhan, P. and Yang, J. (2003). Internet dependency relations and online consumer behavior: a media system dependency theory on why people shop, chat, and read news online. *Journal of interactive advertising* 3(2), 57-69.
- Patwardhan, P., & Yang, J. (2003b). Understanding internet dependency relations in an academic community: Media system dependency theory. Southwestern Mass Communication.
- Punamaki et al., (2009). The associations between information and communication technology (ICT) and peer and parent relations in early adolescence. *International Journal of Behavioral Development*. (33) 6, 556-564.
- San José-Cabezudo, R., Gutiérrez-Cillán, J., & Gutiérrez-Arranz, A. M. (2008). The moderating role of user motivation in Internet access and individuals' responses to a Website. *Internet Research*, 18(4), 393-404.
- Shah, D. V., Cho, J., Eveland, W. P., & Kwak, N. (2005). Information and expression in a digital age modeling Internet effects on civic participation. *Communication research*, 32(5), 531-565.
- Shah, D. V., Schmierbach, M., Hawkins, J., Espino, R., & Donovan, J. (2002). Nonrecursive models of Internet use and community engagement. *Journalism & Mass Communication Quarterly*, 79, 964-87.
- Taveesin, N. J., & Brown, W. J. (2006). The use of communication technology in Thailand's political process. *Asian Journal of Communication*, 16(1), 59-78.
- Westerman, D., Van, B., Klein, K. A., & Walther, J. B. (2008). How do people really seek information about others? Information seeking across Internet and traditional communication channels. *Journal of Computer-Mediated Communication*, 13(3), 751-767.
- Yang, J. (2004). *Zooming in on American civic life: Modeling social capital from Internet dependency relations and Internet current affairs news consumption.*