THE EFFECTS OF SOCIAL NETWORK USAGE ON ORGANIZATIONAL IDENTIFICATION

Completed Research Paper

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Abstract

In recent years, organizations have utilized social network sites (SNS) to communicate with their members about organization-related matters, as well as build a virtual community for members to congregate. Past studies have found that a member's identification with the organization was positively influenced by the organization's communication climate and the user's communication pattern. The purpose of this study is to examine the effects of social network usage on organization identification. The study uses survey questionnaire responses from members of member-based organizations that utilize Facebook to communicate with their organization and its members. Results from the study show that horizontal and vertical communication climate was enhanced by members' level of use, as well as their utilization of the organization's group profile. Also, we found that horizontal and vertical communication climate positively influenced organizational identification. Testing for mediation, results show that vertical and horizontal communication climates mediate the relationship between social network usage and organizational identification. This would suggest that social network usage indirectly influences organizational identification by enhancing the communication climates. The research findings provide insight into the relationship between social network usage, vertical and horizontal communication climates, and organizational identification. The theoretical and practical implications are discussed.

Keywords: Organizational identification, communication climate, organizational communication, SNS usage, online communities
Introduction

Member-based organizations, such as professional and social associations, have long been considered important to society and business by offering people an institution that aids their development and growth both personally and professionally (Gonzalez and Chakraborty 2012). A community-service organization would encourage members to serve their community through service activities and fundraising. In a professional association, members are able to attain professional development, career guidance, and networking opportunities that can have a major impact on their career (Gonzalez and Chakraborty 2012). Member-based organizations are very unique in that an individual’s membership or involvement would not be motivated by monetary rewards or payments. Rather, a member’s involvement with the organization would be motivated by the reputation of the organization and the communication with members of similar values, beliefs, and interests (Gonzalez and Chakraborty 2012). Through social interaction, members will be more inclined to participate in organization-sponsored activities because they will perceive similarities with the values and beliefs of the organization and its members (Dutton, Dukerich, and Harquail 1994). Members will also gain a sense of belongingness and perceive their affiliation with the reputable organization as both beneficial and self enhancing (Dutton et al. 1994; Gonzalez and Chakraborty 2012). With more member participation, a member-based organization will be able achieve its goals and objectives (Catano, Pond, and Kelloway 2001). The survival of member-based organizations, like community service organizations, depends greatly on the involvement of its members (Catano et al. 2001). Member-based organizations can increase their chances for survival by achieving organizational identification among members. Recent studies (Bartel 2001; Riketta 2005; Van Dick et al., 2004; Bartels, Peters, de Jong, Pruyn, and van der Molen 2010) found that members with greater identification with their organization experienced greater job satisfaction, cooperative behavior, and lower turnover intention. Member-based organizations can achieve organization identification through communication. Prior research (Bartels et al. 2010) found that communication among members of an organization can enhance organizational identification. In fact, some member-based organizations have turned to social media to organize the online community around non-profit causes, engage and empower members around an unfortunate event, and campaign for social change (Mashable-MB 2009). By achieving organizational identification, the organizations were able grow and mature while actively serving various communities and causes. Strengthening organizational identification among members is vital to the continued existence and overall effectiveness of the member-based organization.

Communication among members of a member-based organization can provide the socio-emotional benefits (Tanis and Beukebook 2011) needed for the organization to thrive, regardless of distance and dispersion. In past studies, organizational communication and communication climate have gained considerable amount of attention with the emergence of computer-mediated communication-focused research (Dennis 1974; Goldhaber 1993; Guzley 1992; Cheney, Christensen, Zorn, and Ganesh 2004; Downs and Adrian 2004). Earlier studies have linked communication and communication climate to organizational identification (Wiesenhfeld, Raghuram, and Garud 1999, 2001; Bartels, Pruyn, De Jong, and Joustra 2007; Bartels, Peters, de Jong, Pruyn, and van der Molen 2010; Smidts, Pruyn, Cees, and van Riel 2001; Postmes 2003), but the dynamic interactions and processes that occur are rarely discussed. In fact, some studies have investigated the relationship between communication climate and organizational identification or communication pattern of use and identification, but no study, to date, has considered the connection between communication (social network) use, communication climate, and organizational identification. Organizational identification is influenced by the direction of the communication (Bartels et al. 2010) and its content (Smidts et al. 2001). Bartels et al. (2010) proposed two communication climates to represent the horizontal and vertical types of communication in an organization. Vertical communication climate is the perception of the communication that occurs between organization members on different hierarchical status levels in the organization (Downs and Adrian, 2004; Goldhaber, 1993; Bartels et al. 2010). Vertical communication consists of information that assists in defining the organization, the subordinates roles and responsibilities in the organization (Bartels et al. 2010; Dutton, Dukerich, and Harquail 1994). Horizontal Communication Climate is the perception of the communication that occurs between organization members on equal hierarchical status levels in the organization (Bartel et al. 2010; Postmes 2003). Horizontal communication consists of informal messaging, which promotes cohesion and belongingness among members (Postmes et al. 2001; Postmes 2003;
Levine & Moreland, 1990; Lott & Lott, 1965), and task-related information that describe events and developments related to the organization (Bartels et al. 2010). The two different communication climates can impact organizational identification, while the effective use of the social network site will prove to be significant in enhancing the communication climates. Further investigation into the association between social network usage, communication climate, and organization will provide insight into the dynamic interactions and processes in the phenomenon.

This study focuses on member-based organizations, such as professional and social associations and community service organization. Member-based organizations are very important to business and society because they provide members with professional and personal development, career guidance, and opportunities to serve various communities (Gonzalez and Chakraborty 2012). By focusing on member-based organizations, the study will be able to remove latent antecedents that promote identification (i.e. monetary pay) and accurately capture organization members’ attachment-related attitudes and behavior (Gonzalez and Chakraborty 2012). Though traditionally overlooked in research, member-based organizations provide a useful context to examine the relationship between social network usage and organizational identification.

The purpose of the study is to examine the link between social network usage, communication climate, and organizational identification. In addition, the dynamic relationship between social network usage and organizational identification will be examined with an emphasis placed on the role of vertical and horizontal communication climates as the consequence of social network usage and the antecedent of organization identification. The study will attempt to answer the following question: how does social network usage influence an individual’s identification with his or her member-based organization? To help answer this question, the study will use Channel Expansion Theory (Carlson and Zmud 1994, 1999) and Organizational Identification (Ashforth and Mael 1989) to provide a theory-based explanation into the relationship between social network usage and organizational identification. The paper contributes to the study of social network usage, communication climate and organizational identification in a few ways: (1) provides empirical evidence of the relationship between organizational identification, vertical and horizontal communication climates, and social network usage and (2) provides theoretical and practical implications for communication use and organizational identification in a social network environment.

The paper is organized as follows. Section 2 provides a brief explanation of the theories used in the study. Section 3 provides a review of past research in social network usage, communication climate, and organizational identification. In this section, the proposed research model with hypotheses will be presented. Section 4 provides the research method and analyses. Section 5 provides the research results. Section 6 discusses the results and significance. Section 7 provides the theoretical and practical implications. Section 8 conclude the study and provide the limitations of the study.

**Theoretical Foundation**

In this section, we draw on Organizational Identification (Ashforth and Mael 1989) and Channel Expansion Theory (Carlson and Zmud 1994, 1999) to explain the relationship between social network usage, communication climate, and organizational identification. The aim of this section is to provide a thorough review of the theories and illuminate factors that facilitate the interaction between social network usage and organizational identification.

**Organizational Identification**

Organizational Identification is defined as “the perception of oneness with or belongingness to an organization, where the individual defines him or herself in terms of the organization(s) in which he or she is a member” (Mael and Ashforth 1992, p. 104). It is guided by four identification principles (Ashforth and Mael 1989): (1) identification is seen as a perceptual cognitive construct that is not associated with any specific affective conditions or behaviors, (2) identification is viewed as one experiencing the group’s successes and failures, (3) identification is distinguishable from internalization, and (4) identification is similar to personal identification. In organizational identification, an individual has motives for identifying with an organization (Dutton et al. 1994). The two motives for organizational identification (Pratt 1998; Smidts et al. 2001) are the desire for self-categorization, where an individual can “define their
place in society” (Tajfel, 1981, p. 255) and the desire for self-enhancement, where an individual can benefit from being a member of the group (Turner 1987). Based on these motivations, an individual identifies with an organization through affective and cognitive psychological elements. In organization identification, the cognitive and affective components facilitate the individual’s identification with an organization (Smidts et al. 2001; Ashforth and Mael 1989). The cognitive component concerns the perception of “oneness” and shared interests with the organization (Tajfel 1978; Ashforth and Mael 1989; Smidts et al. 2001). The cognitive component allows for the individual to become aware of his or her membership in the organization (Tajfel 1982) and is susceptible to various communication-based triggers (i.e. organization logos and cues) that spur organizational identification. The affective component concerns the sense of pride an individual has in being a member of the organization and an awareness of others recognizing his membership (Ashforth and Mael 1989). The affective component of organizational identification can be triggered through communication with organization members that is personalized and addresses the receiver as a member of the organization (Tanis and Beukeboom 2011). The current study will show how communication between member-based organization members influences their identification with the organization.

Channel Expansion Theory

Channel Expansion Theory (Carlson and Zmud 1994, 1999) expands on Media Richness Theory (Daft and Lengel 1984, 1986; Daft, Lengel, and Trevino 1987) by accounting for the individual’s experiences as a predictor of perceived media richness. The theory posits that an individual’s perception of media richness derives from his or her experience with the communication medium, communication partner, organization-related topic, and organizational context (Carlson and Zmud 1999). First, the experience with the medium provides the organization members with knowledge about the medium’s features and capabilities. As experience with the medium accumulates, the user will gain proficiency and mastery of the medium’s functions, as well as recognize its limitations. Second, the experience with the communication partner will allow for the communicating users to achieve shared understanding and mutually learn each other’s communication style (Rice, Chang, and Torobin 1992), language use, and response expectations. Also, communication partners will acquire information about each other’s characteristics, communication tendencies, and use of medium features to communicate (i.e. symbols). Third, experience with the organization-related topic allows for the communicating partners to require less feedback and clarification because of their familiarity with the topic. Communication partners will be familiar with organization-related topics and will perceive less equivocality in the information communicated. Fourth, the communicating user’s experience with an organizational context provides understanding of organization culture and shared symbols. Communicating users will be able to interpret and understand each other’s message because of their familiarity with the organizational context. Overall, the experiences with the communication medium, partners, organization-related topics, and organizational context increase the user’s capacity to effectively utilize the medium to communicate with other users and improve communication performance. In the current study, the theory will be applied to explain the concepts and factors present in the relationship between social network usage and communication climate.

Research and Hypotheses

Since its development in 2004, Facebook has experienced tremendous growth with the expansion of user networks, applications, site integrations, and added communication functions (Facebook-Timeline 2011). In fact, Facebook has over 800 million active users and 900 million pages, groups, events and community pages (Facebook-Statistics 2011). The average user has 130 friends and is connected to 80 pages, groups, and events (Facebook-Statistics 2011). With Facebook, users can create group and page profiles and communicate with other users that share the same interests. Communication features available to users include email messages, wall posts, status updates, chat messages, “like”, photo and status tagging, and group/fan profiles. Users are able to send mail messages to other users (similar to electronic mail), write on their “friends” profile wall, update their profile status, and chat with friends and/or group profile members. When users update their profile status, the new status will appear in their friends’ news feed. Users are able to tag “friends” (form of user linking) to their status and that message will appear on their friends’ walls, as well as the news feeds of the target’s friends. The same operation occurs when a user “tags” his or her friends in photos and/or videos. And lastly, users can communicate with other users in
the social network site with the use of Group and Page profiles. With regard to communication features, Group and Page profiles differ greatly from one another. The profile differences, however, fall outside the scope of this paper and will not be discussed.

In Facebook, a site user can create a Group profile to share common interests and/or express his or her thoughts and opinions about various topics with other members of the community (Facebook-Group 2011). The Group profile enables people to come together around a common cause or issue and communicate objectives of the group, discuss various subject matters, and exchange information about group-related content (Facebook-Group 2011). For instance, a Group profile could be created for an organization and provide members of the organization a place to congregate and communicate with other organization members. Once the Group profile is created, the site user can decide to make the group available for people to join or make it private with group profile membership available by invite only (Facebook-Group 2011). When a member of the group profile posts a new message, other members will be able to read the new post from their News Feed. Through the group profile, members will be able to interact (i.e. Like) with other members and share information about related content. With the sophisticated communication features available on Facebook, users can create a virtual place for their organization to communicate and interact with one another. Along with improving communications with the organization, individuals will be able to update and be updated with organization-related news and events, including information about the organization and its members. As a result, users could potentially improve communication with members of their organization, as well as remain informed about their organization's goals, values, strategies, and new developments.

Figure 1 presents the proposed research model. The model illustrates the relationship between social network usage and organizational identification. Vertical and horizontal communication climates are positioned as the consequence of social network usage and the antecedent to organizational identification.

**Social Network Usage**

Over the years, advancements in computer-mediated-communication (CMC) have given birth to social network sites as a preferred medium for connecting with old and new friends. The growing popularity of social network sites (SNS) has become one of the most important technological innovation for social communication (i.e. Facebook, MySpace, and Twitter), professional and industry networking (i.e. LinkedIn), dating and relationships (i.e. eHarmony), and location-based networking (i.e. Foursquare). It has also gained a considerable amount of attention from scholars interested in understanding the user's engagement, media characteristics, and impact on user's offline relationships (boyd and Ellison 2007; Cho et al. 2011; Ellison et al. 2007, 2011; Hargittai, 2007; Steinfield et al. 2008; Park et al. 2009; Valenzuela et al. 2009; Zhang, Jiang, and Carroll 2011). Social Network Sites (SNS) are defined as "web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system" (boyd and Ellison, 2007, p. 211). In SNS, users can have an online profile with personal information, connect with members on the site, and acquire membership in various online groups (Ellison, Steinfield, and Lampe 2007; boyd and Ellison 2008). The user profile creates a virtual presence that allows for connections to be made between users in an online community (Lampe, Ellison, and Steinfield 2007). For example, Ellison et al. (2007) suggest that people
used Facebook to maintain connections with old friends and acquaintances that offline may be located in a distant area. In the current study, social network usage encompasses Facebook Use (Koo et al. 2011) and Facebook Group Use (Valenzuela et al. 2009). The social network usage variables represent an individual’s use of the social network site for the sole purpose of communicating with the member-based organization and its members. In the next subsection, the social network usage variables will be defined and their relationship with vertical and horizontal communication climate will be described and hypothesized.

**Facebook Use**

Facebook Use assesses an individual’s use of Facebook to communicate with the member-based organization. While the capabilities of Facebook facilitate the communication among organization members, the characteristics of the information in the communication enhance the quality of communication in both vertical and horizontal directions. First, Vertical communication climate assesses the communication between organization leadership and subordinates. The content of the communication can be deemed satisfactory to members of the organization contingent upon the needs of the communication direction (Smidts et al. 2001; Zmud, Lind, and Young 1990). In other words, the communication between leadership and subordinates would be centered on the communicating participants’ duties and responsibilities, as well as the organization’s issues and developments. Communication of ideas, procedures, and policies between leader and subordinate will increase the quality of vertical communication (Bartels et al. 2010; Dennis 1974). The vertical communication climate can be enhanced when the communicating parties are able to receive accurate information about their role and responsibilities within the organization. Also, vertical communication climate is enhanced when leaders and subordinates are able to initiate discussions about organizational issues or participate in organizational-related decisions. Lastly, using Facebook to discuss organization-related subjects, events, awards and accomplishments can enhance the communication climate between organizational leaders and members because the communicating partners are, in effect, increasing the quantity of strategic communication and vertical interaction (Postmes et al. 2001). We hypothesize the following:

**H1a: Facebook Use will positively influence Vertical Communication Climate in Member-Based Organizations.**

Second, Horizontal communication climate assesses the communication among organization members of equal stature in the member-based organization. Communication of organization-related subjects and developments among members of equal status can promote a good horizontal communication climate (Bartels et al. 2010). Using Facebook to communicate with organization members about difficult solutions and sensitive issues in the organization can enhance the communication climate because the communicating partners will be able to be open with one another and come to a mutual understanding of the issue. Also, when communicating members with equal stature in the organization are able to use Facebook to schedule events and share information about the organization, the quantity of communication increases. Using Facebook to communicate with members of the organization, the quality of the communication will improve when members become more familiar with one another. The communication climate will improve when members gain more experience communicating with other members using the Facebook site. Lastly, members of equal stature will be able to learn each other’s communication style and pattern and improve the quality of communication (Rice et al. 1992). We hypothesize the following:

**H1b: Facebook Use will positively influence Horizontal Communication Climate in Member-Based Organizations.**

**Facebook Group Use**

Prior research on Facebook Group Use is quite limited because of the novelty of this organization-focused communication application (Valenzuela, Park, and Kee 2009; Park, Kee, and Valenzuela 2009; Zhang, Jiang, and Carroll 2011). In Facebook, an organization is able to create a Group profile that connects members of the organization together online. Organization members can use the group profile to share and collaborate on organization-and non-organization related topics and discussions (AllFacebook 2011). The group profile can also serve as a “tool for building awareness around various ideas” (AllFacebook 2011). The Group profile acts as an embedded communication media in a social network environment
because creators and/or leaders of profile can perform various communication functions (AllFacebook 2011), such as mass messaging, stream publishing, and event inbox messaging. After the Group profile is created by site user (i.e. organization member), the user can make the group open for membership and/or send invites for group profile membership (Facebook-Group 2011). Members of the group profile can interact with one another when a new message or discussion topic is posted on the profile. The message will appear in group profile members’ news feed and members can, in turn, interact (i.e. Like) with other members by commenting on message postings. The communication features of the Group profile allow members to collaborate on various tasks and assignments. For example, Zhang et al. (2011) found that some of the groups created Group profiles to discuss assignments, distribute workload, and share work portions. Through the group profile, organization leaders can inform members of new developments and encourage participation among organization members. Organization members may be able to use the group profile to interact with members of equal status, as well as leaders, about various issues concerning the organization. The communication tasks performed through this profile can provide organization members information about the organization and various events. The capabilities of the group profile will allow users to communicate with the organization and potentially enhance both vertical and horizontal communication climates.

Utilization of the organization’s group profile application can enhance the vertical and horizontal communication climates of the member-based organization. First, vertical communication climate can be enhanced when organization leaders interact with the members’ posts, disseminate accurate information about members’ roles and responsibilities (i.e. role for organization-related event), and encourage member participation by posting questions or comments for member response (Postmes et al. 2001; Bartels et al. 2010). When users perform communication actions on the group profile, the message and/or actions will appear on the news feed of all members of the group profile. The information disseminated through the group profile can have a positive impact on individual’s identification by providing information about the organization and its activities (Turner 1987; Dutton et al. 1994). Lastly, the vertical communication climate is enhanced when the leaders interact with the subordinate’s post and/or response because the subordinate will notice that organization leaders are paying attention to the member’s response or suggestion. For that reason, we hypothesize the following:

H2a: Facebook Group Use will positively influence Vertical Communication Climate in Member-Based Organizations.

Second, horizontal communication climate can be enhanced when members of equal status within the organization interact with one another’s posts. The group profile features allow users to read and post messages and discussion topics that will immediately become accessible to members of the group profile. When communication actions are made to a member’s post, they are notified through the news feed or notification alert that a certain user(s) replied or interacted (i.e. Like) to the posting. For example, Mike posts a congratulatory message on the group profile about the organization’s win over a high-ranked team. Members, belonging to the Group profile, see the message in their news feed and respond to the posting either with a comment or interaction (i.e. Like). When Mike is notified about the members’ responses to the good news, the post comments and interactions will enhance the horizontal communication climate. The climate is enhanced when the content of the message communicated to organization members build cohesiveness and belongingness among organization members (Postmes et al. 20001). Positive message posts and responses from members on the organization’s group profile can enhance horizontal communication climate because the responses convey a message that the member of equal status deem the post to be both important and appreciated. Because horizontal communication climate refers to the informal and socio-emotional interaction among members within the organization (Postmes et al. 2001), communicative participation on the group profile for informal and social reasons would enhance the quality and quantity of the communication among members of equal status in the organization. We hypothesize the following:

H2b: Facebook Group Use will positively influence Horizontal Communication Climate in Member-Based Organizations.

Communication Climate

In the current study, communication climate encompasses vertical and horizontal directions of communication. The relationship between communication climate and organizational identification
requires understanding the content of the communication and its impact on organizational identification. Communication climate can be described as “a subjective experienced quality of the internal environment of an organization: the concept embraces a general cluster of inferred predispositions, identifiable through reports of members’ perceptions of messages and message-related events occurring in the organisation” (Dennis 1974, p. 29). Communication climate assesses the accuracy and reliability of information exchanged within the organization and the overall accessibility of upper- and lower-level members of the organization (Bartels et al. 2010). In this section, a detailed review of the communication climates will be provided along with its influence on organizational identification.

**Vertical Communication Climate**

Vertical communication climate is the perception of the communication that occurs between organization members on different hierarchical status levels (Downs and Adrian, 2004; Goldhaber, 1993; Bartels et al. 2010). Vertical communication consists of information that assists in defining the organization and the subordinates’ roles and responsibilities in the organization (Bartels et al. 2010; Dutton et al. 1994). When leadership communicates with subordinates about the organization’s strategies, objectives, and current developments, subordinates are able to reduce uncertainty (Ashforth and Mael 1989) and distinguish the organization from other organizations (Dutton et al. 1994). When leaders communicate with subordinates about their roles and responsibilities, the information helps subordinates determine their place in the organization (Bartels et al. 2010). Also, members gain a sense of connectedness with the organization when leaders engage in communication with them (Prati et al. 2009), which then contributes to the member’s identification with the organization.

Along with communicating with members about their roles and responsibilities, communication from leaders to subordinates allows for the dissemination of the values and identity of the organization (Cheney 1983). The organization’s identity is a set of shared beliefs about the central, distinctive, and enduring characteristics of the organization (Alpert and Whetten 1985; Ashforth and Mael 1989), where the shared values and beliefs, mission, and organizational climate reflect the distinctiveness of the organization. The communication facilitates the alignment between the values, goals, and identity of the organization with the members and spurs identification among members. Vertical communication climate can influence organizational identification when organization members are provided quality interaction with management and can appraise the responsiveness of management as satisfactory (Postmes et al. 2001). When the organization’s core values, central beliefs, and identity are communicated accurately to members, this interaction reduces ambiguity about the organization and its core values and beliefs (Cheney 1983; Ashforth and Mael 1989; Scott and Lane 2000; Postmes et al. 2001; Bartels et al. 2010). Vertical communication between leader and subordinate can spur identification among organization members because the information provides the distinctive characteristics of the organization, which then influence subordinates’ identification with the organization (Bartels et al. 2010). We hypothesize the following:

\[ H3: \text{Vertical communication climate will positively influence organizational identification in Member-Based Organizations}. \]

**Horizontal Communication Climate**

Horizontal Communication Climate is the perception of the communication that occurs between organization members on an equal hierarchical status level (Bartel et al. 2010; Postmes 2003). Ashforth and Mael (1989) suggest an individual will categorize himself within a group of the organization based on social contexts or characteristics (i.e. rank). For that reason, the individual will categorize members in separate groups within the organization based on their hierarchical status level (i.e. leaders-subordinates). Because members with equal hierarchical status are placed in a social category (i.e. in-group) different from members that hold leadership position (out-group), communication with members of the in-group will be more salient. Horizontal communication consists of informal messaging and task-related information. First, informal communication consists of non-organization related topics, such as private personal information (Bartels et al. 2010; Postmes 2003). When members disclose personal information with proximate colleagues, the affective socio-communication increases the sense of attachment and the development of the relationship (Postmes et al. 2001). Members will be able bond with one another and have more involvement with the organization (Bartels et al. 2010; Postmes et al. 2001; Postmes 2003; Levine & Moreland, 1990; Lott & Lott, 1965). The social interaction among
colleagues can be conducive to cohesion and increase their sense of attachment and belonging in the organization (Postmes et al. 2001). As a result, members of equal status level will gain a sense of connectedness that may then enhance organizational identification. Second, task-related communication consists of events and developments that relate to the organization. When organizational-related events and developments are communicated among members, the receiver of the message will internalize the interaction and gain a sense of identification (Bartels et al. 2010). Members that are well informed about the organization’s events, developments, and activities will be able to determine the salient characteristics that make the organization different from others and increase their identification with the organization (Dutton et al. 1994; Smidts et al. 2001). Also, repeated exposure to information about the organization through communication will appear more attractive to members and encourage continual association with the organization (Smidts et al. 2001). Organizational identification is likely to occur when members view their organization favorably (Tajfel 1981; Smidts et al. 2001). For that reason, we hypothesize the following:

H4: Horizontal communication climate will positively influence organizational identification in Member-Based Organizations.

Research Methodology and Analysis

Our study employed a survey questionnaire method to collect data. The survey questionnaire was distributed to members of member-based organizations who were enrolled in courses at a mid-size university in the southwest region of the United States. Participants were given a brief summary about the study and the purpose of the survey questionnaire. Before the survey questionnaires were distributed, participants were asked two questions: (1) Do you use Facebook to communicate with your organization and (2) Does your organization use a Facebook Group Profile to communicate with its members? If they answered “yes” to both questions, participants were handed a survey questionnaire to complete. To encourage participation in the research study, the organization members were offered a small monetary compensation. After two weeks of data collection, a total of 194 survey questionnaires were collected. From the 194 survey observations, only 174 survey questionnaires were usable for research analysis. Demographics can be found in Table 1.

Measurement Instrument

The survey questionnaire was developed to capture information pertaining to a member’s identification with his or her organization, perception of vertical and horizontal communication, and level of use of Facebook and Facebook Group Profile associated with the organization. All of the scales used in the survey questionnaire used five-point Likert scales ranging from “strongly disagree” to “strongly agree.”

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<th>Gender</th>
<th>N (%)</th>
<th>Org. Leadership</th>
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<td>23.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reads wall/discussion board</td>
<td>31.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reads and/or writes on all/discussion board</td>
<td>41.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mostly reads, writes on profile wall, and starts new topics on wall/discussion board</td>
<td>35.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The majority of the constructs in this study have been used in prior research investigating identification and the use of online communication in the context of an organization. The organizational Identification (OI) construct was adapted from Mael and Ashforth (1992). In a recent meta-analysis, the OI scale used in...
the study was the most utilized identification construct based on the survey of past research investigating identification with an organization. The vertical communication climate construct was adapted from Bartels et al. (2010) and Postmes et al. (2001). The horizontal communication climate construct was adapted from Bartels et al. (2010) and Postmes et al. (2001). The Facebook Group Use construct was adapted from Valenzuela et al. (2009) to assess the user’s level of engagement on his or her organization’s group profile. Finally, the Facebook Use construct was adapted from a social communication technology (SCT) usage construct developed by Koo, Wati, and Jung (2011) and modified to fit the Facebook context. Information about the constructs used in this study can be found on Table 2.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Definition</th>
<th>Items</th>
</tr>
</thead>
</table>
| **Organizational Identification** | The extent to which the individual identifies with the organization and its members (adapted from Mael and Ashforth 1992) | When I talk about this organization, I usually say ‘we’ rather than ‘they’  
When someone praises my organization, it feels like a personal compliment. |
| **Vertical Communication Climate** | The individual’s perception of the top-down communication with the organization’s leaders communicating organizational goals and support to their subordinates (adapted from Postmes et al. 2001; Bartels et al. 2010). | Organization members and I are encouraged to participate in making significant decisions.  
The information that I receive (related to my duties and responsibilities) are accurate.  
Organization Leaders take the initiative to discuss organizational issues with you.  
I take the initiative to communicate with the organization’s leadership.  
Organization members receive information about changes within the organization.  
Leadership of this organization pays attention to members’ suggestions.  
There are sufficient opportunities within the organization to give suggestions for improvement. |
| **Horizontal Communication Climate** | The individual’s perception of the lateral communication with organization members of equal stature in the organization (adapted from Postmes et al. 2001; Bartels et al. 2010). | Members of my organization are really open with each other.  
Members of my organization show understanding when communicating on Facebook.  
Organization members and I communicate informally and for social reasons.  
Organization Members and I regularly talk to each other about organizational developments.  
Using Facebook, the quality of communication between organization members within your organization is satisfactory. |
| **Facebook Use** | The general use of Facebook to communicate with the organization (adapted from Koo et al. 2011) | I usually use Facebook to discuss/converse organization-related subjects.  
I usually use Facebook to discuss/converse organization-related events.  
I usually use Facebook to discuss/converse organization-related awards and accomplishments.  
I usually use Facebook to discuss organization-related idea, procedure and policy.  
I usually use Facebook to arrange schedule and share information about the organization.  
I usually use Facebook to find some difficult solutions and to solve sensitive issue in the organization. |
| **Facebook Group Use** | The extent of participation on organization’s Facebook group application, determined by the user’s time reading and posting messages and contribution to new discussion topics (adapted from Valenzuela et al. 2009). | Read the profiles of your organization’s Facebook group  
Post the messages in your organization’s Facebook group  
Post the new discussion topics in your organization’s Facebook group  
Which one of the following best describes your participation in your organization’s Facebook group? |

Note 1: Horizontal and Vertical Communication Climate construct items were relative to Facebook communication.
Note 2: Final set of items used in analysis after items were dropped from the model due to low factor loadings (<.70).
Analysis

We performed data analysis using Smart PLS v.2 (Ringle, Wende, & Will 2005), a Partial Least Squares (PLS) Structural Equation Modeling (SEM) software application. Structural equation modeling was used in the study for its ability to regress complex models with a small sample size. Given the number of constructs in the model, the sample size of 174 is sufficient to accurately assess the relationships between latent variables (Gefen, Straub, and Boudreau 2000). The analysis procedure consists of factor analysis, convergent validity, and discriminant validity. After completing initial analysis of the data, a post-hoc analysis was conducted to test relationships that were not hypothesized in the study. In the post-hoc analysis section, the results of the analysis will provide critical insight into the significance of an individual's overall use of Facebook to communicate with the organization and its influence on organizational identification irrespective of the formation of vertical and horizontal communication climates as a mediating variable.

Using PLS, the measurement and structural models were simultaneously assessed and results of analysis provide evidence of reliability and validity (Chin 1998). First, factor loading results from testing the model are reported in Table 3. The measurement items loaded above the recommended threshold of .70 in their respective construct (Chin 1998). During this analysis stage, a few items were dropped from the model due to low factor loadings (less than .70). Second, each construct had a composite reliability value above the required threshold of .70 (Fornell & Larcker 1981; Hair et al. 2010). The average variance extracted (AVE) for each construct loaded above the recommended threshold of .50 (Fornell & Larcker 1981; Hair et al. 2010). These statistical results (Table 4) provide evidence of achieving convergent validity in measurement model. Third, discriminant validity was achieved when the square root of the average variance extracted (AVE) for each construct was greater than the off-diagonal correlation estimates with other constructs (Hulland 1999; Chin 1998). The aforementioned satisfactory test results provide evidence of the appropriateness of the model used in analyzing the data.

Table 3. Factor Analysis – Loadings and Cross Loadings

<table>
<thead>
<tr>
<th></th>
<th>FB_Use</th>
<th>FBGrp_Use</th>
<th>VCC</th>
<th>HCC</th>
<th>OrgIdent</th>
</tr>
</thead>
<tbody>
<tr>
<td>FB_Use1</td>
<td>0.823</td>
<td>0.505</td>
<td>0.236</td>
<td>0.397</td>
<td>0.194</td>
</tr>
<tr>
<td>FB_Use2</td>
<td>0.830</td>
<td>0.504</td>
<td>0.258</td>
<td>0.411</td>
<td>0.172</td>
</tr>
<tr>
<td>FB_Use3</td>
<td>0.842</td>
<td>0.540</td>
<td>0.341</td>
<td>0.405</td>
<td>0.293</td>
</tr>
<tr>
<td>FB_Use4</td>
<td>0.820</td>
<td>0.434</td>
<td>0.260</td>
<td>0.283</td>
<td>0.145</td>
</tr>
<tr>
<td>FB_Use5</td>
<td>0.824</td>
<td>0.511</td>
<td>0.363</td>
<td>0.422</td>
<td>0.226</td>
</tr>
<tr>
<td>FB_Use6</td>
<td>0.735</td>
<td>0.399</td>
<td>0.193</td>
<td>0.264</td>
<td>0.155</td>
</tr>
<tr>
<td>FBGrp_Use1</td>
<td>0.584</td>
<td>0.834</td>
<td>0.386</td>
<td>0.450</td>
<td>0.416</td>
</tr>
<tr>
<td>FBGrp_Use2</td>
<td>0.479</td>
<td>0.901</td>
<td>0.331</td>
<td>0.384</td>
<td>0.252</td>
</tr>
<tr>
<td>FBGrp_Use3</td>
<td>0.382</td>
<td>0.811</td>
<td>0.269</td>
<td>0.320</td>
<td>0.208</td>
</tr>
<tr>
<td>FBGrp_Use4</td>
<td>0.562</td>
<td>0.843</td>
<td>0.318</td>
<td>0.319</td>
<td>0.290</td>
</tr>
<tr>
<td>VCC1</td>
<td>0.357</td>
<td>0.361</td>
<td>0.823</td>
<td>0.578</td>
<td>0.520</td>
</tr>
<tr>
<td>VCC2</td>
<td>0.284</td>
<td>0.350</td>
<td>0.826</td>
<td>0.593</td>
<td>0.443</td>
</tr>
<tr>
<td>VCC3</td>
<td>0.260</td>
<td>0.338</td>
<td>0.773</td>
<td>0.527</td>
<td>0.555</td>
</tr>
<tr>
<td>VCC4</td>
<td>0.257</td>
<td>0.296</td>
<td>0.794</td>
<td>0.579</td>
<td>0.576</td>
</tr>
<tr>
<td>VCC5</td>
<td>0.211</td>
<td>0.248</td>
<td>0.729</td>
<td>0.557</td>
<td>0.350</td>
</tr>
<tr>
<td>VCC6</td>
<td>0.286</td>
<td>0.282</td>
<td>0.760</td>
<td>0.510</td>
<td>0.387</td>
</tr>
<tr>
<td>VCC7</td>
<td>0.273</td>
<td>0.257</td>
<td>0.793</td>
<td>0.571</td>
<td>0.420</td>
</tr>
<tr>
<td>VCC8</td>
<td>0.218</td>
<td>0.271</td>
<td>0.713</td>
<td>0.473</td>
<td>0.456</td>
</tr>
<tr>
<td>HCC1</td>
<td>0.229</td>
<td>0.232</td>
<td>0.530</td>
<td>0.730</td>
<td>0.456</td>
</tr>
<tr>
<td>HCC2</td>
<td>0.400</td>
<td>0.377</td>
<td>0.578</td>
<td>0.802</td>
<td>0.414</td>
</tr>
<tr>
<td>HCC3</td>
<td>0.329</td>
<td>0.383</td>
<td>0.576</td>
<td>0.756</td>
<td>0.471</td>
</tr>
<tr>
<td>HCC4</td>
<td>0.323</td>
<td>0.288</td>
<td>0.539</td>
<td>0.796</td>
<td>0.373</td>
</tr>
<tr>
<td>HCC5</td>
<td>0.448</td>
<td>0.383</td>
<td>0.458</td>
<td>0.726</td>
<td>0.335</td>
</tr>
<tr>
<td>OrgIdent1</td>
<td>0.186</td>
<td>0.335</td>
<td>0.527</td>
<td>0.526</td>
<td>0.854</td>
</tr>
<tr>
<td>OrgIdent2</td>
<td>0.233</td>
<td>0.297</td>
<td>0.518</td>
<td>0.458</td>
<td>0.888</td>
</tr>
<tr>
<td>OrgIdent3</td>
<td>0.235</td>
<td>0.281</td>
<td>0.523</td>
<td>0.402</td>
<td>0.860</td>
</tr>
</tbody>
</table>
Considering that the study used a single method research design, the results would be vulnerable to common method bias. Guided by the recommendation in Podsakoff et al. (2003), SPSS 16.0 was employed to perform Harman's Single-factor test. Results from this test showed that six factors were present with the highest covariance explained by one factor equaling 28 percent, suggesting that common method bias was an unlikely threat to the results. The single factor loading showed that no single factor accounted for the greater percentage of the explained variance. In addition, Bagozzi et al. (1991) point out that an extremely high correlation value (.90) between the variables is a clear sign of the study having issues with common method bias. However, the highest correlation value between the constructs in the model was well below the .90 threshold (Table 2). In summary, results from the tests provide no evidence of common method bias.

**Research Results**

The standard bootstrap resampling procedure was used to test the significance of the structural research model in SmartPLS. Analysis of variance (ANOVA) test was performed to check for variable estimation differences between the six different types of organizations (Hair et al. 2009). ANOVA between any three of the six groups showed a significant difference at the p< .05 level for each of the 5 variables (F-ratios range from 2.490 to 2.923). The following variables did not have significant variations across the six groups: Facebook Group Use (F-ratio = 1.021), and Facebook Use (F-ratio = 1.890). The results indicate that Facebook users’ perception of communication climates and organizational identification differ significantly across organization types. Figure 2 illustrates the model results from the analysis, with explanatory powers (R²) and standardized path coefficients (β).

The model results indicate that the latent variables in the structural model (Figure 2.) account for 39.3 percent of the variance in organizational identification. The results of the analysis confirm H1ab, H2ab, H3, and H4. In the model, Facebook Use significantly impacted Vertical (β=.178, p< 0.05) and Horizontal Communication Climate (β=.301, p< 0.001). Facebook Group Use had a positive influence on both Vertical (β=.284, p< 0.001) and Horizontal Communication Climate (β=.262, 0.001). Facebook Group Use and Facebook Use accounted for 17.3 percent of the variance in Vertical Communication Climate and 25.3 percent of the variance in Horizontal Communication Climate. Finally, Organizational Identification was positively influenced by Horizontal (β=.220, p< 0.05) and Vertical Communication Climate (β=.452, p< 0.001). The results of the study show that social network usage has a positive impact on vertical and horizontal communication climates. We also find that vertical and horizontal communication climates positively impact organizational identification.
Post Hoc Analysis

The purpose of the post hoc analysis is to further investigate the relationship between organizational-related social network usage and organizational identification. The results of the study suggest that the relationship between social network usage and communication climate(s) is both positive and significant. While we found support for all of the hypotheses in the study, questions about the mediating effects of communication climates on the relationship between social network usage and organizational identification need to be addressed. To demonstrate that Vertical and Horizontal Communication Climate mediate the effect of Facebook Group Use and Facebook Use on Organizational Identification, the following three conditions (Baron & Kenny 1986; Hackbarth et al. 2003) must hold: a significant relationship between the independent and dependent variable, a significant relationship between the independent variable and mediator variable, and the significant relationship between the dependent variable and the mediator variable must accompany either the decline or dissolution of the significance between the dependent and independent variables. A summary of the mediation test is reported in Table 5.

<table>
<thead>
<tr>
<th>Table 5. Mediation Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vertical Communication Climate</strong></td>
</tr>
<tr>
<td>IV - DV</td>
</tr>
<tr>
<td>Facebook Group Use</td>
</tr>
<tr>
<td>Effect Size = .4083</td>
</tr>
<tr>
<td>Partial Mediation - w/med= .395 , w/o med= .148</td>
</tr>
<tr>
<td>Facebook Use</td>
</tr>
<tr>
<td>Effect Size = .4694</td>
</tr>
<tr>
<td>Full Mediation - w/med= .378 , w/o med= .086</td>
</tr>
</tbody>
</table>

| **Horizontal Communication Climate** | Condition #1 | Condition #2 | Condition #3 |
| IV - DV | IV - MV | (DV-MV) | IV - DV Down |
| Facebook Group Use | Beta=.384, T-value=5.906 | Beta=.452, T-value=9.341 | (Beta=.494, T-value=6.153), Beta=.160, T-value=1.880 |
| Effect Size = .2889 | Sobel = 5.8978 | VAF = 0.6825 |
| Full Mediation - w/med= .339 , w/o med= .148 |
| Facebook Use | Beta=.293, T-value=4.003 | Beta=.475, T-value=7.708 | (Beta=.545, T-value=5.231), Beta=.037, T-value=0.315 |
| Effect Size = .3362 | Sobel = 5.1715 | VAF = 0.8765 |
| Full Mediation - w/med= .316 , w/o med= .086 |

Note 1: Independent Variable (IV): Facebook Group Use and Facebook Use, Dependent Variable (DV): Organizational Identification and Mediator Variable (MV): Vertical and Horizontal Communication Climate.

For each communication climate, mediation tests were performed on Facebook Group Use and Facebook Use. First, Vertical Communication Climate mediated the relationships between the social network usage variables, Facebook Group Use and Facebook Use, and organizational identification. When the mediator variable was added to the model, the strength of the relationship between Facebook Group Use ($\beta=.162, \text{T-value} = 2.346$) and Facebook Use ($\beta=.082, \text{T-value} = 1.066$) and Organizational Identification greatly declined and became less significant or statistically non-significant and the amount of variance explained in Organizational Identification increased. With Facebook Use as the dependent variable, the amount of variance explained in Organizational Identification increased from .086 to .378 when Vertical Communication Climate was added to the model. With the same mediator variable, the amount of variance explained in Organizational Identification increased from .148 to .395 with Facebook Group Use as the dependent variable. Second, Horizontal Communication Climate mediated the relationship between the social network usage variables, Facebook Use and Facebook Group Use, and Organizational Identification. The strength of the relationship between the social network usage variables, Facebook Use ($\beta=.037, \text{T-value} = 0.315$) and Facebook Group Use ($\beta=.160, \text{T-value} = 1.880$), and Organizational Identification weakened and became statistically non-significant when the mediator variable was added to the model. With Facebook Use as the dependent variable, the amount of variance explained in Organizational Identification increased from .086 to .316 when Horizontal Communication Climate was added to the model. With the same mediator variable, the amount of variance explained in Organizational Identification increased from .148 to .339 with Facebook Group Use as the dependent variable. After
analyzing the communication climates as mediator variables in the relationship between social network usage variables and organizational identification, the results suggest the presence of mediation in the model.

Moreover, to assess the effect size of the mediator variable, Cohen (1988) effect size estimation method was employed with the following standards: weak effect size would range between .02-.15, moderate effect size would range between .15 - .35, and strong effect size would be greater than .35. After estimating the effect sizes for the indirect effect, we found that all three models had reported moderate effect sizes with their estimates ranging between .2889 - .4694. Next, the total impact of mediation was assessed by assessing the mediator variables’ influence in transmitting the impact of the independent variable to the dependent variable and estimating the magnitude of its indirect effect (Iacobucci and Duhachek 2003; Sobel 1982). The results indicate that the indirect effect size influence on the dependent variable for each model was highly significant. The effect size of the vertical communication climate variable significantly influenced the effect of Facebook Group Use (Z=5.7867, p<0.001) and Facebook Use (Z=4.8934, p<0.001) on Organizational Identification. Also, the effect size of the Horizontal Communication Climate variable significantly influenced the effect of Facebook Group Use (Z=5.8978, p<0.001) and Facebook Use (Z=5.1715, p<0.001) on Organizational Identification. The magnitude of the indirect effect of the mediation ranges between .596 - .876, which suggest the total effect of the independent variable on the dependent variable explained by the indirect effect range between 59.6 to 87.6 percent. This would suggest that the social network usage variables influence on organizational identification is highly mediated by communication climates. This provides insight into the relationship between social network usage and organizational identification and the significance of the communication climate as a mediator between the two variables.

**Discussion**

The purpose of the study was to examine the relationship between social network usage and organizational identification. By examining social network usage, the study was able to explain the complexity of the interactions present between usage, communication climate, and identification, while presenting the impact differences between social network uses and communication climates. Table 6 summarizes the hypothesis testing results.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a: Facebook Use will positively influence Vertical Communication Climate.</td>
<td>Supported</td>
</tr>
<tr>
<td>H1b: Facebook Use will positively influence Horizontal Communication Climate.</td>
<td>Supported</td>
</tr>
<tr>
<td>H2a: Facebook Group Use will positively influence Vertical Communication Climate.</td>
<td>Supported</td>
</tr>
<tr>
<td>H2b: Facebook Group Use will positively influence Horizontal Communication Climate.</td>
<td>Supported</td>
</tr>
<tr>
<td>H3: Vertical Communication Climate will positively influence Organizational Identification.</td>
<td>Supported</td>
</tr>
<tr>
<td>H4: Horizontal Communication Climate will positively influence Organizational Identification.</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Based on the results, there is evidence to support the hypothesis that the extent of social network use positively influences the communication climates, regardless of the communication direction. Both communication climates, which consist of measures that assess the individual’s perception of vertical and horizontal communication, had a significant relationship with organizational identification, but vertical communication climate had a greater impact on an individual’s identification with the organization. This suggests that an individual’s identification with the organization can be impacted more by communication with organization leaders than with members of equal status. To further investigate the relationship between social network usage and organizational identification, post hoc analysis was conducted on relationships that weren’t hypothesized in the study. Based on the results, vertical and horizontal communication climates mediate the relationship between social network usage and organizational identification. While social network usage positively influences vertical and horizontal climates, we find that an enhanced communication climate has a positive impact on organizational identification. Thus, social network usage can indirectly impact organizational identification only when the communication climates are enhanced. Without an enhanced communication climate, high levels of Facebook and Group Profile use will not significantly impact an individual’s identification with the organization. Overall, the
research and post-hoc analysis results reveal the significance of both vertical and horizontal communication climates in the relationship between social network usage and organization identification and provide both theoretical and practical implications.

**Theoretical and Practical Implications**

The paper contributes to the study of social network use, communication climate and organizational identification in a few ways: (1) using theories from different disciplines to examine the relationship between social network usage and organizational identification, (2) providing empirical evidence of the relationship between organizational identification, vertical and horizontal communication climates, and social network usage, and (3) providing theoretical and practical implications for communication use and organizational identification in a social network environment. The theoretical and practical implications of the study involve the association between social network usage, communication climate, and organizational identification. The theoretical implication stems from the communication features in the social network site. First, we find that communication climates can be influenced differently by different channels within a social network environment. Second, we find that vertical and horizontal communication climates mediate the relationship between social network usage and organizational identification. The mediation test results show that social network usage indirectly influences organizational identification among organization members by enhancing the vertical and horizontal communication climates.

The practical implication derives from the relationship between vertical and horizontal communication climates and organizational identification. By accounting for vertical and horizontal communication, the study was able to test the impact of two different communication climates on organizational identification. First, members’ identification with the organization is significantly impacted by both vertical and horizontal communication climates. We found that the communication climates between leader and subordinate influences organizational identification among members more than the communication between members of equal status level. This would suggest that organizational leaders can spur identification among subordinates by communicating accurate information about members' roles and responsibilities and informing members about organization-related events and developments (Postmes et al. 2001; Bartels et al. 2010). Second, leadership should improve the communication climate with their subordinate, as well as encourage better communication among members. By improving the vertical and horizontal communication climate, management can improve members’ identification with the organization (Bartels et al. 2010). When organization members perceive the vertical and horizontal communication climate positively, they tend to identify more with the organization and become less inclined to become insubordinate or uncooperative with leaders and subordinates in the organization. Because the member-based organizations have a traditional hierarchical structure that defines the roles and responsibilities of each member within the organization, the results of the study would be applicable to traditional work organizations.

**Limitations and Conclusion**

With any study there are limitations that should be noted when interpreting the findings. First, the study did not account for organization members’ distance from other members or their frequency of communication outside of the social network environment. It is possible that some of the organizations communicate face-to-face in either meetings or through random encounters and that the frequency of this type of interaction may moderate the relationship between organizational-related social network usage and organization identification (Wiesenfield et al. 1999). However, the results of the study suggest that the communication performance in a social network environment was not hindered by communication constraints. Future research should investigate the association between social network usage, communication climates, and organizational identification by including control variables that account for the characteristics of the individual (e.g., age, gender, membership tenure) and his or her organization (e.g., size, hierarchy, structure).

Second, the study investigates the research problem using a dynamic, ever-expanding social network environment. During the time of research, the functionality of Facebook and the Group profile improved and more communication features were adapted to the profile application to enhance group members'
communication experience. In the study, the Group Use was limited to reading, writing, and posting functionality and did not account for the new communication features. Maximizing the Group Profile’s media capabilities, communicating users can perform mass messaging to members’ inbox and send event invites (AllFacebook 2011). However, the construct did not contain these new functions. Future research should consider expanding the construct to account for the new features without altering the meaning of the construct. An expansion to the construct will significantly contribute to the literature and provide a better measurement to assess one’s use of the Facebook Group profile. Further research and development should be performed to establish the necessary system requirements for communication mediums that can provide the necessary functionality to satisfy vertical and horizontal channel directions in a social network environment. Next, future research can expand the constructs or develop a new measurement to assess various dimensions of an embedded communication application and investigate its relationship with different communication climates.

Lastly, the study uses Facebook as the social network environment to investigate the relationship between social network usage and organizational identification. The relationship between Group profile and vertical and horizontal communication climates is not generalizable to other social network sites because the group profile communication feature does not exist in other major social network sites. However, Facebook Use’s impact on the organization’s communication climate is generalizable because the usage variable consisting of different communication patterns between the users in the organization can be replicated in a different social network site. The communication pattern can be replicated in different social computing environments and has even been performed on various social computing technologies (Koo et al. 2011). Future research can test the relationship between a group profile and communication climates in a different social network environment, but this may depend on the social network site’s decision to adapt their current platform to include a group communication profile. In addition, future research can apply an experimental approach to further test the hypotheses and/or test the hypotheses over time and capture fluctuations within the model.

In conclusion, the study has investigated the relationship between social network usage and organizational identification. The study was able to examine how organizational identification is impacted differently by the direction of communication among members within the organization. Member-based organizations can achieve higher organizational identification among members by promoting communication between leaders and members and supporting interaction among members of equal status. Further analysis showed that horizontal and vertical communication climates mediate the relationship between social network usage and organizational identification. As a result of this research, future research can advance the study of social network usage and organizational identification and further examine the intricacies associated with the communicating users, communication medium, nature of the organization, and the direction of the communication.

**Acknowledgements**

The authors gratefully acknowledge the suggestions of Dr. Gina Green, Dr. Cynthia Riemenschneider, and the ICIS AE and reviewers.
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