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# Let`s Work Together! We-Intention to Use Instant Messaging for E-Collaboration

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“LET’S WORK TOGETHER!”  
WE-INTENTION TO USE INSTANT MESSAGING FOR  
E-COLLABORATION

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**Abstract**

*Instant messaging is one of the fastest growing internet-based collaborative technologies and is being widely used for work collaboration. In this paper, we modified the model of goal-directed behaviour by adding the social influence processes to investigate the we-intention to use instant messaging for e-collaboration. An online survey was conducted and data collected from 163 respondents were analyzed using the partial least squares. The research model explained 67.4% of the variance in we-intention. Desires, group norms, past behaviour, perceived behaviour control were found statistically significant in determining the we-intention to use instant messaging, whilst positive and negative anticipated emotions and social identity had significant effects on we-intention through desire. This is one of the very first models in Information Systems that employs the concept of “we-intention” to explain e-collaboration. We believe that the implications of this study provide new and important insights to both researchers and practitioners.*

*Keywords: Instant messaging, E-collaboration, We-intention, Model of goal-directed behaviour, Theory of planned behaviour, Social influence, Social computing technologies*

## 1 INTRODUCTION

The advance and proliferation of Internet has greatly changed the way people collaborate and work with each other. Many Internet-based collaborative tools have become available to the public, such as email, weblogs, videoconferencing, bulletin board system, wikipedia, yahoo!knowledge, and instant messaging. Among all these Internet-based technologies, instant messaging is the fastest growing communication medium, the number of users are estimated to grow from 432 million in 2006 to 650 million in 2010 (Radicati Group 2006). In addition, global service providers such as AOL instant messenger, MSN messenger, and Yahoo! Messenger each reported over 1 billion messages sent per day (Symantec 2006).

Instant messaging has a number of unique features that greatly support work collaboration. These features include (1) providing a buddy list of other users and a “pop-up” mechanism to display messages; (2) offering its users the ability to instantly create a private chat room and invite others to participate and (3) providing the “presence awareness” by notifying others when their buddies are online and available to receive a message (Huang et al. 2003, Quan-Haase et al. 2005). With these unique features and the huge adoption and use, instant messaging could serve as a useful collaborative tool in the workplace. The value of instant messaging, however, will not be maximized if it cannot be really accepted for collaborative work. In view of this, the purpose of this study is to investigate user intention to use instant messaging for collaborative work.

In the past two decades of Information Systems (IS) research, the predominant focus has been put on intention-based models. We witness an extensive use of the Technology Acceptance Model (TAM) (Davis 1989), Theory of Reasoned Action (TRA) (Fishbein et al. 1975), Theory of Planned Behaviour (TPB) (Ajzen 1985), and their variants to explain user acceptance behaviour. Recently, some studies started to adopt these traditional intention-based models to explain the use of instant messaging (e.g., Li et al. 2005, Lin et al. 2006). The result of these studies, however, may not provide enough insights in explaining the collective use of this Internet-based collaborative technology. The traditional approach that examined technology use from an individual perspective may not provide enough insight for our understanding of collective activities, for instance, e-collaboration. In addition, the traditional intention-based models are action-based models that do not incorporate the goal achievement as the decision criteria. They also neglect the automatic factor (past behaviour) and the social factors (group norms and social identity) of goal-directed behaviour. Therefore, this study attempts to bridge the gap of research on using instant messaging for e-collaboration. Building on the model of goal-directed behaviour and social influence theory, we investigate the we-intention to use instant messaging for collaborative work. We believe that this study will provide new and important insights to both researchers and practitioners. In the next section, we review the theoretical background of this study. We then present the research model and the research method, and finally we report the results of data analysis and discuss the implications for theory and practice.

## 2 THEORETICAL BACKGROUND

In the context of using instant messaging for e-collaboration, users in the group mostly share a common goal and exert their effort to achieve this collective goal together. However, these behaviours basically depend on user intention to adopt instant messaging for collaborative work. In this section, we first introduce the concept of “we-intention”, we then describe the model of goal-directed behaviour and finally we discuss the role of social influence in group behaviour.

## 2.1 We-Intention

According to Bagozzi and Lee (2002b), there are three levels of explanation on decision making in social research. The three levels of explanation are: (1) Classic individual based models (A personal intention to perform an individual act by oneself), (2) Contingency consistency and other normative based models (A personal intention to perform an individual act but with consideration of the social influence), and (3) A group-based model (including both I-intention and we-intention to perform a group act). In the past two decades, research in Information Systems (IS) has been dominated by the classic individual based models to explain the adoption and initial use of a new technology (Venkatesh et al. 2003). Basically, an individual's personal intention to use a new technology depends on his or her individual reasons and perceived social pressure for using this technology.

The use of collaborative technology, however, can make sense only when a group of individuals adopt this technology. Employees cannot use this technology for collaboration if they find their co-workers do not adopt this collaborative technology. In this sense, the classic individual based models cannot provide enough insights to explain the collective use of information technology, where other persons' simultaneous adoption of the same technology is the pre-requisite of individuals' adoption behaviour. Indeed, the group-based model also is an unexplored issue in the IS discipline, and the "we-intention" concept remains very new in social research.

"We-intention" has initially been concerned by philosophers (Bratman 1997, Tuomela 1995), who defined this concept as a "commitment of an individual to participate in joint action, and involves an implicit or explicit agreement between the participants to engage in that joint action". They primarily focused on conceptual and logical aspects of "we-intention". Only recently, Bagozzi and his colleagues concentrated on the measurement and hypothesis testing concerns and used this concept to explain eating lunch together and virtual community participation (Bagozzi et al. 2002a, Bagozzi et al. 2002b, Dholakia et al. 2004). In according to Bagozzi (2000), "we-intention" can be considered as the intention to participate in a group to perform a group act, in which the participants perceive themselves as members of the group. For instance, "We intend to play football". In this case, a person sees the self as a part of the football team and takes the football game as a group action rather a personal act. Obviously this is different from I-intention to perform an individual act (e.g. I intend to go to library), where other persons are not involved as essential parts of the behaviour. Compared with "I-intention", "we-intention" highlights the individual commitment in collectivity and the social nature of group action. Therefore, "we-intention" is more appropriate to explain collective activity and social act than traditional individual intention.

## 2.2 Model of Goal-Directed Behaviour

The theory of planned behaviour (TPB) has attracted much attention in the past two decades because of its parsimony (Ajzen 1985). Researchers however continuously proposed additions to the TPB so as to improve its predictive and explanatory power. Recently, Perugini and Bagozzi (2001) proposed a new model, called model of goal-directed behaviour (MGB), based on TPB by adding three classes of variables. First, anticipated emotions were added in parallel with the traditional independent variables found in the TPB. According to Perugini and Bagozzi (2001), anticipated emotions function as independent variables "based upon a decision process that takes into account judged consequences of goal achievement and goal failure". Compared to the traditional action-centered independent variables (e.g., attitude, subjective norms, and perceived behavioural control in TPB), anticipated emotions focus on personal goals instead of action, and reflect imagined affective response toward goal success and goal failure. A second addition to the TPB under the MGB is the incorporation of past behaviour, which represents the automatic processes neglected in the TPB. The effect of past behaviour on both intention and future behaviour has been proven significant in previous research (Ouellette et al. 1998).

In MGB, past behaviour is hypothesized to exert direct effects on desire, intention and behaviour (Perugini et al. 2001). The final addition to TPB is the concept of “desire”. Some criticism has pointed out that attitude, subjective norms, and perceived behavioural control included in the TPB provide reasons for acting, however, the TPB fails to consider how intentions become energized (Bagozzi 1992, Fazio 1995). In this regard, Bagozzi (1992) proposed that desire represents a motivational content needed to induce an intention to act and mediates the effects of the classical “reasoned” antecedents on intention. Desire is often referred as an extrinsic desire, which is “a desire for something for its believed conductiveness to something else that one desires” (Mele 1995). Consistent with previous research, desire refers to a motivational state and transforms the reasons for acting into a motivation to do so in the MGB (Perugini et al. 2001).

### 2.3 Social Influence Processes

Traditional intention-based models primarily focused on cognitive aspect of social influence, namely subjective norms, which reflect social pressure from significant others. However, in the light of group behaviour, it is important to take different processes of social influence into account. In this regard, Kelman (1974) distinguished three different modes of social influence, including compliance, internalization, and identification. All three modes of social influence might function to different degrees depending on the circumstances. The social influence underlying compliance reflects the influence of expectations from significant others and is often characterized by subjective norms. In IS adoption research, the compliance process appeared to be paramount especially in a mandatory context and at the early stage of technology usage behaviour. Internalization reflects the adoption of a decision based on the similarity of one’s value with that of others, and is represented through the effects of group norms in the current study. The third mode of social influence, identification, refers to the self-awareness of one’s membership in a group, as well as the emotional and evaluative significance of this membership (Tajfel 1981). In accordance with previous studies (Bagozzi et al. 2002a, Bagozzi et al. 2002b), we use social identity to represent the social influence underlying identification process.

## 3 RESEARCH MODEL AND HYPOTHESES

Figure 1 depicts the research model of this study. In the current investigation, we modified the model of goal-directed behaviour (MGB) by adding the social influence processes to investigate the we-intention to use instant messaging for e-collaboration. The constructs and their relationships are discussed in the following sections.

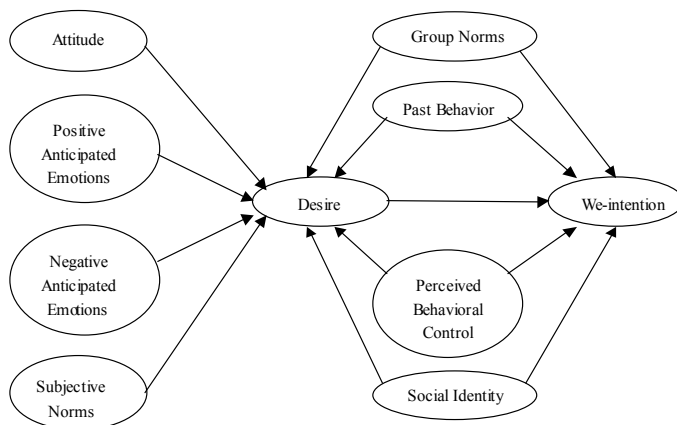


Figure 1. The Research Model of We-intention to Use Instant Messaging for E-collaboration

### 3.1 We-Intention to use Instant Messaging

In the current study of intention to use instant messaging for e-collaboration, we believe that user tends to construe himself or herself as a member of a group and will form an intention to use instant messaging together with other group members (Bagozzi et al. 2002a). Obviously, the behaviour of using instant messaging for e-collaboration is a group act and one cannot perform just by himself or herself. Thus, we believe that “we-intention” is a more appropriate concept in this study.

### 3.2 Desire as a Mediating Variable

According to the MGB, desire is considered as the proximal determinant of intention and mediates the effects of the traditional “reasoned” variables (attitude, subjective norms, and perceived behavioural control) on intention to act. Applying the MGB to instant messaging usage behaviours, we believe that desire transforms the classical personal “reasoned” antecedents into a motivation to participate into a group and use instant messaging for e-collaboration. As Tuomela’s (1995) statement, the beliefs required for we-intention are purely subjective and need not be true, and the member could be the only agent in a group with we-intention. Thus, once a user is aware of his or her own desire to use instant messaging to collaborate with other group members, this will motivate him or her to form a we-intention to use instant messaging for e-collaboration (Bagozzi et al. 2002a). Consistent with the traditional TPB, we also expect that perceived behavioural control over the use of instant messaging exhibits both direct and indirect impacts on we-intention to use. Based on the discussion above,

*H1: Desire has a positive impact on we-intention to use instant messaging for e-collaboration*

*H2: Attitude has a positive impact on user desire to use instant messaging for e-collaboration*

*H3: Subjective norms have a positive impact on user desire to use instant messaging for e-collaboration*

*H4: Perceived behavioural control has a positive impact on user desire to use instant messaging for e-collaboration*

*H5: Perceived behavioural control has a positive impact on we-intention to use instant messaging for e-collaboration*

Desire is also formed by the anticipated emotions in MGB. When an individual plans to collaborate with other group members via instant messaging, he or she will evaluate the affective consequences of both successful and unsuccessful use of instant messaging for collaboration. The desire to use instant messaging for e-collaboration is formed as a result of self-evaluation of goal attainment and goal failure. Therefore,

*H6: Positive anticipated emotions have a positive impact on user desire to use instant messaging for e-collaboration*

*H7: Negative anticipated emotions have a positive impact on user desire to use instant messaging for e-collaboration*

### 3.3 The Role of Past Behaviour

The MGB incorporates the construct of past behaviour to capture the automatic aspect of user behaviour. A great deal of studies has repeatedly reported that past behaviour has an independent effect on intention (for a review, see Armitage et al. 2001). For example, Ouellette and Wood (1998) argued that the more frequent and recent the acts people perform, the more likely they form favorable intentions about the act. Extending this line of argument in the current study, we expect that past

behaviour exhibit direct impacts on both desire and we-intention to use instant messaging for e-collaboration.

*H8: Past behaviour has a positive impact on user desire to use instant messaging for e-collaboration*

*H9: Past behaviour has a positive impact on we-intention to use instant messaging for e-collaboration*

### **3.4 The Role of Social Influence**

In addition to subjective norms, group norms and social identity are two other important modes of social influence in determining user behaviour, in particular, the group behaviour. Group norms represent internalization process that occurs when the individual finds his or her values and goals are congruent with those of other members in the collaborative group. In the current study, users who use instant messaging to work together mostly have the same interest and share a common goal. Bagozzi and Dholakia (2002a) posited that if an individual's values and goals are congruent with those of another, the person will form a desire and intention to participate in the virtual community. Based on the discussion above,

*H10: Group norms have a positive impact on user desire to use instant messaging for e-collaboration*

*H11: Group norms have a positive impact on we-intention to use instant messaging for e-collaboration*

The identification process is represented in the current research through the effect of social identity and it refers to one's conception of self in terms of the relationship with a focal group. Instant messaging provides a variety of features to promote the relationship development between its users, such as buddy list and presence awareness. In addition, the frequent communication between group members through instant messaging further facilitates identification within the collaborative group. Based on the discussion above,

*H12: Social identity has a positive impact on user desire to use instant messaging for e-collaboration*

*H13: Social identity has a positive impact on we-intention to use instant messaging for e-collaboration*

## **4 RESEARCH METHOD**

The purpose of this study is to investigate the we-intention to use the instant messaging for e-collaboration. The target respondents of this study were university students who have used instant messaging for collaborative work (e.g., using the instant messaging to discuss group projects together). An online survey was used to collect the data for analysis. Online survey design has the advantages of allowing electronic input and reducing response bias (Boyer et al. 2002), and facilitates data collection from a large amount of respondents. In order to motivate more participation in this online survey, an incentive of SD memory card was offered as lucky draw prize. The measures used in the survey are provided in Table 1. All the items had been validated in prior studies. Minor changes on the wordings were made so as to fit the current investigation of instant messaging. A total of 163 usable questionnaires were collected. Among the respondents, 39% are female and 61% are male. Up to 74% of the respondents aged between 21 and 25. The average usage experience with instant messaging was 5.35 years and the average time spent on instant messaging everyday is 4.39 hours. A large majority (61%) of the respondents reported that they use instant messaging for work.

## 5 DATA ANALYSIS

The research model was analyzed using Partial Least Squares (PLS). The PLS procedure (Wold 1989) is a second-generation multivariate technique which has been gaining interest and use among researchers. PLS could assess the measurement model and structural model simultaneously in one operation and has the ability to model latent construct under conditions of non-normality. Following the two-step analytical procedures (Hair et al. 1998), the measurement model was first examined and then the structural model was assessed.

### 5.1 Measurement Model

Composite reliability is the measurement for internal consistency. A composite reliability of 0.70 or above and an average variance extracted of more than 0.50 are deemed acceptable (Fornell et al. 1987). Table 1 summarizes the factor loadings, the composite reliability values and the average variance extracted values of the measures of the research model. All the measures exceed the recommended thresholds, with composite reliability ranged from 0.898 to 0.959 and average variance extracted ranged from 0.688 to 0.866.

Construct	List of items	Loading	Source
Attitude (ATT) $\alpha=0.898$ $\beta=0.688$	Using instant messaging for collaboration during the next 2 weeks would be: (seven-point semantic scales) ATT1: foolish/wise ATT2: harmful/beneficial ATT3: bad/good ATT4: unpleasant/pleasant	0.838 0.816 0.879 0.781	Perugini et al. (2001), Bagozzi et al. (2002a)
Positive Anticipated Emotions (PAE) $\alpha=0.942$ $\beta=0.699$	If I am able to use instant messaging for collaboration during the next 2 weeks, I will feel: (seven-point "not at all-very much" scale) PAE1: not at all excited/ excited very much PAE2: not at all delighted/delighted very much PAE3: not at all happy/happy very much PAE4: not at all glad/glad very much PAE5: not at all satisfied/satisfied very much PAE6: not at all proud/proud very much PAE7: not at all self-assured/self-assured very much	0.849 0.904 0.829 0.836 0.817 0.801 0.814	Bagozzi et al. (2002a)
Negative Anticipated Emotions (NAE) $\alpha=0.959$ $\beta=0.699$	If I am unable to use instant messaging for collaboration during the next 2 weeks, I will feel: (seven-point "not at all-very much" scale) NAE1: not at all angry/angry very much NAE2: not at all frustrated/frustrated very much NAE3: not at all guilty/guilty very much NAE4: not at all ashamed/ashamed very much NAE5: not at all sad/sad very much NAE6: not at all disappointed/disappointed very much NAE7: not at all depressed/depressed very much NAE8: not at all worried/worried very much NAE9: not at all uncomfortable/uncomfortable very much NAE10: not at all anxious/anxious very much	0.810 0.822 0.788 0.717 0.871 0.784 0.905 0.886 0.886 0.874	Bagozzi et al. (2002a)
Subjective Norms (SN) $\alpha=0.934$ $\beta=0.825$	SN1: Most people who are important to me think that I should/should not use instant messaging for collaboration during the next 2 weeks. (seven-point "should-should not" scale) SN2: Most people who are important to me would approve/disapprove of me using instant messaging for collaboration during the next 2 weeks. (seven-point "approve-disapprove" scale)	0.887 0.932	Bagozzi et al. (2002a), Venkatesh et al. (2000)



	SN3: People who influence my behaviour think that I should/should not use instant messaging for collaboration during the next 2 weeks. (seven-point “should-should not” scale)	0.906	
Desire (DE) $\alpha=0.928$ $\beta=0.812$	DE1. I desire to use instant messaging for collaboration during the next 2 weeks. (seven-point “disagree-agree” scale)	0.909	Bagozzi et al. (2002a)
	DE2. My desire for using instant messaging for collaboration during the next 2 weeks can be described as: (seven-point “no desire at all- very strong desire” scale)	0.896	
	DE3. I want to use instant messaging for collaboration during the next 2 weeks. (seven-point “does not describe me at all-describe me very well” scale)	0.898	
Group Norms (GN) $\alpha=0.909$ $\beta=0.833$	Using instant messaging for collaboration sometime within the next 2 weeks can be considered to be a goal. For each of the members in your group, please estimate the strength to which each holds the goal. (seven-point “weak-strong” scale)		Bagozzi et al. (2002b)
	GN1: Strength of self’s goal. GN2: Average of the strength of group members’ goal.	0.925 0.900	
Perceived Behavioural Control (PBC) $\alpha=0.904$ $\beta=0.825$	PBC1. How much control do you have over using instant messaging for collaboration during the next two weeks? (seven-point “not control-total control” scale)	0.902	Bagozzi et al. (2002a)
	PBC2. For me to use instant messaging for collaboration during the next two weeks is: (seven-point “difficult-easy” scale)	0.914	
Past Behaviour (PB) $\alpha=0.928$ $\beta=0.866$	PB1. How often did you use instant messaging for collaboration during the past four weeks? (seven-point “never-frequently” scale)	0.933	Perugini et al. (2001)
	PB2. How often did you use instant messaging for collaboration during the past year? (seven-point “never-frequently” scale)	0.928	
Social Identity (SI) $\alpha=0.909$ $\beta=0.769$	SI1: How would you express the degree of overlapping between your own personal identity and the identity of the group you collaborate with through instant messaging when you are actually part of the group and engaging in group activities? (eight-point “far apart-complete overlap” scale)	0.678	Bergami et al. (2000), Bagozzi et al. (2002a)
	SI2: Please indicate to what degree your self-image overlaps with the identity of the group of partners as you perceive it. (seven-point “not at all-very much” scale)	0.803	
	SI3: How attached are you to the group you collaborate with through instant messaging? (seven-point “not at all-very much” scale)	0.854	
	SI4: How strong would you say your feelings of belongingness are toward the group? (seven-point “not at all-very much” scale)	0.843	
	SI5: I am a valuable member of the group. (seven-point “does not describe me at all-describes me very well” scale)	0.804	
	SI6: I am an important member of the group. (seven-point “does not describe me at all-describes me very well” scale)	0.782	
We-Intention (WE) $\alpha=0.919$ $\beta=0.851$	WE1: I intend that our group use instant messaging for collaboration together sometime during the next two weeks. (seven-point “disagree-agree” scale)	0.925	Bagozzi et al. (2002b)
	WE2: We intend to use instant messaging for collaboration together sometime during the next two weeks. (seven-point “disagree-agree” scale)	0.920	

Note:  $\alpha$ = composite reliability;  $\beta$ = average variance extracted

Table 1. Summary of Psychometric Properties of the Measures

Discriminant validity of the measures can be verified by comparing the shared variances between constructs with the average variance extracted for each construct (Fornell et al. 1981). Higher average variance extracted for each construct than the shared variances between constructs suggests

discriminant validity. Table 2 presents the correlations between constructs and the square roots of average variance extracted. The results suggested an adequate level of discriminant validity of the measurements.

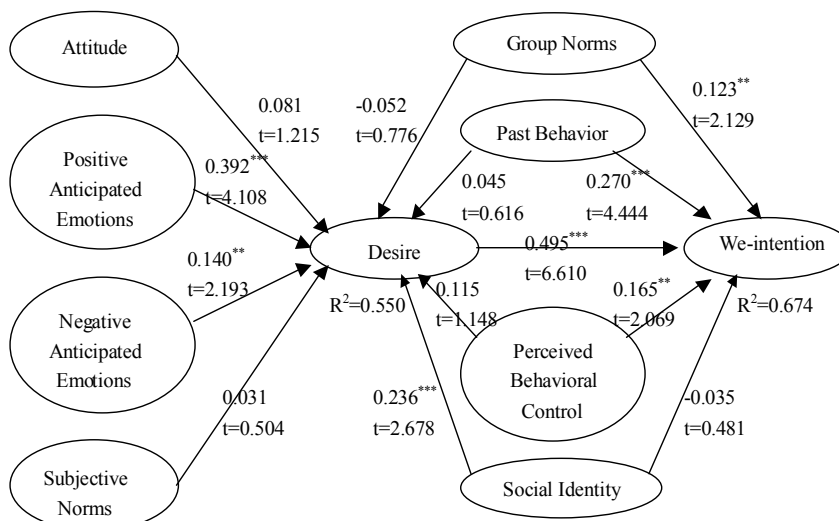
	ATT	PAE	NAE	SN	DE	GN	PBC	PB	SI	WE
ATT	<b>0.829</b>									
PAE	0.537	<b>0.836</b>								
NAE	0.047	0.291	<b>0.836</b>							
SN	-0.276	-0.253	-0.057	<b>0.908</b>						
DE	0.465	0.682	0.296	-0.165	<b>0.901</b>					
GN	0.377	0.465	0.057	-0.205	0.353	<b>0.913</b>				
PBC	0.471	0.492	0.097	-0.115	0.515	0.398	<b>0.908</b>			
PB	0.384	0.526	0.228	-0.200	0.496	0.381	0.610	<b>0.931</b>		
SI	0.523	0.666	0.090	-0.230	0.617	0.538	0.642	0.583	<b>0.877</b>	
WE	0.472	0.669	0.270	-0.135	0.736	0.448	0.612	0.643	0.601	<b>0.922</b>

Note: Diagonal elements are square roots of average variance extracted.

Table 2. Correlation Matrix of the Constructs

## 5.2 Structural Model

Figure 2 presents the overall explanatory power, estimated path coefficients (all significant paths are indicated with asterisks), and associated t-value of the paths of the research model. Test of significance of all paths were performed using the bootstrap resampling procedure. The results show that exogenous variables explain 67.4% of the variance in “We-intention to use instant messaging for e-collaboration”, and 55.0% of the variance in “Desire”. All structural paths (except social identity) with direct impacts on we-intention are found statistically significant in the research model. Desire has the strongest impact on we-intention, with path coefficient at 0.495, followed by past behaviour, perceived behavioural control and group norms, with path coefficients at 0.270, 0.165, and 0.123



Note: \*p<0.1, \*\*p<0.05, \*\*\*p<0.01

Figure 2. Results of the Research Model

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spectively. Positive anticipated emotions, negative anticipated emotions, and social identity are the three key factors significantly influencing desire in the research model, with path coefficients at 0.392, 0.140, and 0.236 respectively.

## 6 DISCUSSION AND CONCLUSION

The motivation of this study is to understand the we-intention to use instant messaging for e-collaboration. The research model extends the model of goal-directed behaviour (Perugini et al. 2001) by adding the social influence processes. The measurement model is confirmed with adequate convergent and discriminant validity of all measures and the structural model explains 67.4% of the variance in we-intention to use instant messaging for e-collaboration. The results show that desire plays an important role in mediating the effects of the reasoned antecedents on we-intention. It is interesting to find that the “action-based” variables, such as attitude and subjective norms, are no longer significant in determining the we-intention to use instant messaging. In contrast, the “goal-directed” variables, including both positive and negative anticipated emotions, exhibit strong impact on user desire and in turn affect the we-intention to use instant messaging for e-collaboration. This may be explained by the fact that most users are experienced users of instant messaging. The belief variables are no longer important in determining their use of instant messaging for e-collaboration. Instead, they pay more attention to whether the use of instant messaging can help them to achieve the collective goal together. The results also provide support to the automatic aspect of the research model that is captured by the past behaviour of using instant messaging for collaboration. Finally, the three modes of social influence processes play different roles in the research model. For instances, subjective norms are not important in determining the use of instant messaging, while group norms exhibit a direct impact on the we-intention to use instant messaging and social identity affects we-intention indirectly through desire.

Before highlighting the implications for research and practice, this section lists the limitations of this study that could be addressed in future studies. First, the data were collected mainly from a student sample with high experience in using instant messaging. We-intention is built up when they use instant messaging together to accomplish homework assignments and class team projects, which are different in nature from the tasks conducted in other social or business contexts. Generalization of the findings of the present study should be made with caution. Second, we have not discerned the different group situations in the current study. Previous studies indicated that computer-mediated communication is both task- and social-emotion-oriented in nature (Liu 2002). Future research should investigate we-intention and usage behaviour of instant messaging in both task- and social-emotion-oriented e-collaboration. Third, although the model explains about 67% of the variance, some important variables may be missing, for example, trust. Trust is another issue that we should pay attention to in our future studies on virtual communities and networks.

This study is one of the very few attempts that investigates the special phenomenon of group use of information technology and introduces the “we-intention” concept in the study of collective use of instant messaging. This study advances theoretical development on e-collaboration in three important ways. First, the current study introduced the concept of “we-intention” and group-based models in IS research. Second, this study extends and empirically tests the model of goal-directed behaviour (MGB) in the context of collective use of instant messaging. Finally, this study incorporates the three social influence processes into the MGB, providing a better explanation of group acceptance behaviour of Internet-based collaborative technologies than the original MGB.

The results of this study also provide important insights to practitioners. Instant messaging is one of the most widely adopted internet-based collaborative technologies that facilitate socializing, event

coordination, and work collaboration. Though the respondents of this study are mostly university students, they are the major users of instant messaging and they also represent the future workforce. Understanding the factors that drive collective intention to use this collaborative technology becomes extremely important to practitioners. Based on the findings of this study, here are some guidelines when the collaborative technology is introduced in the workplace:

- The significance of “goal-directed” factors illustrates that users’ decision to use this technology for e-collaboration is closely related to their expected results of usage. Practitioners should therefore emphasize and demonstrate some successful cases of the use of instant messaging for e-collaboration to group members.
- Social influence (group norms and social identity) also plays an important role in determining the we-intention to use instant messaging. Practitioners should wisely use the specific features of instant messaging, such as user profile, picture, and presence awareness, to promote the group norms and social identity to the working groups.
- Past behaviour has a significant effect on user intention to use instant messaging for e-collaboration. That means, the more frequent and recent the users use instant messaging for collaboration, the more likely he or she will use instant messaging for e-collaboration in future. Practitioners or group members should consider extending the use of the instant messaging among the group members. Apart from collaborative work, members should also try to use instant messaging for other collaborative activities, such as socializing and event coordination.

In summary, this study employs group-based model and “we-intention” concept to give a new insight in understanding user intention to use instant messaging for e-collaboration. Future research should continue to enrich this line of research area by extending the investigation in different types of internet-based collaborative technologies, especially those social computing technologies.

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