# The Influence of Group Identity, Group Trust and Group Norms on Group Learning Participation

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## ABSTRACT

*There is little research concerning students' willingness to participate in activities of virtual group. Accordingly, based on social identity theory this study conducted a path analysis to investigate the antecedents of students' participation. The result indicated that it were positively influenced by both shared group identity and group trust. Although group norms was also affected by shared group identity, its influence on students' participation was not significant.*

## 1: INTRODUCTION

Many practitioners of e-learning now consider group-based learning to be a critical element [1][2]. However, some has suggested that the development of the virtual group is likely to be ineffective, because participants may disregard some significant information or withdraw from discussion easily [3]. Indeed, an important part of maintaining the group relationship is to actively participate in online interactions [4][5][6]. Reviewing the past studies, little research conducted with the students' participation from psychological aspect.

Within both the sociological and psychological literature, a person's self-identity has been viewed as an important influence on behavior [7][8][9]. For example, in the study of Bagozzi and Dholakia [10], the construct - social identity plays an important role to determine virtual community participation. The social identity perspective is a social psychological analysis of group processes, intergroup relations, and the self-concept [11] [12][13]. According to the Social Identity Theory (SIT), if the group identity becomes salient, each member can effectively understand and take on the other's values. In other words, due to the anonymity in the cyber space, the salience of the group identity is likely to prompt members to work together rapidly even these members lack a common history.

Furthermore, virtual groups in CMC-based e-learning have been the study subject by several researchers. For example, Jarvenpaa et al.'s study [14] explores the challenges of creating and maintaining students' learning performance in virtual groups. Their finding indicates trust is critical to successful collaboration in all virtual groups. Another research by [2] reveals that group identity provides potentially useful information to manage virtual groups. Moreover, past researches also indicate norms are fundamentally important to the formation of agreements that underlie the smooth operation of distributed cooperative work [15][16].

Based on aforementioned research, social identity is viewed as one of the critical social determinants that enhance members' participation. We believe that the contemporary social identity approach has rich potential to serve as an integrative force on individuals' perception of group norms, group trust and perceived participation. Our research goal is to examine how the shared group identity influences group learning process in cyber space.

## 2: LITERATURE REVIEW

The review of literature includes four main parts. The social identity theory and related researches were elucidated in the first section. The second section concentrates on introducing the theoretical base of group trust. Then, the research findings on group norms were introduced. Previous researches conducted to prove the value of participation were included in the final section.

### 2.1: SOCIAL IDENTITY THEORY

The social identity perspective embraces two integrated sub-theories, among which the most significant are social identity theory [11] and self-categorization theory. Social identity was defined as "the individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership" [17]. Tajfel [18] argues that individuals categorize themselves as well as those around them into two distinct groups: the "ingroup" (all individuals categorized as similar to the subject), and the "outgroup" (all others). Individuals perceiving as member of the ingroup will be motivated to engage in behaviors needed to maintain the relationship with other virtual community members. An important part of maintaining this relationship with the group is to actively participate in online interactions. Bagozzi and Dholakia [10] find that the intention of participating in virtual community is influenced by social identity through participation desires. Dholakia et al. [41] also testify that social identity has great influence on desires to participate in virtual community activities.

Furthermore, in Williams and O'Reilly's [19] review of the demography literature, they noted that perceptions of "otherness" within a group have been shown to

decreased cooperation. Consistent with this, Moore, Kurtzberg, Thompson, and Morris [20] found that reaching a consensus among individuals was more difficult when an ingroup identification was lacking. To the extent that an individual identifies with his or her teammates, they will evaluate that person's behaviors and actions both on and off-task more positively.

The cognitive dimension of social identity is specified by self-categorization theory in terms of the causes and consequences of social categorization of self and others. The process of social categorization perceptually segments the social world into ingroups and outgroups that are cognitively represented as prototypes. These prototypes are context specific, multidimensional sets of attributes that define and prescribe attitudes, feelings, and behaviors that characterize one group and distinguish it from other groups [21].

Social categorization of self, self-categorization, has the same effect but more so. It not only depersonalizes self-perception but goes further in actually transforming self-conception and assimilating all aspects of ones attitudes, feelings, and behaviors to the ingroup prototype; it changes what people think, feel, and do. Depersonalization is the basic process underlying group phenomena; it perceptually differentiates groups and renders perceptions, attitudes, feelings, and behaviors stereotypical and group normative. Accordingly, self-categorization theory is the other sub-theory of social identity perspective. It focuses on the basic social cognitive processes that cause people to identify with groups and manifest group behaviors.

## 2.2: GROUP TRUST

Trust had been discussed for decades. In recent years, it has been emphasized and becomes an interesting topic in many areas, such as psychology, sociology, and organizational management. According to Deutsch's [22] definition of trust: "we commit to take the ambiguous path if we believe that the trusted person will take the action that will produce the good outcome." We adopt this as the definition of trust for our work: trust in a person is a commitment to an action based on a belief that the future actions of that person will lead to a good outcome. For virtual groups, we speculate that trust is important to support virtual group because it may lead parties to work as a team and facilitate members to continually cooperate, share information, and believe that their party is "us" [23].

Many previous studies argued that there was a relationship between identity and trust. There is literature supporting that members build trust after they have identified to the organization [24]. Borgen found that strong identification is a significant trust-making mechanism in cooperative organizations [24]. Virtual group is a kind of sub-organization, so this result can be used to infer the relationship between group identity and group trust. Accordingly, we argue that shared group identity can result in group trust.

## 2.3: GROUP NORMS

Norms are expected to make significant contributions towards enabling discourse in cyberspace among people of different backgrounds, just as they do in the physical world. Norms are shared patterns of thought, feeling, and behavior, and in groups, what people do and say. According to McGrath's definition [25], norms tell group members what they can and cannot do. Similarly, from a social identity point of view, norms reflect a shared group prototype [26]. Based on this perspective, once categorized, people are viewed through the lens of the relevant group prototype and are represented in terms of how well they embody the prototype. As mentioned previously, group prototypes specify how people feel, perceive, think, and behave. As a result, the process of self-categorization produces conformity to shared in-group prototypes and thus produces in-group normative behavior [27]. In-group prototypes not only describe behavior but also prescribe it, which tell us how we ought to behave as group members.

Therefore, group prototypes function as group norms, because perceivers expect group members to adhere to them [28]. As a result, we argue that the shared group identity provides a sound account of group norms.

## 2.4: PERCEIVED PARTICIPATION

An important component of group collaboration is the discussion that occurs during group work, since verbal exchanges among the group participants provide the cognitive benefits of collaborative learning [29]. Besides, following constructivist learning approach, online group learning activities are collaborative, conversational, intentional, and reflective [30]. Apparently, both online and offline group collaboration require learners to actively participate in the interaction.

Learner participation is critical to learning process as well as to establish and maintain interactions. Participation describes learners' involving level during the learning process. Active participation in the group discussion would make the group learning experience more meaningful. However, participation is not just interacting with each other. The contributions made by participants should be related to the task content and meaningful to the group collaboration. The definition of perceived participation in this study is mainly focus on students' perception of contribution related to the group task.

Norms are defined as shared expectations regarding the behavior of team members [31][32]. Accordingly, with higher group norms, individuals are more likely to exhibit behaviors that other members expect, which may lead to higher perception of participation. Group trust, in this study, is a belief that the future actions of other members will lead to a good outcome. Thus, trust not only helps individuals to work as a team, but also facilitates members to continually cooperate. Based on this perspective, we also argue that group trust would lead to positive perception of participation.

## 3: RESEARCH METHOD

Based on the aforementioned literature review, we propose our research framework as depicted in Figure 1.
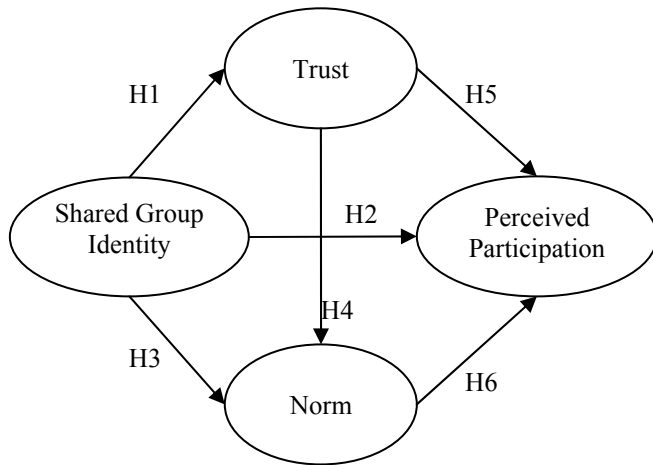


Figure 1. research framework

The hypothesis of this study were listed as follows:

**H1:**The higher the individual's shared group identity, the higher his perceived group trust.

**H2:**The higher the individual's shared group identity, the higher his perceived group norms.

**H3:**The higher the individual's shared group identity, the higher his perceived participation.

**H4:**The higher the individual's perceived group trust, the higher his group norms.

**H5:**The higher the individual's perceived group trust, the higher his perceived participation.

**H6:**The higher the individual's perceived group norms, the higher his perceived participation.

### 3.1: SAMPLES

A total of 100 undergraduate students enrolling in a organizational behavior course participated in this study. Participants were divided into 20 work groups, each consisting of 5 members. The course requires a total of eighteen-week of instruction, lasting from mid-September 2005 to late January 2006.

### 3.2: PROCEDURES

In this study, each group chooses a real-world business case from the case list. Each of the business case describes a unique real-world problem with no singly correct answers. All participants were required to take the real case as their learning task. During the eight-week of group collaboration, participants were asked to complete a group-based assignment. Participants were asked to be collaborative with group members in order to hand in their group report of the real case study.

Throughout the eight-week of group collaboration, students were also required to use a self-developed CSCL environment to communicate with other team members. The CSCL environment provided each group with an independent discussion platform where group members could contribute their viewpoints on the case problem, clarify or elaborate their solutions on the case problem, and inquire others' comments on their proposed solutions. They were all told what they posted would be recorded and weighted to their final grades.

### 3.3: MEASURES

We use four measures to assess corresponding constructs. Subjects were asked to answer each question items according to their perceptions on whether they agree or disagree with the statements ranging from 1 (extremely disagree) to 5 (strongly agree).

*Shared Group Identity*: Shared group identity was measured by the 12-item instrument developed by Tyler [33].

*Group Trust*: In this study, we used items from McAllister's [34] and Kanawattanacai and Yoo's [35] measures. A total of 11 items were used to measure the construct.

*Group Norms*: Group norms were measured by 3 items adapted from Wagemans's cooperation norm scale [36].

*Perceived Participation*: To capture the nature of team members' participation, we used Seers et al's measures [37]. The instrument included 3 items.

Table 1 shows the measures with factor loading greater than 0.7 of each construct. Accordingly, there were 7 items of shared group identity, 8 items of group trust, 1 item of perceived performance dropped because the factor loading were less than 0.7.

Table 1. Description of construct items

| Dimen. | Items | Factor Loading |
|--------|-------|----------------|
| SI1 | I am pleased to be a member of the GROUP. | 0.83 |
| SI2 | The GROUP is willing to help me solve problems | 0.79 |
| SI3 | I am proud to tell others that I am part of the GROUP. | 0.87 |
| SI4 | I would recommend to close friends that they join the GROUP. | 0.79 |
| SI5 | I am proud to think of myself as a member of the GROUP. | 0.91 |
| Trust1 | I can rely on other teammates not to make my job more difficult by careless work | 0.85 |
| Trust2 | Most of my teammates can be relied upon to do as they say they will do | 0.90 |
| Trust3 | I see no reason to doubt my teammates' competence and preparation for the job | 0.79 |

| | | |
|---|---|---|
| Norm1 | In my group, we expect everyone to assist one another in order to benefit the group. | 0.86 |
| Norm2 | My group's norm is to help one another with our assigned group tasks. | 0.81 |
| Norm3 | In my group, we think that everyone should volunteer to do things for the group. | 0.89 |
| Pat1 | I was equally engaged to achieve the common goals as my team members | 0.90 |
| Pat2 | I was fully contributing to our team | 0.92 |

## 3.4: DATA ANALYSIS

Partial Least Squares (PLS) was conducted to assess the research model of the study. The PLS technique that can analyze structural models with multiple-item constructs [38]. One of its significant features is that PLS is especially suitable for research with small sample. PLS produces loadings between items and constructs and standardized regression coefficients between constructs. Moreover, $R^2$ values for each dependent constructs are also produced.

## 4: RESULTS

The measurement model in PLS is assessed in terms of item loadings, internal consistency, and discriminant validity. Individual item loadings and internal consistencies should greater than 0.7 [39]. Thus, individual item loadings shown in Table 1 indicated the research constructs were considered adequate. Additionally, internal consistencies measured by Cronbach's α were greater all than 0.7 (as shown in Table 2).

Table 2. Reliability and correlation matrix

| Construct | Cronbach's α | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| 1.Share Identity | 0.88 | 0.70 | | | |
| 2.Trust | 0.79 | 0.63 | 0.71 | | |
| 3.Norms | 0.80 | 0.63 | 0.69 | 0.72 | |
| 4.Participation | 0.87 | 0.62 | 0.62 | 0.60 | 0.80 |

Discriminant validity is concerned with the ability of a measurement item to differentiate between objects being measured. For a satisfactory discriminant validity, items should load more strongly on their own construct than on other constructs in the model. Furthermore, the average variance shared between each construct should be greater than that between the construct and other constructs. As a result, Table 2 indicated that all diagonal elements (AVE of each construct) were larger than off-diagonal elements (correlations among constructs), thus, a high level of disciminant validity was presented in this study.

The path coefficients from the PLS analysis were shown in Figure 2. Consistent with recommended procedures [40], jackknifing was used to generate standard errors and t-statistics.
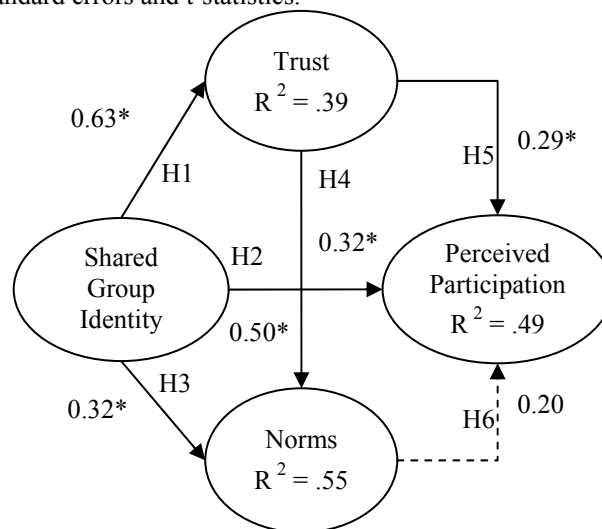


*: p<.05;
The dash line indicates the relationship between group norms and perceived participation is not significant.
Figure 2. Path coefficients of the model

As depicted in Figure 2, hypotheses 1, 2, and 3 were supported. Shared group identity was shown to exert a significant positive influence on group trust (β=0.63, p<.001) and perceived participation (β=0.32, p<.01) and group norms (β=0.32, p<.01). Hypothesis 4 proposed a link between group trust and group norms. The path was positive and significant (β=0.50, p<.001), supporting the contention that group trust increases the high level of group norms. With respect to hypothesis 5, a significant positive relationship between group trust and perceived contribution was observed (β=0.29, p<.05). Hypothesis 6 was not supported in this study (β=0.2, p>.05), which suggested a higher level of group norms would not influence learners' perceived participation.

Figure 2 also indicated the explained variance for each of the constructs in the model. Approximately 49% of the variance in perceived participation is explained by the model. Further, shared group identity explained 39% of the variance in group trust and 55% of the variance in group norms respectively. As a whole, the explained variance in this study was acceptable.

## 5: DISCUSSION AND CONCLUSION

This study investigated the influence of shared group identity on antecedents of perceived participation. According to the results, five of six hypotheses in this study were supported. Firstly, shared group identity has significantly impact on group trust as well as group norms. Secondly, the empirical evidence indicated that students' perceived participation in the group was significantly affected by group trust as well as by shared group identity. However, group norms didn't

significantly affect students' perceived participation. Theses findings were partially consistent with Dholakia et al. [41] results. In their study, they argued social identity has great influence on activities in virtual communities. Furthermore, group trust also has significantly influence on group norms. In sum, this paper confirmed both the direct and indirect effect on learner's perception of shared group identity on perceived participation. As previous mentioned, trust was a commitment to an action based on a belief that will lead to a good outcome. Accordingly, individuals with higher shared group identity would take their commitment more seriously to engage in behaviors needed to maintain the teamwork outcome. Although the impacts of perceived participation didn't discuss in this study, its influence on learners' performance has been confirmed by past research [29][30]. Future research may provide more empirical study to examine the relationship.

The significant findings in this study offer teachers a successful experience that shared group identity does enhance students' participation in virtual learning. There are two major pedagogical implications arising from this study: (1) shared group identity development, and (2) the importance of guiding learners to acquire stronger group trust in a cooperative learning context.

Students in virtual groups if do not emphasize on social interaction with their peers, they may be self-centered and dominant. However, with stronger shared identity, students establish a sense of belongingness to the group and have a degree of loyalty to participate group activities. Accordingly, students may help each other to achieve the group goal, and they were not dominant and self-centered any more, since they were in the same boat. In addition to the shared group identity development, students' perceived group trust also leads to exhibition of participation. The study provides empirical evidence regarding the importance of enhance group trust to facilitate students' participation.

To sum, it is group trust and shared group identity that positively associated with perceived participation. Future research may take this into consideration. Clearly, shared group identity is not the only antecedent of group trust and group norms in virtual community. Future research should focus on other factors as a cause in different settings to further our understanding.

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