

# Cultivating Online Social Resources to Enhance Entrepreneurial Learning: Providing New Insights Into Trust Repairing

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The purpose of this study is to examine the impact of online social capital on knowledge acquisition, and thereby, improve the process of entrepreneurial learning for youngsters. The researchers offer hypotheses to shed light on the interrelationships among critical components of social capital theory and knowledge acquisition towards the enhancement of entrepreneurial learning. The study also highlights the role of trust as a moderator which links the other aspects of social capital with knowledge acquisition. The hypotheses were tested using data collected from online groups based on the motive of entrepreneurial culture and student learning. The study findings identified a significant positive relationships between social interaction and knowledge acquisition, between shared vision and knowledge acquisition, and also between knowledge acquisition and entrepreneurial learning, confirming our hypothesis that social capital affects knowledge acquisition and its practical application to student learning. Furthermore, trust as a moderator diminished the positive relationships between social interaction and knowledge acquisition and also between shared vision and knowledge acquisition. With the emerging use of Web-based technologies, this research can be valuable to explain how different facets of online social capital can foster learning effectiveness for young entrepreneurs in multiple social settings. The findings also provide significant implications for organizations and social networks to better understand the aspects of trust repair which could be helpful to enhance collective learning.

*Keywords:* social capital, social interaction, shared vision, knowledge acquisition, entrepreneurial learning, trust

## Introduction

In today's dynamic environment, it has become necessary for individual entrepreneurs and organizations to continuously incorporate new knowledge into their business processes for achieving and sustaining competitive advantage (Cassiman & Veugelers, 2006). Acquiring knowledge from relational resources is

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considered particularly crucial in entrepreneurial culture for generating and exploiting new exciting opportunities. In this regard, the rapid growth in emerging internet technologies has developed new methods of social networking which offer users numerous ways to connect, integrate, and communicate with each other all over the world (Ruleman, 2012). The Internet has become an inexpensive medium that enables millions of people worldwide to disseminate information and share knowledge. Correspondingly, online social networks have become a significant part of the lives of internet users for interactive sharing and communication (Chang & Chuang, 2011).

Through social media over the Internet, individuals with same interests, purposes, and intentions can form online groups to interact, share experiences, and conduct vigorous discussions with each other (Hsu, 2015). Such online tools have been found to be worthwhile to expand interactions in the virtual domain by enabling useful conversations about content and problems, and thus enhancing the development of virtual social capital (Ellison, Steinfield, & Lampe, 2007). Social capital is an intangible asset produced by social networking among people, and thus it can also be generated virtually through media-based communities (Lu, Yang, & Yu, 2013). Knowledge acquisition and its utilization are predominantly social processes (Kogut & Zander, 1992; Yli-Renko, Autio, & Sapienza, 2001), therefore, social capital can play an essential role in the long-term success of new entrepreneurs by promoting the sharing and exchanging of useful knowledge (Hanneman & Riddle, 2005).

This study focuses its attention on the process of entrepreneurial learning through knowledge acquisition utilizing virtual or online social capital. Entrepreneurial learning is the practical implementation of the acquired information and conversion of new experiences into an innovative knowledge based on the specific situations (Ravasi & Turati, 2005). Following the essential propositions of social capital theory (Nahapiet & Ghoshal, 1998), this study adopts “social interaction” as a variable of structural social capital, “shared vision” as a variable of cognitive social capital, and finally “trust” as a variable of relational social capital. Thus, the study can examine that how these embedded resources affect the operations in a virtual community regarding knowledge acquisition and entrepreneurial learning.

There are broadly recognized observations within the literature of entrepreneurial learning that it occurred through broad social interactions, open discussions, and collaborations of shared visions or ideas in a group or community (Hargadon, 2002; Liu & Lee, 2015; Yli-Renko et al., 2001; Song, Min, Lee, & Seo, 2017; Rae, 2000). But, organizations in general and individual starters in particular also need to develop a favorable approach to expand their capability to acquire knowledge in virtual social networks. In this regard, unsurprisingly, trust has been known as being “at the heart of knowledge interchange” (Davenport & Prusak, 1998) and the “gateway” to build successful relationships (Wilson & Jantrania, 1993). Previous literature mostly focused on this relational dimension (trust) as a mediating variable with the other related aspects of social capital (Lefebvre, Sorenson, Henchionb, & Gellyncka, 2016; Cheng, Yeh, & Tu, 2008); a little attention has been paid to how trust can explain the variations in knowledge sharing or knowledge acquisition as a critical element to build social relations (Grabner-Kräuter & Bitter, 2015). The reason for the scant attention is that trust can have multiple facets (Chowdhury, 2005), and consequently, can have different impacts in the perspective of knowledge sharing among individuals.

So, the study findings also contributed to the existing literature by fulfilling another research gap identified by Grabner-Kräuter and Bitter (2015) for future empirical studies to address the question: How does trust develops over time and what factors can lead to affect/change the trust? Therefore, to address these research

gaps, this study contributes by providing more theoretical understandings into the relationships and role of trust with social interaction and shared vision towards knowledge acquisition. Trust is one of the most critical component of social capital (Farshchi & Brown, 2011), but to the best of our knowledge, no study has been conducted before this to measure the moderating effect of trust towards knowledge acquisition in the context of online social capital. With the emerging use of Web-based technologies, this research can be valuable to explain how different facets of online social capital can foster learning effectiveness for young entrepreneurs in a multiple-interaction setting. Moreover, it can also offers the attention towards trust management system and trust repairing strategies for network managers.

A quantitative study was conducted to validate the measures with the research objectives of exploring the effectiveness of entrepreneurial learning by highlighting the role of trust in linking the essential dimensions of social capital with knowledge acquisition. The remainder of this manuscript unfolds as follows: The authors first describe the research framework and hypothesized relationships among all variables based on the previous literature. The next section discusses the validity of the proposed model and research methods, followed by the empirical results. The paper is concluded with a discussion of findings, the study's contribution to existing literature, implications for future work, and study limitations.

## **Theoretical Background**

### **Theory of Social Capital**

The concept of social capital has been employed in multiple studies of management, organizational, and social context by different researchers (Liu & Lee, 2015; Chang & Chuang, 2011; Yina, Fei, & Sheu, 2014; Adler & Kwon, 2002; S. Lee, Park, & J. Lee, 2015; Lawson, Tyler, & Cousins, 2008). The concept has been operationalized differently by scholars (Payne, Moore, Griffis, & Autry, 2011) because of its numerous and challenging aspects. Most of the scholars commonly agree that social capital represents the sum of actual and potential resources an individual or a social group gain through its relationship network (Chow & Chan, 2008; Nahapiet & Ghoshal, 1998; Coleman, 1988). It is embedded in the relationships between entities and their associations with different communities (Chang & Chuang, 2011). Social capital by providing value to its actors facilitates them to take advantage of their network resources and obtain a competitive advantage over rivals (Tsai & Ghoshal, 1998). Further, this theory suggests that network of relationships possessed by individuals strongly affects the degree of knowledge sharing occurrences (Nahapiet & Ghoshal, 1998).

The central propositions of social capital theory (Nahapiet & Ghoshal, 1998) is based on three dimensions: structural, relational, and cognitive. The researchers demonstrated that the structural dimension of the social capital theory is the degree and intensity of interrelationships that exist between individuals in an organizational or a social group setting. It can be analyzed in terms of network strength and stability (Zheng, 2010) and the power of social ties and bonding in a group (Grootaert, Narayan, Jones, & Woolcock, 2004). Relational dimension analyzes the characteristics of personal relationships developed by participants in the history of their group interfaces (Granovetter, 2008). The key facets of this aspect are referred as trust (Ridings, Gefen, & Arinze, 2002), mutual benefit (Lu et al., 2013), and personal identification (Chang & Chuang, 2011) in a social network. While the cognitive dimension covers the aspects of shared language, understanding, and meaning (Chang & Chuang, 2011), shared vision and representations (McLure-Wasko & Faraj, 2000), shared goals and culture (Inkpen & Tsang, 2005).

### **Online Social Capital, Knowledge Acquisition, and Entrepreneurial Learning**

Online social networks or virtual communities have become an integral part of users' lives and serve as a dynamic tool to exchange information and knowledge across the globe. A virtual community is a social network and online discussion forum for individuals to interact, collaborate, and negotiate with multiple subjects (Chang & Chuang, 2011; Pendry & Salvatore, 2015). These online communities are enabled through Internet-based software that builds on the theoretical and technical grounds of Web and expedites the creation and discussion of user-generated focuses (Kaplan & Haenlein, 2010). Virtual communities are established on the grounds of shared interest, shared values, shared needs, and as well as of professional disciplines. These platforms assist the participants to originate, exchange, and collaborate the useful information in a community (Ellison et al., 2007; Joosten, 2012). Moreover, participating in a virtual community brings about collaborative learning, better synchronization and enhanced learning performance among members (Ruleman, 2012). Knowledge also occurs through shared activity, community engagement, and communication in social networks.

Taking the previous studies into account, many researchers argue that internet helps to maintain the geographically dispersed relationships in a close environment by providing social support (Subrahmanyam, Reich, Waechter, & Espinoza, 2008; Ellison, Gray, Lampe, & Fiore, 2014; Pendry & Salvatore, 2015; Johnston, Tanner, Lalla, & Kawalski, 2013), and consequently, this interaction positively leads towards the enhancement of social capital (Kraut et al., 2002; Hampton & Wellman, 2003; Ellison, Lampe, Steinfield, & Vitak, 2011). Social capital serves as an important resource to accomplish the goals and also access information and new knowledge. It is an intangible asset that is created by personal relationships and social networking among individuals (Coleman, 1988). It was also proposed by Donath and Boyd (2004) that adoption of social networking sites or virtual communities promote social capital by incorporating more diverse social assets. Acquiring knowledge through online communities over social media is a method for accumulating experiences through obtaining and sharing knowledge and guiding learning as well (Gupta, Melewar, & Bourlakis, 2010). This social aspect of virtual organizing was also found to be substantially significant for coordination among individuals and fostering more innovation and efficiency (Steiny & Oinas-Kukkonen, 2007).

Knowledge acquisition refers to the individuals' identification and capturing of new information, concepts, and thoughts from their surroundings. Acquiring knowledge through social capital is considered as an essential part of the entrepreneurial learning process (Landry, Amara, & Lamari, 2002; Li, 2015). Entrepreneurial learning is defined by Rae (2015) as the process of recognizing and performing on the possible opportunities as a natural process to get it useful in daily practice and also in the formal training. Rae also stated in his study that "entrepreneurial moments" are those in which new implications are observed, produced, and implemented. Researchers argue that social capital plays a vital role in this process by stimulating access to new resources, markets, and new technologies (Li, 2015). Likewise, it facilitates the utilization of exciting opportunities with uncertain results and improves the capabilities to efficiently utilize the knowledge obtained through a network of personal connections (Liao & Chou, 2012). Entrepreneurial learning can be a different approach from formal education or training in a practical way that individuals may experience situational insights, go through the process of creating, and then, transform the ideas or obstacles into opportunities and actions (Erdelyi, 2010). This course of participation and transformation, especially in the existence of relational social capital (trust), can enhance more innovative development and undertakings of risky actions in a competitive environment (Rodrigo-Alarcon, García-Villaverde, Ruiz-Ortega, & Parra-Requena, 2017).

### Conceptual Framework and Research Hypotheses

By keeping in view the fundamental paradigms of social capital theory, this study incorporates three primary factors of knowledge acquisition: social interaction and connections between members of a community, shared vision, and trust. Previous literature suggests that social capital should be analyzed as a multidimensional construct which involves the measurements of several dimensions (Koka & Prescott, 2002). For this study, trust is used as a moderating variable to measure the effect of social interaction and shared vision on knowledge acquisition (see Figure 1).

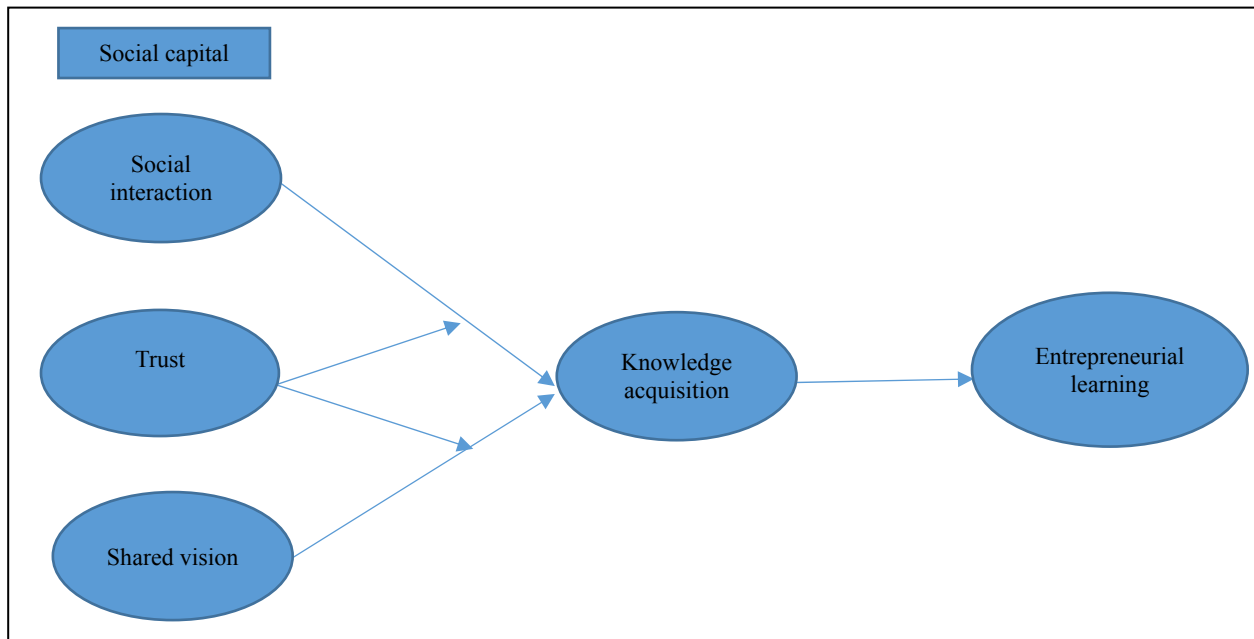


Figure 1. Conceptual framework.

**Social interaction and knowledge acquisition.** Social interaction is a process where individuals or group members interact with each other through appropriate means in different social relationships (Cartledge & Milburn, 1995) and consequently, they get familiar with each other and gain mutual understanding (Hakansson & Ford, 2002). Previous studies also indicate that social bonding and frequent interactions among people are the means for knowledge acquisition, information, and resource flow (Vera-Muñoz, Ho, & Chow, 2006). Different actors in a social group can gain access to each other's resources through frequent communications (Tsai & Ghoshal, 1998). In this regard, virtual communities play an influential role to provide such opportunities for interaction, collaboration, and forming relationships (Scarmozzino, Corvello, & Grimaldi, 2017). Moreover, knowledge is also accumulated through integrating information, experience, and understanding by participation in virtual or online communities (Chang & Chuang, 2011).

Through such social interaction in a virtual community, several benefits can be earned in the aspects of stronger relations with closure (Coleman, 1988), increased sense of belonging, better academic settings (Tomai et al., 2010), and individual well-being (Pendry & Salvatore, 2015). Community members who have intimately connected with each other are more likely to mutually gain or attain a higher degree of knowledge (Mu, Love, & Peng, 2008). Thus, the power of knowledge acquisition, its regularity, breadth, and depth highly depend on the developing of close social interactions (Yli-Renko et al., 2001; Liou, Chih, Yuan, & Lin, 2016). Chang and

Chuang (2011) also argued that virtual social networks provide such information channels which facilitates the knowledge sharing behavior with minimum consumption of time and energy.

Therefore, we posited that social interactions in social groups could enhance the process of knowledge acquisition.

H1: A higher level of social interactions is associated with a higher level of knowledge acquisition.

**Shared vision and knowledge acquisition.** Shared vision as a fundamental part of cognitive dimension represents the “degree to which community or network members share common goals, common understandings, joint representations, and observations” (Levin, Whitener, & Cross, 2006; Hsu, 2015). Members with a shared vision, shared values, and shared understandings help to expedite the individual actions and restrain any adverse behaviors or conflicts (Horwitz, 2005; Tsai & Ghoshal, 1998) towards the fulfillment of collective interests (Coleman, 1988). This process plays an essential role in sharing and assimilating the aspects of knowledge which are “not common” between them (Grant, 1996). Graham and Hazel (2004) also specified in their study that a collective reinforcement happens when a person incorporates his/her needs with the needs of other people in a community or group and then considered as a group member. Further, this reinforcement acts to consolidate a community by shared values and inspirations, which facilitates knowledge flow also within inter-organizational communities (Tagliaventi, Bertolotti, & Macri, 2010).

It was also advocated by Tsai and Ghoshal (1998) that individuals who share the same beliefs or values are more able to see the prospective benefits of transforming and sharing their information resources. A shared vision among group participants is considered a vital tool which helps to unite them and to perceive and integrate knowledge (Inkpen & Tsang, 2005; Ortiz, Mario, & Guadamillas, 2016). Better consistency and group harmony over common goals or objectives facilitates the group coordination and communication, and also assist in developing cooperation among members (Hsu, 2015). On the whole, cognitive dimension of social capital is likely to enable the flow of information sharing in a virtual community (Hersberger, Murray, & Rioux, 2007), as participants have the ability of collective behavior and thoughts (Whipple, Boyer, & Vanpoucke, 2010). Therefore, the study proposes the following hypothesis:

H2: A higher level of shared vision is associated with a higher level of knowledge acquisition.

**Knowledge acquisition and entrepreneurial learning.** Knowledge acquisition refers to as identification and capturing of useful information from the internal or external environment by both organization and individuals (Wu, 2008). To keep up with the innovative settings, acquisition of new knowledge is necessary to be well-informed and maintains flexibility in a dynamic environment. Knowledge acquisition is represented as one of the significant facets of the entrepreneurial learning process (Scarmozzino et al., 2017). This practice of learning is more encouraged through open discussion and collaboration in the form of social networking which supports the active interchange of new ideas (McLure-Wasko & Faraj, 2000). As other studies also claim that entrepreneurs are leveraged more through their social interactions (Klyver, Hindle, & Meyer, 2008) and several forms of involvement and undertakings (McLure-Wasko & Faraj, 2005) during the process of knowledge acquisition and its transmission.

Researchers also discuss that the more social capital a new venture creator develops in its business contacts and related community, the more chances occur to acquire new knowledge and employ it for competitive growth (Landry et al., 2002). Knowledge is also considered as a significant resource for achieving positive entrepreneurial outcomes in the views of past resource- and knowledge- based theories (Barney, 1991; Grant, 1996). Based on the amount of knowledge acquired in a community, individuals can find better chances

for identifying and pursuing valuable opportunities (Nieto & González-Álvarez, 2016). Moreover, learning also occurs, and new knowledge is created when individuals obtain information and transform it into their existing experience (Bhattacharjee, 2015). This acquired knowledge can also be utilized for competitive advantage in the form of new product and technological developments (Yli-Renko et al., 2001). Later on, the literature on entrepreneurial learning also supports the view of Kolb (1984) about experiential learning held through experiences by asserting that entrepreneurs are usually action-oriented and therefore, much of their knowledge is also experiential based (Rae, 2000).

Based on the above discussion, authors propose that the degree to which an individual relies on his network for obtaining expertise and related knowledge may have a positive impact on the association between knowledge acquisition and entrepreneurial learning in the result of new venture outcomes (Sullivan & Marvel, 2011).

H3: A higher level of knowledge acquisition is associated with a higher level of entrepreneurial learning.

**Trust in social capital.** Trust is defined as “an inherent set of beliefs that the other party or group members will not act opportunistically, and will not take advantage of the situation” (Hosmer, 1995; Tsai & Ghoshal, 1998). Trust is found to be a key factor towards the development of voluntary online cooperation between new and as well as present individuals in virtual communities (Ridings et al., 2002). Trust, as being an essential element of relational social capital, is considered a primary source of social exchange and the pillar for both inter-personal and inter-organizational connections (Dyer & Chu, 2011). Granovetter (2008) also argued that social relations are primarily responsible for the creation of trust which is usually generated when agreements are fixed within a higher structure of interrelations and social networks. Trust can expedite the exchange of information and knowledge among participants and also encourage high flexibility. Therefore, it can be supposed that social interactions in a group and trust both are necessary for each other for promoting the process of innovation and fruitful knowledge creation (Farshchi & Brown, 2011). Researchers also contend that opportunities for knowledge relocation among group participants increase with the development of trust over time (Chiu, Hsu, & Wang, 2006; Li, Ye, & Sheu, 2014).

Similarly, several empirical studies also claim that shared vision (cognitive social capital) heightens the growth of trust in a virtual group. Researchers argue that shared vision, shared meaning (Tsai & Ghoshal, 1998), and shared language (Levin et al., 2006) enable the development of trust between actors in the perspective of knowledge transfer. Ruan and Durresi (2016) also indicated in their study that development of shared vision and language is significant to expedite the smooth process of trust, created in knowledge sharing context.

Above discussion and arguments indicate that trust plays a vital role in an online group/community (Rosen, Lafontaine, & Hendrickson, 2011; Grabner-Kräuter & Bitter, 2015). Therefore, we assume that people are more willing to involve towards the process of social interchange, supportive interaction, and shared values in the presence of high trust. For this study, trust is proposed to have an interaction effect between social interaction and knowledge acquisition, and between shared vision and knowledge acquisition respectively.

H4: The higher the trust among group members is, the more favorable will be the relationship between social interaction and knowledge acquisition.

H5: The higher the trust among group members is, the more favorable will be the relationship between shared vision and knowledge acquisition.

## Research Design and Methods

### Measures

Five constructs were used to measure the response: social interaction, shared the vision, trust, knowledge acquisition, and entrepreneurial learning. The items measuring all the constructs were adapted from previous valid research studies in order to make sure the rationality and consistency of research tool (Table 2 for the study items and the source). The final questionnaire was analyzed by two academics in an education center of Pakistan. A pilot test was first employed by using self-administered questionnaires to develop and test the adequacy of research instrument and to assess the feasibility of study as well. Some minor changes were made in some questions to ensure the clarity of essential contents. The 7-point Likert scale was used to measure the responses, where “1 = Strongly disagrees,” “4 = Neutral,” and “7 = Strongly agree,” respectively.

### Data Collection

The study used the survey design method to gather the data from large sample size and used statistical analysis technique to test the hypotheses. Data were collected from undergraduate and graduate students of three major universities in Lahore, Pakistan who were pursuing their degree in Business Administration and Management Sciences. Students of the discipline for business and management sciences were targeted, because it is understood well that entrepreneurship skills and professional expertise developed through education can improve their likelihood of becoming successful managers<sup>1</sup>. The business graduates are better equipped in this regard with an intention to build management skills and the ability to manage change for the more innovative private enterprises. Moreover, Pakistan is chosen as a communal society where individuals have relied on their social relations to attain specific goals and objectives (Gyekye, 2011).

Table 1

*Demographic Characteristics of the Sample*

Measures	Frequency	Percentage (%)
Gender		
Male	244	67.7
Female	116	32.2
Age		
18 or less	56	15.5
19-25	268	74.4
26-30	34	9.4
Educational level		
Undergraduate	105	29.1
Graduate	255	70.8

Two methods were used for data collection by having random sampling technique: self-administered survey through accessing the students in classrooms, and Web-based survey. The questionnaire was developed in SurveyMonkey and link was activated on social media site (Facebook) for four weeks. The purpose of study was also explained in the start of questionnaire. The basic drive was to collect the data from students who have regular or ever joined online groups/communities based on the motive of entrepreneurial culture and student learning. Therefore, in the initial analysis, those respondents were excluded who were not the part of any online

<sup>1</sup> See <https://www.innovationpolicyplatform.org/content/business-and-entrepreneurship-skills-and-experience>.



group. In all, out of 640 prospective respondents, 360 complete responses were used for the final analysis; out of which 67.7% were males and 32.2% were females. The descriptive information of sample size is given in Table 1. Harman's one actor test was used to assess the common method bias in the data. It is considered as a matter of problem if the only factor describes more than 50% of the variance (Harman, 1976). Results show that after categorizing all items into five factors, the primary factor showed only 18.67% variance. So, common method bias was not to found as a problem for this study.

Table 2

*Measurement Items*

Construct	Indicators	Source(s)
Social interaction	SI 1 Members in the community/group maintain close relationships with each other.	(Chiu et al., 2006) (Tsai & Ghoshal, 1998)
	SI 2 There is frequent communication among individuals in the group.	
	SI 3 Members in the group spend a large time in interacting with each other.	
Shared vision	SV 1 Members in the community/group have same vision to help others and resolve their problems.	(Leana & Pil, 2006)
	SV 2 Members in the community follow shared goals and objectives.	
	SV 3 There is a unity of purpose between members.	
Trust	TR 1 Members of the virtual community can be trusted.	(Chiu et al., 2006) (Ridings et al., 2002)
	TR 2 Members of the virtual community have high integrity.	
	TR 3 Members in the group will not make use of others even when they find a chance.	
Knowledge acquisition	KA 1 I always obtain useful information and ideas through discussion from my online groups.	(Van den Hooff & Van Weenen, 2004) (Yli et al., 2001)
	KA 2 I acquire new knowledge through giving responses and seeking opinions for problems.	
	KA 3 Members in the virtual community learn new things from each other.	
Entrepreneurial learning	EL 1 Obtaining new understanding of different expertise is essential for my future business.	(Scarmozzino et al., 2017)
	EL 2 Acquiring new knowledge about different markets and trends is useful for my future business.	
	EL 3 Finding motivations and suggestions related to new undertakings is useful.	
	EL 4 I obtain new ideas to improve new or current goods/services.	

### Data Analysis and Results

First of all, data was tested for convergent and discriminant validity before examining the measurement model and structural model analysis (see Table 1). Convergent and discriminant validity are both considered as subdivisions of construct validity. In this regard, the standard values for Factor loading, Cronbach Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) were found to meet the set criteria of 0.7, 0.7, 0.7, and 0.5 correspondingly (Hair, Anderson, Tatham, & Black, 1998) (results shown in Table 3). Likewise, discriminant validity was also measured to increase the legitimacy of data (Fornell & Larcker, 1981). It is made sure when a construct does not supposed to be correlate with other construct, from which it should be different. For this purpose, it is measured by comparing the relationship between the correlation among the paradigms and square root value of each paradigm. If the square root value of AVE for each construct is higher than the correlation among the specified constructs, it confirms the verification of discriminant validity (Venkatraman, 1989). Results are shown in Table 4.

### Model Analysis

Structural Equation Modeling (SEM) was used to estimate the measurement and structural model simultaneously (Anderson & Gerbing, 1988). In this regard, AMOS 21 was employed to test the research model and to assess the offered propositions for the study.

Table 3

*Confirmatory Factor Analysis*

Construct	Items	Factor loadings	Cronbach alpha	CR	AVE
Knowledge acquisition	KA 1	0.864	0.885	0.886	0.722
	KA 2	0.821			
	KA 3	0.845			
Entrepreneurial learning	EL 1	0.846	0.789	0.796	0.568
	EL 2	0.770			
	EL 3	0.793			
Social interaction	SI 1	0.828	0.794	0.795	0.565
	SI 2	0.801			
	SI 3	0.792			
Trust	TR 1	0.824	0.823	0.825	0.612
	TR 2	0.828			
	TR 3	0.816			
Shared vision	SV 1	0.759	0.804	0.808	0.512
	SV 2	0.824			
	SV 3	0.777			
	SV 4	0.799			

Table 4

*Composite Reliability, AVE, and Correlation*

Sr.	Constructs	CR	AVE	SI	SV	KA	TR	EL
1	Social interaction	0.795	0.565	0.752				
2	Shared vision	0.808	0.512	0.135	0.716			
3	Knowledge acquisition	0.886	0.722	0.454	0.268	0.850		
4	Trust	0.825	0.612	0.458	0.001	0.483	0.782	
5	Entrepreneurial learning	0.796	0.568	0.401	0.144	0.482	0.424	0.754

Notes. \* The square root of AVE is displayed on the diagonal of matrix; values for inter-construct correlations are displayed below the diagonal.

**Model Fitness**

The goodness of the model fit for measurement and structural model is evaluated by chi-square and some further fit indices, such as Tucker-Lewis Index (TLI), Incremental Fit Index (IFI), Comparative Fit Index (CFI), and Root Mean Squared Error of Approximation (RMSEA). By depending upon the sample size, the value for chi-square will not be less than 2.0 and not greater than 5.0 (Tabachnick & Fidell, 2007). The standard value for Root Mean Square Error of Approximation (RMSEA) and Adjusted Goodness-of-Fit Index (AGFI), is less than 0.08 and greater than 0.8, respectively. Furthermore, it is recommended that the values for Goodness-of-Fit Index (GFI), Normed Fit Index (NFI), and Comparative Fit Index (CFI), indices should be higher than 0.90 (Arbuckle, 2003).

The measurement model shows the good model fit using data with  $X^2 = 1.897$ ;  $p < 0.001$ ; CFI = 0.965; GFI = 0.943; IFI = 0.965; RMSEA = 0.050. This outcomes provide the evidence that data is acceptable enough for further examination of structural model. The findings for structural model analysis demonstrate that the model is fit for the observed data where  $X^2 = 2.054$ ; CFI = 0.950; GFI = 0.932; IFI = 0.951; TLI = 0.937; and RMSEA = 0.054. Results are shown in Figure 2 for structural model with path coefficients.

### Results of Hypothesis Testing

The first Hypothesis suggested that social interaction has a positive impact on knowledge acquisition, which is supported with  $\beta = 0.287$ ,  $p < 0.01$ . Hypothesis 2 proposed that shared vision has a positive relationship with knowledge acquisition; findings support the hypothesis with  $\beta = 0.276$ ,  $p < 0.001$ . Hypothesis 3 specified that knowledge acquisition has a positive impact on entrepreneurial learning; findings depict that hypothesis 3 is also proved with  $\beta = 0.405$ ,  $p < 0.001$  (see Figure 2).

It was found that trust interacted significantly but negatively with social interaction and shared vision to influence the construct of knowledge acquisition (see Figure 2). Figures 3(a) and (b) show that the moderating effect of trust which diminishes the positive relationship between social interaction and knowledge acquisition, and also between shared vision and knowledge acquisition. It demonstrates that if trust is low between two people, it will dampen the positive relationship between social interaction and knowledge acquisition, and similarly between shared vision and knowledge acquisition.

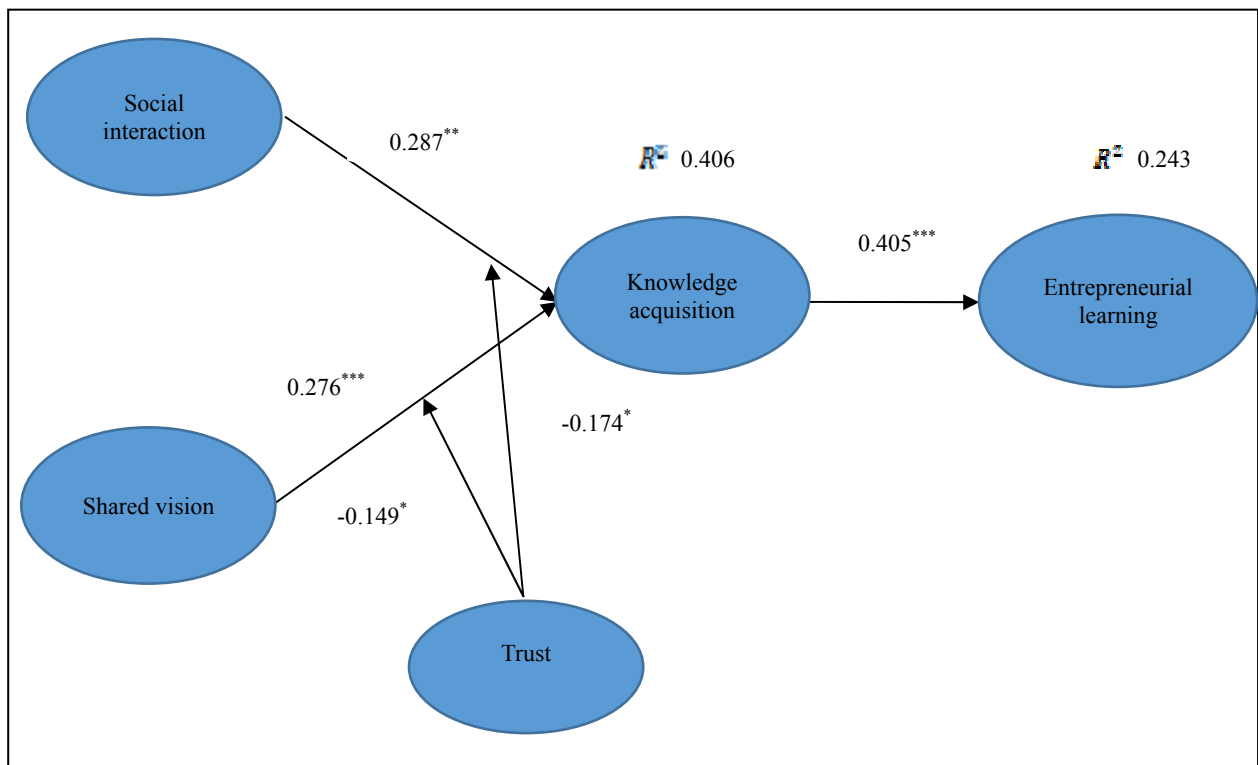


Figure 2. Structural Equation Modeling with moderation results.

Notes. All paths in structural model analysis are significant at  $p < 0.5$ ;  $^{**} p \leq 0.01$ ;  $^{***} p \leq 0.001$ .

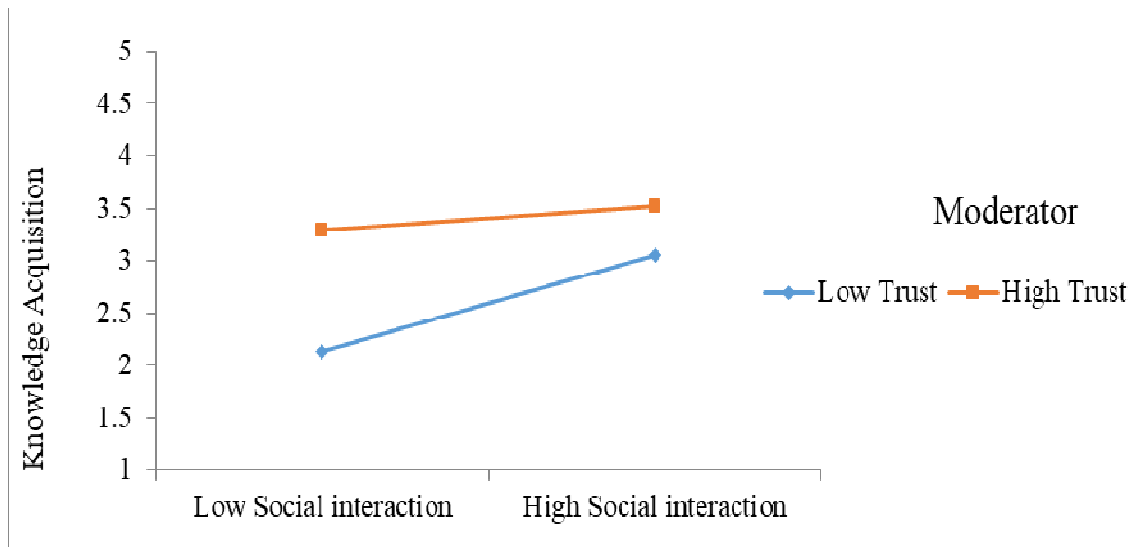


Figure 3(a). Moderating effect of trust on social interaction-knowledge acquisition relationship.

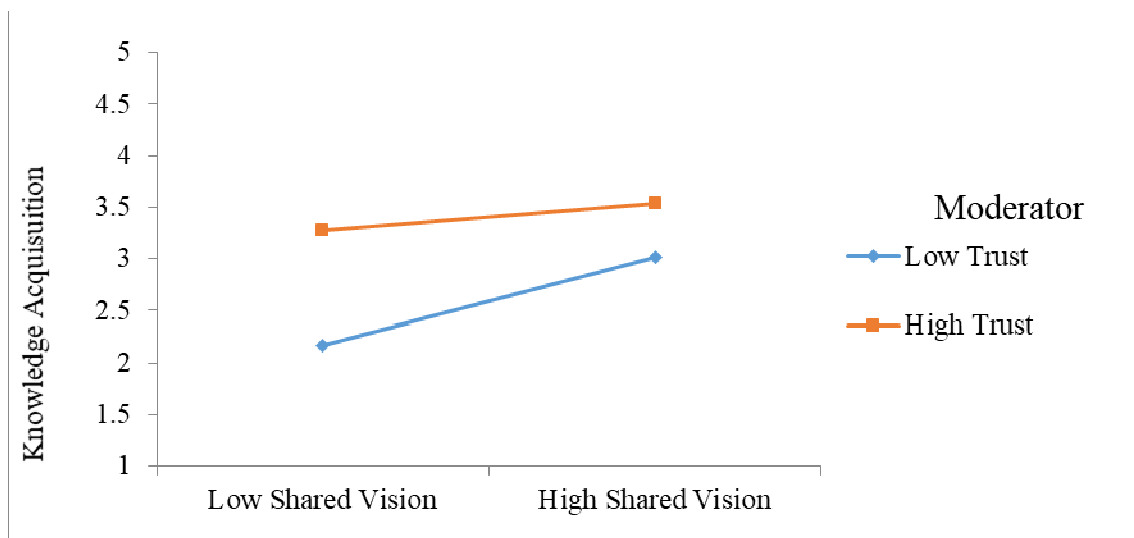


Figure 3(b). Moderating effect of trust on shared vision-knowledge acquisition relationship.

### Discussion and Conclusion

This research uses a social capital perspective to understand the factors of promoting entrepreneurial learning through knowledge acquisition and in the kind of online social networks. The findings expose that social capital plays a crucial part in determining the success of entrepreneurs' learning through knowledge acquired in a social network. The first and second hypothesized relationship from social interaction to knowledge acquisition and from shared vision to knowledge acquisition in the form of online groups did prove to be significant for this study. This result supports a related research framework proposed by Song et al. (2017) that learners are more successful in recognizing new opportunities when they gain more technical or market knowledge from their social networks. The current findings indicate that social networks have become more critical to attaining strategic resources including new expertise and related business information. The results are consistent with previous empirical studies which take the position that individuals who actively interact within

their social networks acquire and exchange a higher degree of knowledge and consequently get more insights for personal and professional growth (Singh, Hills, Hybels, & Lumpkin, 1999; Mu et al., 2008). Similarly, these results are also consistent with the previous studies arguing that greater consistency and shared vision or goals among group members better facilitate group coordination towards sharing and obtaining new knowledge (Hsu, 2015). Communication and knowledge sharing are considered to be critical mechanisms in the formulation and conservation of active online communities or groups (Hersberger et al., 2007). Moreover, online groups based on a firm common drive are more likely to exhibit high identification with shared values and beliefs.

The third hypothesis, that a higher level of knowledge acquisition in a community is related with a higher level of entrepreneurial learning, was also confirmed by the results. Evidence was found to show that knowledge sharing is a vital facet for an entrepreneur while using virtual technology communities, where many people take part with the objective of gaining and learning knowledge (Chiu et al., 2006). The results here support what previous researchers have alluded to before: that entrepreneurial education is individually and socially facilitated and positioned on translating new concepts and problems into future prospects and creative actions (Erdelyi, 2010; Rae, 2015). New entrepreneurs can also acquire information through connections with the external environment through system followers (Kaish & Gilad, 1991). The results are also consistent with a previous study which draws on the knowledge-based view and social capital theory to formulate and test a conceptual framework of using interactive knowledge acquisition to enhance product/service innovativeness for entrepreneurs (Sullivan & Marvel, 2011). It can be deduced that knowledge pursuing through online social groups, in combination with good relationships and contacts, can direct the individuals to gain new information which ultimately promotes entrepreneurial learning. Gaining knowledge about new trends and market demands is significant because it increases an entrepreneurs' capacity to efficiently utilize the opportunities and also generate the desirable outcomes (Wiklund & Shepherd, 2003). Useful interactions and enough capacity to seek knowledge among virtual networks can constitute learning paths for new startups.

The results for Hypotheses 4 and 5 showed that trust as a moderator diminishes the positive relationships between social interactions and knowledge acquisition, and between shared vision and knowledge acquisition. This finding does not support the proposed hypotheses but is mainly interesting by showing the dampening effect on the projected relationships. This surprising result endorses the arguments of Baba (1999) that the presence of trust between two parties or individuals suggest that one side may act in a way which can be harmful to the other one. Therefore, it may also affect their participation in a group. Similarly, trust was found to be a significant issue for adult learners who collaborated online concerning the skills or knowledge they possess (Smith, 2010). There is always a risk that expectations from others may not truly be fulfilled, even in the case of close social relations. The possible reasons for this result can be viewed as inter-group conflicts and competition between group members because of shared vision, shared goals, and equal priorities. Therefore, trust can have a direct or moderating effect on a range of behavioral and performance outcomes in all kinds of formal settings (Dirks & Ferrin, 2001). An environment of competition may also be created when group partners want to focus on specific business values or protect their interests. Sockalingam and Panteli (2005) have discussed this phenomenon, that trust is essential for minimizing the risk as trust automatically decreases if one partner perceives the other one as involved in opportunistic behavior (Inkpen & Tsang, 2005). This result can also be consistent, from some perspectives, with a study conducted about knowledge hiding behavior within organizations (Connelly, Zweig, Webster, & Trougakos, 2012). The authors state that interpersonal

dynamics can affect the individuals' response to not fully share their knowledge with coworkers because of potential cultural or social influences.

The result is also in line with the study of Szulanski (1995) who stated that the knowledge acquired from a source not perceived as trustworthy will be resisted more in group settings. These findings furthermore add to the literature on the critical influence of trust in online social communities by highlighting the role of deception or playing dumb through pretending to have less knowledge or information about the subject which can lead to inaccurate conclusions by the receiver (Wang, Muller, Liu, & Zhang, 2014; Ruan & Durreesi, 2016). Participants must behave ethically to ensure a long-term, trustworthy relationship, and their trustworthiness can be dramatically reduced by even a single case of misbehaving (Xiong & Liu, 2004). There can also be the possibility of trust reduction because of using thinner communication media, especially in case of more complex interactions (Gattiker, Huang, & Schwarz, 2007). Earlier research also shows that some offline interactions can affect users' perception, and therefore can positively enhance their trust in the online world (Chi, Kin, Seow, & Tam, 2009) and as well as encourage them more to play a part in the group activities (Koh, Kim, Butler, & Bock, 2007).

Overall, this study provides rationale for believing social networks are the most significant source of knowledge for entrepreneurs (Johanisson, 1990; Anderson, Park, & Jack, 2007), and therefore, also as a critical element for the development of entrepreneurial behavior. It can be concluded that an individual's network can facilitate access to knowledge formation, which can ultimately lead towards active learning and opportunity recognition. This study supports the position of Corbett (2007) that learning is a significant element which takes place when entrepreneurs ascertain new opportunities during the evolution of innovative notions. Moreover, it was also observed how close interactions, shared values, or goals play an important role to facilitate the process of knowledge acquisition towards entrepreneurial learning. These dimensions of social capital promote the exploitation of new opportunities with uncertain outcomes and also improve the capability to scrutinize the information obtained throughout this process (Hargadon, 2002). The current study concludes that social capital in the kind of a liaison enables the participants to tap more effectively into the knowledge resources of its relationship partners. The process of value creation in terms of learning can be enhanced if entrepreneurs share a mutual concern in resource attainment, involvement, and its utilization.

Finally, the study also highlights the role of trust in linking the essential measurements of social capital with knowledge acquisition. The empirical study confirmed that trust plays a vital role between parties as a precursor of knowledge sharing, as is also emphasized within the knowledge management literature. Contrary to our assumptions, when considering trust as a moderator, it was not positively related to the relationship between social interaction and knowledge acquisition, nor the relationship between shared vision and knowledge acquisition. It would not be wrong to say that the nature of trust is complicated and not easy to understand because trust can have multiple facets (Chowdhury, 2005). The results concerning the construct of trust allow us to fill the gap identified in the literature to study by classifying it as a moderating construct rather than only a mediator or a dependent variable, as discussed in previous studies (Aryee, Budhwar, & Chen, 2002; Tsai & Ghoshal, 1998; Ridings et al., 2002). This study infers that individuals are restricted sometimes by the fear of sharing and dispersion of their knowledge because of different personal, social, or social influences. Thus, it is important to understand that how the process of knowledge sharing or knowledge acquisition can be stimulated within online groups or communities to fully utilize its benefits. Stronger relational capital (trust) can facilitate the group members to develop related insights and visions towards inter-group collaboration and

cooperation without fear of opportunism (Li et al., 2014). The results could also help the organizations and social networks to understand better which factors related to trust repair could most helpful to boost entrepreneurial learning.

### **Future Implications and Limitations**

There are also some limitations in our study. First, the sample composition is limited, based on mostly young graduate and undergraduate students who have joined online social networks. Although the data based on the motive of entrepreneurial culture and learning was collected from virtual groups, the data from online communities in which topics are diverse may not be applicable to all types of communities. Secondly, this research was conducted by using self-administered and Web-based questionnaires, so individuals may behave or participate differently depending on the forum used. Thirdly, this study used a single component of each dimension of structural, relational, and cognitive social capital to measure its relationship with knowledge acquisition and then finally the entrepreneurial learning effect. Future studies can also be implemented by taking into consideration the other dimensions of social capital and their influence in the different stages of the entrepreneurial process.

Based on the study findings, possible actions can be taken in various educational institutes to develop a favorable attitude among students towards knowledge sharing behavior. Developing and promoting such behavior at academic institutes would also help graduates to share and acquire knowledge at their workplace, thereby becoming more valuable employees. The findings also have a potential of helping the educational institutes to promote a culture and environment that will facilitate students' participation in the process of knowledge contribution, and consequently, lead towards the discovery and utilization of entrepreneurial opportunities. Such kind of understandings can provide the basis for trust enhancing strategies in the perspective of virtual domains. Moreover, new insights from this study could also be helpful for network managers to develop the directions while working together with inside or outside business companions. In addition to this, based on these findings, government representatives should develop policies and programs devoted to the development of regional social capital to enhance entrepreneurial creation. Such steps are important, because entrepreneurs can become more successful in recognizing opportunities, as networks and entrepreneurship is a key element in any economy, but substantially depends on the development of cognitive trust.

### **Compliance with Ethical Standards**

The authors confirm that there are no known conflicts of interest associated with this study and there has been no significant financial support for this work that could have influenced its outcome. We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfy the criteria for authorship but are not listed. We confirm that we have given due consideration to the protection of intellectual property associated with this work and that there are no impediments to publication, including the timing of publication, with respect to intellectual property. In so doing, we confirm that we have followed the regulations of our institutions concerning intellectual property. It is confirmed that informed consent was obtained from all individual participants included in the study.

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