The Development of Online Friendship Scale

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ABSTRACT

This article discusses concept and measurement of online friendship in an Indonesian context. Online friendship is considered to be superficial due to the lack of face-to-face interaction and emotional intimacy. Based on grounded theory research, online friendship consists of five dimensions: caution, voluntariness, companionship, sharing, and mutual support (Study 1). UGM’s Online Friendship Scale was developed as measurement of online friendship (Study 2). Initial set of items was administered to university students (N = 42) and resulted in 21 reliable items (r = .408-.687). Construct validity testing was appropriately used for the data (Bartlett’s Test = 1174.1 (p<.05), KMO values = .837). CFA confirms that the online friendship scale is multidimensional. The factor loads came up with four dimensions: sharing (30.197%), voluntariness (8.576%), companionship (8.256%), and mutual support (7.769%). Sharing (information and knowledge) was the dimension with highest contribution, indicating online friendship serves more as means of networking between users rather than social bonding.

KEYWORDS
Adolescent, Indonesian Context, Online Friendship, Online Friendship Scale, Scale Development, Social Network Sites

INTRODUCTION

In the current era of information and digital technology, a new form of friendship emerges. It challenges the concept of traditional friendship. Friendship is defined as a “voluntary interdependence between two people over time, that is intended to facilitate socio-emotional goals of the participants, and may involve varying types and degrees of companionship, intimacy, affection, and mutual assistance” (Hays, in Demir & Ozdemir, 2010; Collins & Madsen, 2006). Three aspects have been known to form the basis of friendship, namely reciprocity, interdependency, and voluntary actions (Rubin, Bukowski, & Parker, 2006). Hence, exploring the current style of friendship becomes essential, mainly to understand young generations these days.

Online friendship develops and evolves through computer-mediated communication (CMC) in an online social context (Chan & Cheng, 2004). The emergence of social networking sites (SNS) that connect millions of internet users worldwide, such as Friendster, MySpace, LinkedIn, and Facebook, significantly increases the number of online friendship. Situated in completely different space, unusual phenomena begin to occur and are failed to be explained by existing psychological and social theories of friendship.

DOI: 10.4018/IJCBPL.2017100102

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CMC became increasingly popular in the 1990s and drives many experts to investigate the nature of interpersonal relationship in cyberspace as well as its antecedents (Hwang, 2014), dynamics (De Choudhury, Sundaram, John, & Seligmann, 2010), and effects (Helliwell & Huang, 2013). For examples, the phenomena of love in the virtual world indicates the unique development of online relation (Cooper & Sportolari, 1997); occurrence of self-contradiction and distinct dynamics of personality (Amichai-Hamburger, Wainapel, Fox, 2002), and more intense and frequent expression resulting from online disinhibition effect (Suler, 2004).

Some studies have specifically investigated online friendship, its development and features. Parks and Floyd (1996) investigated how people build friendships in cyberspace. Friendship is a typical relationship in cyberspace, formed with new acquaintances in SNS. It evolves with time and usually progresses into offline situations. For many people, cyberspace is another place to meet and the friendship will eventually move into the real world.

Osborn (2000) defined online friendship based on its characteristics. The methods include applying characteristics of offline friendship onto online friendships and seeing the difference in scores that the subjects gave to their online and offline friends. Similar to offline friendship, online friendship is characterized by the presence of mutuality, authenticity, fun, complementarity, understanding, and commonality, but in a lower level. However, since this study sought to explore online friendship in offline friendship perspective, no new findings were found regarding the nature of online friendship.

Chan and Cheng (2004) compared the quality of online and offline friendship at different stages of development based on seven dimensions of interpersonal relationships, namely interdependence, breadth, depth, code change, understanding, commitment, and network convergence. In line with previous study, online friendship has a relatively lower quality compared to offline one. However, as time passes, allowing more messaging exchanges, the quality will increase to the point that it no longer differs much with offline friendship quality.

Talmud and Mesch (2007), and Antheunis, Valkenburg, and Peter (2012) found that the quality of online social relations depends on the duration and diversity of topics and activities that people take together. Time plays a vital role because it facilitates the development of collective history and identity. Meanwhile, intimacy is formed through participation in joint activities and discussion of various issues of personal concern. Proximity to friends is a function of perceived social similarity, diversity of content and activity, and duration of relationships.

These studies contribute significantly to a better understanding of online friendship and its influencing factors. However, there is no study found to have focus on conceptualizing online friendship. The current conceptualization of online friendship is still largely affected by the conceptualization of offline friendship and fails to capture the accurate features of friendship situated in cyberspace. To fill this theoretical gap, the current research aims to discover how online friendship is perceived by the people who experience it. The research questions posed are: What is the meaning of online friendship according to SNS users? What are the dimensions of online friendship that might distinguish it from traditional-offline friendship?

To explore the concept of online research, we conducted two studies. In Study 1, we conducted a qualitative study to reveal the experience of undergoing online friendship from several active users of SNS. In Study 2, to validate the concept of online friendship, we developed an online friendship scale based on the dimensions found and analysed it using Confirmatory Factorial Analysis (CFA).

The purpose of this study is important, not only to develop theory for online friendship, but also to understand online social behavior in the context of developing country such as Indonesia. Investigation of online friendship in Indonesia is relatively rare, despite the fact of Indonesia being the world’s eighth largest internet user. Indonesian internet users reached 88 million people. Young
people aged 18-25 years (49%) is the most extensive user, using it mainly for socializing (Asosiasi Penyedia Jasa Internet Indonesia, 2014).

This situation poses some risks to many countries because intensive use of social media is often not accompanied with proper digital literacy (Suwana & Lily, 2017; Fardiah, Rinawati, & Karsa, 2015; Rice, Haynes, Royce, & Thomson, 2016). There are several cases in Indonesia that indicate the occurrence of cybercrime by utilizing online friendship as its modus operandi. By understanding the nature and dynamics of online friendship, we can provide informative feedback for healthy online friendship promotion efforts.

METHODS

Exploratory research in Study 1 used grounded-theory methods as the primary methodological framework, in which theories are derived from data (Charmaz, 2006). This method is better for exploring online friendship quality that has never been studied before, especially in Indonesian context.

Data were collected in two stages: focus-group discussions (FGD) and surveys with open-ended questionnaires. FGD was conducted to ten students from various faculties in Universitas Gadjah Mada and four high school students. All participants are selected with the main criteria being active in online social media, such as Facebook and Twitter. In the FGD, the questions asked about the use of social media (activity and intensity) and the process of online friendship. After the FGD, a survey was conducted on 86 students in the third semester using questionnaires. There are three questions asked in the questionnaire:

1. According to you, what is meant by online friendship?
2. What do you experience when you feel like you have online friends?
3. What do you experience when you feel like you are unable to have online friends?

Data were collected and analyzed using grounded theory method (open coding, focused coding, and axial coding). In open coding stage, several keywords were obtained. The next stage identified categories and subcategories of these keywords, resulting in major themes constituting the core or central phenomenon of the topic under study.

RESULT OF STUDY 1: EXPLORING THE QUALITY OF FRIENDSHIP ON SOCIAL NETWORKS

Core Category 1: Definition of Online Friends

The core category of “definition of online friendship” consists of five categories: location, partner, befriending method, nature of interaction, and friendship goals. The five categories are based on 17 categories shown in Table 1. The definition of online friendship indicates that it has several different relational characteristics from offline friendships, which in turn affect activities that occur in online environment, as further elaborated in core category 2.

Online friendship is interindividual relation that occurs among people in the virtual world. Online friendship occurs through utilization of online media, such as internet applications, websites, and social networks, such as Facebook, Twitter, and MySpace. Online friendship is established among people who have or had known each other in the real world, either in present or past time. In this case, online friendship acts as an extension of space and support for offline friendship.

Online friendship can also be made with acquaintances in cyberspace. Its development involves the presence of interaction and introduction that can turn strangers into friends, even evolves further into offline friends; while the absence of further transition would leave them to be strangers. Uniquely,
Table 1. Core categories, categories, and subcategories

<table>
<thead>
<tr>
<th>Core categories</th>
<th>Category</th>
<th>Sub-category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition of Online Friendship</td>
<td>Location</td>
<td>Exist in the virtual world</td>
</tr>
<tr>
<td></td>
<td>Partner</td>
<td>Offline friends</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New friends from social media</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strangers</td>
</tr>
<tr>
<td>Befriending Method</td>
<td>Modality</td>
<td>Message exchanges in public and private media</td>
</tr>
<tr>
<td>Nature of Interaction</td>
<td>Feign, unreal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not in-depth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High self-disclosure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Uncertainty and lies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Freedom, but with high caution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not limited by time &amp; space</td>
<td></td>
</tr>
<tr>
<td>Purpose of making friend</td>
<td>Sharing knowledge &amp; information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Building network (with new people)</td>
<td></td>
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<tr>
<td></td>
<td>“Silaturahim” (reconnect with old friends)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“KEPO” (Knowing every particular object)</td>
<td></td>
</tr>
<tr>
<td>Cautiousness</td>
<td>Awareness on the dangers of cyberspace</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Being selective and cautious</td>
<td></td>
</tr>
<tr>
<td>Voluntariness</td>
<td>Freedome on personal preference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Freedom to connect and disconnect a relationship</td>
<td></td>
</tr>
<tr>
<td>Mutual Support</td>
<td>The need for equal reciprocal interaction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The need for positive interaction</td>
<td></td>
</tr>
<tr>
<td>Companionship</td>
<td>Activities together</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compatible communication</td>
<td></td>
</tr>
<tr>
<td>Sharing</td>
<td>Sharing information, knowledge, thought, &amp; feelings</td>
<td></td>
</tr>
</tbody>
</table>

strangers can still be labeled “friends” as long as the personal account between the two parties is still connected.

Computer-mediated communication (in form of personal computers or smartphones) limits the depth of the interaction of online friendship due to the absence of nonverbal cues. People rely on at least three modalities to communicate to each other, i.e., text (visual-verbal), images or photos (visual-pictorial), and video (audiovisual) to exchange messages. Therefore, interpersonal compatibility which is essential for the continuity of friendship depends on how one uses these three modes of communication.

In general, we get friends from the real world and then continue in cyberspace. I think real friendship only exist in the real world .... (Subject 2, questionnaire)

... it’s very easy to gain and lose friends online. This is what makes it (friendship online) different from the friendship in the real world, namely the lack of respect for each other. While the positive side of online friendship is that it is an effective medium for sharing information. (Subject 40, questionnaire)

Regarding not being able to make online friends, I personally do not care much about it. I am able to keep intimate friendship and communication in the real world. (Subject 41, questionnaire)

For most subjects, online interaction is considered pseudo, abstract, or unreal, unless it can continue in the real world. The formed relationship is also considered not intimate and sincere, as
well as lacking emotional attachment. Someone can get new friends as quick as losing them (just click “unfriend”).

The purpose of befriending in cyberspace is not to gain complete support, especially the emotional one. The main purposes are to share or exchange information, to build networks with new people, and to maintain relationships with old friends from the real world. Online friendship works more as supporter of offline friendship. Online friends serve as additions, extensions, add-ons, or substitutes for offline buddies.

Due to its secondary role, one considers friendship in cyberspace as less important than friendship in the real world. Virtual and real world are understood as a separate world and have their own life. Online friendship with friends in the real world can be connected and disconnected without affecting offline relations. For some reason, the degree of friendship can be decided, and a person can remain ordinary all time without causing relational problem. People also do not have to try hard to be a good friend for his friend in cyberspace.

**Core Category 2: Online Friendship Dimensions**

The second core category, “dimensions of online friendship”, shows some distinct characteristics of online friendship which affect online activities. There are at least five categories, namely cautiousness, voluntariness, supportive mutuality, companionship, and sharing behavior.

**Cautiousness**

The need of security stands out in online relationships, especially with strangers (people who are never seen or known before in the real world). Cautiousness is closely related to the awareness of the dangers of cyberspace. For some subjects, the virtual world is considered as uncertain and full of lie wherein people can use false identities and have evil intentions. Information about people is limited which consequently makes background checking –which is essential for decision making to be friend or not- difficult to do.

> There was a stranger on my friend list (I didn’t know how it came to be). He chats me and I responded casually, but after awhile he became interested in me ... I refused to have a relationship and no longer stayed in contact with him by ignoring his messages. (Subject 5, questionnaire)

> At first I had good communication with a friend on social networking. We know each other closely, but over time the person becomes impolite, and eventually I was forced to block him/her. (Subject 52, questionnaire)

The most prominent behavior in this category is acting in selective and vigilant manner before approving friend requests and during the period of befriending, especially with strangers. Initially, to ensure security, subjects take into consideration the stranger’s name (whether it is a real name of the person or a cheesy one), bio information, avatar or profile picture (real photograph or not), status of “mutual friend”, and recommendation from others. If these criteria are not met, subjects unhesitatingly refuse the friend request.

In other cases, when subjects have approved a stranger’s friend request, the assessment is made based on the quality of their interaction during a period. Subjects will stop considering a person as their friend, ignore him/ her, cancel friendship or even block that person, when they perceive suspicious intentions, experience negative communications (e.g., offensive speech), or lack in mutual interaction expected.

**Voluntariness**

Online friendship has more freedom in comparison to the offline one. One can freely and easily invite or approve friend invitations using “add/accept friend” and “follow” feature so that the number of
one’s friends can reach hundreds and even millions of people. They can be friends, family members, now and past acquaintances, public figures, and national/international celebrities. One can also free to cut friendship with anyone they dislike, whether it is a stranger or someone they know, without any penalty.

Online friendship happens without coercion based on personal initiative. Each person has a great control to make or break their relationship with others. However, the voluntariness is not immune from certain social influences. This was demonstrated in the experience of one of the subjects of focus group discussion:

On Twitter I do not foll-back (follow back) friends who do not ask, because I’m the type of person who does not like to be an open follower. ... (but) usually if it’s someone I know who asks for a follback, then I will follback. If suppose he/she does not ask and I do not know who it is then I won’t follow. ... if I need it, I’ll follow ... like an artist. Or maybe suppose I like some of my artists then I’ll follow to see their activities. (Subject IE, FGD)

Voluntariness is bound to an unstated norm among social media users, i.e., mutual interaction (equal reciprocating). If someone does something for others (e.g., follow his page), then the partner is “obliged” to do the same (follow-back). If someone has commented or pressed the “like” button on his friend’s status, then his friend in other occasions have to do the same for that person. If someone does not do the same thing, this unfair behavior would hurt their relation. Unfairness does not support online friendship relation.

**Mutual Support**

Mutual interaction is the determinant factor for sustainable online relation. Based on the survey, some subjects said that they wanted to cancel friendships or completely remove friendships, to be ignorant and unconcerned, as a form of retaliation because their friends did not interact in mutually reciprocal manner.

Mutual support is reflected in balanced and equal positive mutual interaction; “if you are given good things, you have to turn the same”, Friendship ends if there is no reciprocal interaction or only one party is active (e.g. messages are not responded well by by replying, not commenting, and ignoring it altogether; refuse to follow-back, or refuse to exchange information by staying private).

When a person does not get the expected feedback, then even if his or her peer status is still a friend, the person loses the sense of friendship. For people in social media, friends are people who want to interact reciprocally, mutually, and supportive with them. Reciprocal and mutual relations are a source of self-esteem and happiness. Unresponsiveness is threat for online friendship.

Some examples of experiences when I don’t feel like being friends are when I start communicating but was not well responded, they give rudimentary answers, or they don’t want to participate/comment on what I write on my status. (Subject 38, questionnaire)

In any social networking site, if there are interactions such as being addressed or greeted ... if we are treated as human being then we will also feel appreciated. Mutual greetings on Facebook, Twitter, and email are enough to show relationships. There are even groups or forum for discussion which is no different from the real world. Discussions can be done through social networking and the results are the same. The greetings and discussions, made me feel like my existence matters. I felt appreciated and acknowledged as a friend who are needed by others. The feeling of being acknowledged is especially strong when my online friend discusses and confides important matters to me. (Subject 44, questionnaire)
Companionship

Friends are partner to perform activities together, both in real world and in cyberspace. The existence of mutual and reciprocal relations denotes companionship. Even if there is no face-to-face interaction and lacking in nonverbal cues during communication, companionship can still be built through activities such as chatting, commenting or joking about a disseminated status, photo, information, news, or engaging in discussions in online forum or online community. Romantic relationships can be maintained through companionship in social networks. One of the subjects in this focus group discussions told:

Well people normally use Facebook to communicate with their girlfriend/boyfriend, right? I personally prefer to use Facebook chat or skype. Sometimes while waiting for him/her I’ll just play a game… (Subject IE, FGD)

At that time, I just got accepted into the Faculty of Psychology UGM, and through my social network I got to meet with new friends who also got accepted into the same faculty. At first, we only chatted through Facebook, but later exchanged phone numbers until we became best friends at Campus (Subject 46).

Companionship in online social media is not as deep and good as the companionship in the friendships formed in the real world. Although most people felt that online interaction lacks in proximity, emotional attachment, and warmth, it does not close the possibility that it might bring a sense of excitement. This factor is considered important to improve the quality of offline friendship relationships through the support of online relations.

Sharing Behavior

Sharing is the goal and primary activity in social media, ranged from sharing news or information, specific knowledge, life experiences, thoughts, to deep personal feelings. Sharing is a form of expression and self-disclosure. Sharing is a way to gain recognition for existence in social media, to identify interests among people who are friends, and to maintain existing relationships. Life in cyberspace is dynamic with people willing to share. People who do not share will be lost or cut-off because sharing is the key to obtain mutual response that determines existence and relationship.

However, not all sharing behaviors are accepted by social media users. Some forms of sharing behavior degrade the quality of friendship or even damage it, as it changes the judgment of the person sharing. The appropriateness of sharing behavior is assessed through the content of the information shared. Most people enjoy useful knowledge or information, relevant interests or hobbies, school assignments, and fun experiences, but hate (feeling uncomfortable with) inappropriate content to share with the public, such as excessive (overly emotional) expression, extravagant show of private life, or unimportant and unworthy talks.

At that time, my friend was being very overly dramatic with the things he was facing, such as when he was rejected by a girl and felt suicidal. I became angry and annoyed. (Subject 3)

… in Twitter, I just feel uncomfortable with the contents… sometimes he/she just blabbers about things that only discourage us… they comment on everything, even the smallest trivial things. (Subject IE, FGD)

Discussion: Online Friendship Model

Based on the definition and dimensions found, the dynamics of online friendship is described in Figure 1. Online friendship is a kind of friendship that takes place in online situation, involves two types of partners i.e. strangers encountered in SNS and known offline friends or relatives. These two types of people are responded differently by individual users. Most offline friends can readily be
accepted as online friends so that the online friendship functions as extension of offline friendship. However, toward strangers, individuals do a series of filtering as a manifestation of cautiousness.

Cautiousness affects one’s willingness to accept friendship invitations. Decision to approve invitation is related to self-assurance that the partner is not a dangerous person. Public profiles, names, and the existence of mutual friends are essential because they are the primary source of information about a person in the virtual world. If an online profile seems not genuine, then the friend request most likely will be declined.

Two people become “online friends” when two accounts are connected, but that condition does not necessarily generate real experience of friendship. Both parties need to be equally willing to establish mutual and supportive relationships for the friendship to survive. The existence of mutual and supportive interactions (giving positive impacts on the individuals involved) is essential because it is the only basis to judge whether someone is a good online friend. Someone will be considered a friend even if the mutual interactions are as simple as exchanging messages, liking, commenting on posts, and giving birthday greetings on social media. Mutual interactions show a mutually rewarding relationship among SNS users.

Mutual exchanges are illustrated in a variety of sharing behaviors, usually in the form of self-related information (personal experience, thoughts, and feelings) or general information (news, stories, jokes). This sharing turns on social networking sites, while the companionship that people experience becomes a source of joy when interacting on social networks.

From time to time, someone will evaluate his/her online friends and friendship status. If a friend provides him/ her secure feeling, respect, and joy, then online friendship would be preserved. Online friend will then be perceived as true friend. Otherwise, if a friend does unpleasant acts and disrespects the relationship (e.g., ignores), then the friendship would lose its credibility. One may avenge the same neglect, and on further adverse development, cancel the friendship.

Study 1 produced important findings. First, seeing these in perspective of previous studies, we found that four out of five online friendship dimensions is cognate with aspects of offline friendship. Good quality friendship, either in offline or online situations, demands sharing behavior and companionship as well as mutual support and voluntariness (Collins & Madsen, 2006; Rubin, Bukowski, & Parker, 2006). Some aspects, such as commitment and intimacy will develop later once online friendship is eventually transformed into an offline or mixed-mode friendship (Antheunis, Valkenburg, & Peter, 2012; Mesch, 2005).

Second, one unique dimension stands out in online friendship, i.e. cautiousness. In cyberspace, individuals tend to be cautious in establishing new relationships with strangers. They do not easily
trust and accept strangers to become friends. Coutiousness is manifested in several behaviors such as being selective in displaying biodata, keeping certain personal informations private or limited to public, refusing friend invitations from people with suspiciously fake profile, and unhesitatingly pressing “unfollow” or “block” button to avoid unpleasant people. All of these are driven by awareness of the dangers of cyberspace and need of secure environment and personal safety. These precautionary actions are entirely reasonable, primarily because of the nature of virtual world that does not allow one to see the other person directly and some of the information contained in it might not correspond to reality (Deilbert, 2012).

RESULT OF STUDY 2: DEVELOPMENT OF ONLINE FRIENDSHIP SCALE

The social networking scheme is based on the aspects obtained from study results 1. At least five aspects are used namely cautiousness, voluntariness, companionship, sharing, and mutual support. The results of the difference test of Online Friendship Scale items is done on 43 fifth semester students of Faculty of Psychology, obtaining 19 items that have a discrimination power of more than 0.3. The construct validation is then performed.

The construct validation was carried out on 150 psychology students and analyzed using exploratory factor analysis. The Kaiser Meyer Olkin Measure of Sampling Adequacy obtained results of 0.837. The results are in the range of 0.5 to 1, as recommended by some experts. Furthermore, Barlett’s Test Sphericity with chi square approach obtained a value of 1174.1 (p <0.05). It can be concluded that the scale of friendship in UGM social network is appropriately analyzed by using exploratory factor analysis. The factor load for the whole dimension can be seen in Table 2.

The variance explained of this scale is 60.287%, while the acceptable variance explained limit of 60%. There are four dimensions obtained by basing on the eigenvalue of more than one and each factor load more than 0.4 (Hair, Anderson, Tatham and Black, 2004), i.e., sharing, voluntariness, companionship, and mutual support. The reliability test results with alpha Cronbach of 0.880.

Data for the confirmatory factor analysis derives from the administration of the measuring tool to Psychology students (N= 190). The aim of this analysis is to prove that the measurement model of the online friendship construct fit the basic theory. The conformity between the measurement model and the data obtained shows evidence of construct validity.

The measurement model developed is the measurement model of two levels, the first level is the measuring construct while the second level is the dimensions of the measuring construct. The model measured is a multidimensional model that has interrelated dimensions. The second order CFA model accommodates this concept. Specifically, the measurement model tested in this study is a simplification of the measurement model that corresponds to the structure and composition of the items in the scale. Simplification is done by merging two to three items in one dimension. This is done to adjust the number of items by sample size and item characteristics. Some items have a very high correlation between items that need to be one.

CFA analysis of second order concludes that online friendship construct measurement model is in accordance with the data obtained. It shows that all the model’s accuracy indexes fit the fit model criteria. The chi-squared score is 25.024 (p> 0.05) which shows the discrepancy between the proposed measurement model and the ideal model, i.e. the model that can explain the diversity in the data, shows no significant difference. In other words, the measured test model is in accordance with the data obtained from the measurement results. On the other hand, all descriptive indices of model accuracy also show findings on model accuracy. The comparative fit indices (CFI) index is 0.987 and the Tucker Lewis Indices (TLI) score is 0.977. Both are above the critical point of acceptance of the model accuracy is 0.90. Meanwhile, Root Mean Square Error of Approximation (RMSEA) score is 0.056 which is below 0.08. This result indicates that all index of model accuracy is in accordance with the criteria of model accuracy (see Figure 2).
Parameter of the tested model found that all factor loading, both indicator and dimension, scores above 0.50. The loading factor indicator moves between 0.664 and 0.988, while the dimension factor loading moves between 0.640 and 0.920. All loading factors are significant at 5% level.

**DISCUSSION**

The exploratory factor analysis used to reduce the dimension of the Online Friendship Scale is considered entirely appropriate. This is based on the results of Kaiser Meyer Olkin Measure of Side Adequacy test that obtained a score of 0.837. The result is within the range of 0.5 and 1 (Hair et al, 2004). Furthermore, a value of 1174,100 \( (p < 0.05) \) was obtained using Barlett’s Test Sphericity with kai square approach as recommended by Hair et al (2004).
The factor load for the whole dimension, which includes sharing, voluntariness, companionship, and mutual support, is based on the exploratory factor analysis. The most significant dimensions contributing variance are sharing (30.197%), voluntariness (8.576%), companionship (8.256%), and mutual support (7.369%) and unidentified (5.889%). Testing through CFA confirms that the online friendship scale is multidimensional and has interrelated dimensions. For further explanation regarding concept of multidimensional test with correlated dimensions, readers can consult with Furr and Bacharach (2008).

In this context, the sharing dimension (e.g. sharing knowledge) is the largest variance contributor. This provides a relevant overview of the participants’ characteristics. The primary task of the students is to gain academic achievement and develop great social relations. The attempts to have academic achievement are inseparable from innovative and creative behavior. The dimension of knowledge sharing provides a positive contribution to innovative behavior (Helmi & Pertiwi, 2012). It is thus understandable that sharing knowledge, whether in the form of data, information, or experience, is an essential tool in the completion of academic tasks (Helmi & Pertiwi, 2012, Majid & Panchapakesan, 2015).

A person who can share knowledge usually focuses on task completion as their motivation to gain achievement (Kasim, 2015). They share knowledge because they have the same purpose. Therefore, social networking is often used as a means optimized for the completion of academic tasks, given their limitations to meet each other face-to-face. Thus, it can be stated that the sharing of knowledge contributes to the variant, implying that they too exist in the real world. Social media act as a mediator. These social networking users are not worried about the problems that appear in social networking media. For example, whether they can be trusted or not; whether they can appreciate their campus friends.

Several other dimensions of friendship are voluntariness contributes 10.576%, of the variance, companionship 10.256%, and mutual support 9.369%. These three dimensions have behavioral indicators for interpersonal relationships and not for completing tasks. When the user considers these dimensions, then these three dimensions refers to interrelated stages of friendship.

Social penetration theory can be used to explain the psychological dynamics of the three dimensions, such as when social network users are willing to perform social interaction that is limited
to peripheral things. Along with the passage of time, the friendship will be more intensive; from ordinary friends to good friends.

Operationally, many behaviors reflect companionship, starting from the desire to keep social interaction up to face-to-face meetings and recounting failures. Behavioral indicators that indicate intimate exploration was not evident. When someone interacts on a social network the actual behavior is meant to be related to all online communities through public channels. Therefore, one’s response to others will also be known by members of the social networking community. It is as described by social network analysis from the sociocultural perspective. Companionship and social support are expected when someone is intertwined in social networking. Therefore, the third and fourth dimensions on this scale relate to companionship and mutual support. This is in accordance with social need theory and social network analysis, which states that individuals form relationships to fulfill the need for self-validation and companionship (Buhrmester, in Talmud & Mesch, 2006).

CONCLUSION

Based on Study 1 and 2 results, it can be concluded that individuals, particularly adolescents, have the need to establish relationships with peers in accordance with the need to belong theory. Information technology has become a mediator for relationships among friends on social networks. Online friendship is portrayed by Talmud and Mesch (2006) as the online relationship between adolescents, occurring at different levels of groups, schools, and countries.

When viewed from adolescents’ stage development, Helmi and Pertiwi (2012) showed that there is a difference between the needs of high school students and college students when joining social network community. High school students still require self-verification, having to reinforce their personal identity. At this stage, they are still in search for their personal identity. Meanwhile, college students are at the final stage of development, entering early adulthood. For them, the fulfillment of these developmental tasks is in preparation for entering the professional world, bridged by academic achievement.

Academic achievement is a bridge to perform vertical mobility. This means that after they have a degree, they are faced with the task to pursue a career in the future and will elevate their social status. Therefore, in UGM’s Online Friendship Scale, the biggest contribution is the sharing dimension (30.197%). In this context, social media is not used to meet the need to establish relationships with old friends or add new relationships, but rather serve as a medium for sharing useful information, data, or experiences.

This sharing dimension is a distinguishing feature to previous friendship scales that have been devised so far, which focused more on friendship in the real world. Friendship Quality Questionnaire-Revised (FQQ-Parker & Asher, 1993) reveals dimensions of companionship/recreation, validation/caring, help/guidance, intimate disclosure, conflict/betrayal and conflict resolution. Similarly, Friendship Qualities Scale (FQS-Bukowski, Hoza, & Boivin, 1994) also comprises the dimensions of companionship, help, security, closeness, and conflict.

Based on the quality of two friendship scales, adolescents’ friendship acts more as a social function among friends. On an online friendship scale, however, it appears that the task completion function (particularly academic task) becomes more prominent. Other findings in this study indicate that online friendship is less involved in deep affection aspects. This research is the first step in preparing the concept and construction of online friendship. Further research is expected to develop concepts and constructs of online friendship by involving a broader subject.
REFERENCES


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