CHAPTER 1

INTRODUCTION
I.1 Social Learning

Social learning focuses on how people learn by interacting with and observing other people. This type of learning focuses on the social context in which learning occurs. Some people view social learning as a special type of behaviorism because it reflects how individuals learn from people in their environment. Others view it as a separate meta theory because the learner is also actively making meaning of the interactions. A foundational contribution of social learning is that people can learn vicariously by imitating others. Thus, central to social learning processes is that people learn from role models. This was in direct contradiction to behaviorists who said that learners had to perform themselves and be reinforced for learning to occur. Thus, the facilitator must model new behaviors and guide learners in learning from others. Bandura (1960s-1980s) is probably the best-known name in this area. It was his works in the 1960s and extending through the 1980s that fully developed social learning theory.

Ormond (1999) lists four core assumptions of social learning theory:
1. People can learn by observing the behaviors of others and the outcomes of those behaviors.
2. Learning can occur without a change in behavior.
3. The consequences of behavior play a role in learning.

Social learning also occupies a central place in HRD. One contribution is in classroom learning in which social learning focuses on the role of the facilitator as a model for behaviors to be learned. Facilitators often underestimate their influence as a role model and forget to utilize role modeling as part of their instructional plan.

Social learning may make its biggest contribution through non-classroom learning. One area is in new employee development, in which socialization processes account for the largest portion of new employee development (Holton, 1996; Holton & Russell, 1999).
Socialization is the process by which organizations pass on the culture of the organization to new employees and teach them how to be effective in the organization. It is an informal process that occurs through social interactions between new employees and organizational members.

Another key area is mentoring, which is a primary means of on-the-job development in many organizations. It is often used to develop new managers. This is clearly a social learning process as mentors teach and coach protégés. Yet another key area is on-the-job training whereby newcomers learn their jobs from job incumbents, in part by direct instruction but also by observing the incumbent and using the incumbent as a role model.

There are few critics of social learning as it mostly contributes to learning theory in HRD without inciting any sharp arguments. Social learning is widely accepted as an effective and important learning process.

Andragogy in practice, the framework depicted in Figure 1.1, is an enhanced conceptual framework to apply andragogy more systematically across multiple domains of adult learning practice (Holton et al., 2001; Knowles et al., 1998). The three dimensions of andragogy in practice, shown as rings in the figure, are (a) goals and purposes for learning, (b) individual and situational differences, and (c) andragogy: core adult learning principles.

Watkins and Marsick (1993) suggest that learning is a constant process and results in changes in knowledge, beliefs, and behaviors. They also believe that, in a learning organization, the learning process is a social one and takes place at the individual, group, and organizational levels. They propose six imperatives that form the basis for the organizational strategies recommended to promote learning:

i. Create continuous learning opportunities.

ii. Promote inquiry and dialogue.

iii. Encourage collaboration and team learning.
iv. Establish systems to capture and share learning.

v. Empower people toward a collective vision.

vi. Connect the organization to its environment.

**Figure 1.1**

**Andragogy in Practice Model**

Source: Holton et al (2001)

Figure 1.2 shows the interrelationship of these six imperatives across the individual, team, and organizational levels. These six imperatives are similar to the disciplines suggested by Senge (1990, 1994). Marquardt (1996) similarly focuses on a learning system composed of five linked and interrelated subsystems related to learning: the organization, people, knowledge, technology, and learning. Most theories of a learning organization appear to
focus on the values of continuous learning, knowledge creation and sharing, systemic thinking, a culture of learning, flexibility and experimentation, and finally a people-centered view (Gephart, Marsick, Van Buren, & Spiro, 1996).

**Figure 1.2**

Learning Organization Action Imperatives

![Learning Organization Action Imperatives](image)

Source: Holton et al (2001)

Kaiser and Holton (1999) propose the conceptual model presented in Figure 1.3 based on their review of the learning organization and innovation literatures and on the parallel sets of variables and theorized relationships to performance improvement. This model hypothesizes that learning organization strategies increase learning and innovation (performance drivers), which improve performance outcomes.

This hypothesized model of the learning organization as a performance improvement strategy results in the following conclusions:
(i) Learning—in particular, improved learning at the team and organizational levels—leads to increased organization innovation.

(ii) The adoption of learning organization strategies is appropriate for organizations in markets where innovation is a key performance driver.

(iii) Innovation is expected to result in improved performance outcomes, leading to competitive advantage for the organization.

Figure 1.3

Learning Organization Performance Model

Source: Holton et al (2001)

1.2 Social Software

Social software refers to a range of web-based applications that allows users to interact and share information with one another (Green and Pearson, 2005). The distinctive feature of such systems is the development of new ideas and concepts rather than technological innovation: Internet users are increasingly evolving from being an audience to forming a community that actively participates in the creation of content (O’Reilly, 2007). With the emergence of a large number of wikis, weblogs, and social networking platforms
like MySpace, Wikipedia, and Facebook, social software has become very popular in the personal context.

A 2008 study by Gartner indicated that half of all US companies used wikis (Morse, 2008). Other companies choose to implement weblogs (Efimova and Grudin, 2007) or social network applications (Cross, Liedtka and Weiss, 2005). The motive for using such software in the corporate environment is usually to improve communication with customers and business partners, and to encourage collaboration within the company (Bughin and Manyika, 2007). However, due to limited budgets, I.T. departments and decision makers have to justify their investments and must, therefore, provide transparency concerning the impacts of new information Systems (I.S.). Accordingly, it is essential to assess the success of social software in corporate environments.

I.3 Organisational Learning

Figure 1.4 represents diagrammatically the initial conceptualization of the interdependencies between levels and dimensions in capturing the richness of learning as a complex social process.

Epistemological approaches to learning in organizations are rooted in the social view of learning (Antonacopoulou & Chiva, 2007). This view posits that individuals learn more efficiently by sharing tacit and explicit knowledge than through controlled formal systems (Nonaka & Takeuchi, 1995). As early as 1978, Vygotsky proposed that all learning is social in nature and is continuously developed in humans who engaged in social activities (Ardichvili & Yoon, 2009). The contexts in which individuals conduct social activities, such as work teams, organization culture, organization structure, and technologies, directly affect individual learning. In addition, new learning tools driven by Internet-based technologies have shaped social learning in recent years (Cabanero-Johnson & Berge, 2009). A virtual
world is one such tool that allows the individual to go beyond the confines of the physical world.

**Figure 1.4**

*Multiple Levels of Learning and their Interactions*

![Multiple Levels of Learning and their Interactions](image)

Source: Antonacopoulou (2006)

Learning drives change in organizations. Hence it is important that organizations institute effective learning processes to succeed in an increasingly competitive marketplace (*Hannah & Lester, 2009*). Learning in organizational settings has been a topic of interest among academicians and practitioners. The increasing number of related publications in academic journals and the popular press (*Ardichvili & Yoon, 2009*) amply illustrate this reality. As a multidisciplinary field with several coexisting foci of interests, the study of learning in organizations is inherently complex (*Bapuji & Crossan, 2004; Hannah & Lester, 2009*).

However, we are in agreement with the generally accepted belief that learning facilitated by human resources rests at the core of an organization’s capabilities and is fundamental to the development of an organization’s value proposition (*Argote & Ingram, 2000; Kang, Morris, & Snell, 2007*).
The analysis begins by asking the question, “What is learning in the context of an organization?” Researchers have offered different ways to describe this phenomenon (Baxter, Connolly, & Stansfield, 2009; Fenwick, 2008). For the purpose of this discussion, Elkajer’s (2001) definition of learning will be adopted. He defined learning as “an intentional effort aimed at discovering relations between our actions and the resulting consequences in addition to our former/present experiences” (p 441). His emphasis is on the process of inquiry that leads to growth in experiences by individuals, teams, and the organization. In this regard, knowledge is gained from a process of active inquiry and reflective experiences driven by people.

Two alternate forms of learning in organizations have been discussed in the literature: exploratory and exploitative learning. Exploratory learning encompasses the pursuit of new knowledge. Exploitative learning is aimed at refining and deepening existing knowledge sets of an organization. Both exploratory and exploitative forms of learning have been found to influence the survival of the organization. Kang et al. (2007) and Katila and Ahuja (2002) argue that an organization must exploit its existing knowledge to ensure current viability and explore new frontier to ensure future viability.

Learning in organizations takes place in the context of social interaction (Adler & Kwon, 2000). Several meta theories have been used to explain learning in organizational contexts (Swanson & Holton, 2001). Among them, constructivist, social learning, and situated learning theories (Bandura, 1977; Taylor, Marienau, & Fiddler, 2000) are particularly relevant to our discussion. The constructivist perspective posits that knowledge is constructed when individuals attribute personal meaning to their learning experience. The individual makes sense of the information and internalizes the knowledge by experiencing it. This is similar to Elkajer’s (2001) definition of learning.
Taking an inclusive approach, Watkins and Marsick (1995) proposed that learning could occur at four levels: individual, team, organizational, and society. However, if the unit of analysis is the organization, there is agreement in the field that learning is deemed to occur at three of these four levels, that is, the individual, team, and organizational levels (Bapuji & Crossan, 2004; Baxter et al., 2009). Such thinking finds support in the works of Hannah and Lester (2009) who characterized leadership interventions at the micro level (individual), the meso-level (social network or team), and the system level (the organization). In addition, other researchers (Crossan, Lane, & White, 1999; Yukl, 2009) have noted that HRD professionals should focus their efforts not only on individual learning but also on collective learning of teams and organizations.

Researchers who study learning in organizations have suggested that we need to address learning at all three levels if we want to understand its implications in an organizational context. Higher level (team and organizational level) learning cannot occur without the existence of individual learners (Baxter et al., 2009). The individual’s cognitive process (such as inquiry and reflection) drives knowledge creation and learning. Yet, without connection to the team and the organisational context, what was learned will lose its meaning and support of the contextual environment. Crossan et al. (1999) go a step further and propose that four board processes link the three levels of learning. These are intuiting, interpreting, integrating, and institutionalizing. For example, consider the situation in which an individual working on intuiting and interpreting processes suddenly finds it difficult to transform the newly learned material to achieve performance enhancements. The individual must then seek the assistance of the team to aid with the integration of the new learning and then institutionalize the new knowledge at the organisational level.
I.4 Virtual Worlds and Learning

Virtual Worlds (VW) are designed to provide virtual environments with 3-D capabilities and are rooted in the concept of Multiple User Virtual Environments (MUVE). VW has been discussed and studied by researchers in several contexts including business, education, and information sciences (Davis et al, 2009; Dede, Ketelhut, & Ruess, 2002; Messinger et al., 2009; Noam, 2007; Papagiannidis, Bourlakis, & Li, 2008). Messinger et al. (2009) defined VWs as environments where “thousands of individuals can interact simultaneously within the same simulated three-dimensional space” (p. 204). Others view VWs as computer-generated spaces populated with 3-D avatars (Castronova, 2005; Kohler, Matzler, & Füller, 2009).

Recognizing that VWs can deliver both vividness and interaction in a 3-D environment, still other researchers have viewed VWs as technology-mediated communication channels that allow individuals to experience a heightened presence (Steuer, 1992). Given the purpose of this research, we use Dede et al.’s (2002) definition of VWs because it best reflects the context of learning in these 3-D virtual environments:

“Virtual worlds are virtual environments that enable multiple users to simultaneously access virtual contexts, interact with digital artefacts, represent themselves through avatars, communicate with other individuals and computer-based agents, and engage in collaborative learning activities”

Identifying the capabilities of a VW is the first step in the process of understanding how a VW can be leveraged to influence learning in organizations. D’Souza, Li, and Du (2011) reported on the dimensionality of VW capabilities. After reviewing existing literature on VW capabilities spanning several fields, including HRD, Internet marketing, information technology, virtual environments, and learning, these researchers isolated multiple categories of VW capabilities. Three of these capabilities—tactical, technological, and spatial—are relevant to learning in organizations.
I.4.1 Tactical Capabilities

**Immersion:** The 3-D structure of a VW nurtures immersive behaviour in an individual. In addition, the use of avatars in the 3-D environment provides richness, realism, and heightened levels of tele-presence (*Kohler et al., 2009; Ijsselsteijn, Rider, Freeman, & Avons, 2000; Steuer, 1992*). Evidence from studies conducted in academic environments suggests that such immersion does occur (*Eschenbrenner, Nah, & Siau, 2010; Richter, Anderson-Inman, & Frisbee, 2007*).

**Engagement:** Researchers have found that the level of engagement is believed to be higher in VW environments than in other virtual environments because of the ease of communication in VWs and the choice of method for self-expression (*Kohler et al., 2009; Davis et al, 2009*). This seems to be especially true in facilitated cooperative learning environments (*Mason, 2007*).

**Collaboration:** VWs, like other virtual environments, have been found to (a) enhance iterative or interactive collaboration, (b) provide shared outcomes, and (c) support the altruistic behaviour of individuals (*Eschenbrenner et al., 2008; Jarmon, Traphagan, Mayrath, & Trivedi, 2009; Thomas & Brown, 2009*). In addition, VWs have been found to create more personal connections, provide unprecedented levels of interactivity, and improve collaboration, communication, and cooperation (*Kohler et al., 2009*).

**Creativity:** VWs provides conducive environments for creativity similar to the real world given that VWs provide the freedom to experiment (*Kohler et al., 2009*). In addition, the use of avatars allows individuals to represent their demeanour in the VW better.
Knowledge migration: There is evidence that creativity in the VW can lead to innovation and that this innovation can be transferred to the real world or can be leveraged in the VW (Hemp, 2006; Kohler et al., 2009). However, the efficacy of such transfers has not been investigated rigorously. In one of the few studies that addressed this issue, Mikropoulos (2001) analysed brain activity present in research subjects while they performed tasks in the real world and in VVs and found that crossover effects are possible.

I.4.2 Technological Capabilities

Real-time interactivity: One of the features of a VW is the facilitation of synchronous communication. Communicators need to be present in the VW for communication to occur. This limits the ability to rehearse because the interaction occurs in real time. On the other hand, such communication enhances spontaneity in the dialog. These communication characteristics mimic real-world encounters more precisely than other forms of electronic interactions (Kahai et al, 2007; Kohler et al., 2009).

Avatar-mediated communication: The use of avatar-mediated communication is another distinguishing characteristic of VVs. The fact that these avatars are created in 3-D adds to the attractiveness and mystique of VVs (Hemp, 2006). In addition, the use of avatars facilitates communication by enhancing tele-presence (Peterson, 2006). However, avatars provide a level of anonymity that can be a double-edged sword because high level of anonymity could lead to deceptive behaviours.

Electronically enriched interaction: Researchers have found that VVs provide media richness and interactivity at levels not achievable with other media (Coyle & Thorson, 2001).
More important, VW technology offers the capability to control, deliberately, one’s nonverbal communications in a virtual environment.

I.4.3 Spatial Capabilities

**Spatial transformation:** Virtual world provides a convenient instrument for the replication and extension of, or the escape from, reality (Hemp, 2006). To varying degrees, VWs allow individuals to configure their profile, define the boundaries of their space, and choose their interaction. More important, they do so very efficiently. Virtual WorldNews has documented how IBM saved US$320,000 when it conducted a meeting using the spatial transformative capabilities of a VW (Hopkins, 2009).

**Spatial convergence:** Individual engagement is influenced by social, cultural, and geographic differences. The convergence can become challenging when group members exist in communities that are socially, culturally, and geographical diverse. The ability to “shrink” geographic distances makes VWs attractive to managers (Davis et al., 2009).

I.5 Collaborative Learning

Collaborative learning is a fundamental learning form that has been more and more stressed out with the paradigm shift from the teaching side to the learning side in the current learning technology. The object of collaborative learning is the group activity and the collaborative mutual interdependence relations within the group(s) (Dillenbourg & Self, 1994). Simply put, in collaborative learning, each learner is accorded a sub-task, and by each learner accomplishing it, the group goal is reached and collaborative mutual interdependent learning is achieved.
Distributed collaborative learning is a type of collaborative learning that can take place in the network environment, etc., with multiple learners geographically far from one another (O’Malley, 1994). Geographically a distanced situation can mean remote or far physically, but this also covers cases where direct interaction and dialogue is not possible among participants due to other reasons. Distributed collaborative learning support is a research domain that tries to find out ways to support the collaboration of multiple learners on the network (CSCL - Computer Supported Collaborative Learning) (ISO/IECa), in problem solving or other cooperative curriculum activities, according to the used LT (Learning Technology) (ISO/IECb).

Compared with CSCW (Computer Supported Cooperative Work) (Conklin & Begeman, 1988; Crowe, 1994; Winograd & Flores, 1986), CSCL has as a goal not so much the working efficiency, but the learning achievement efficiency, and the promotion of deep understanding of the subject field by the learner, combined with the recognition or meta-recognition of this achieved ability by other persons (Dillenbourg & Self, 1999; Olamoto et al., 2000).

The regular CSCL-management software implementation provides usually 2 types of activity space: a private working space and a collaborative working space, where the learners can exchange information in a synchronous or asynchronous manner.

Figure 1.5 displays the collaborative learning concept from the point of view of the learner behaviour and the resources' usage. From the point of view of collaborative learning behavior, we can differentiate between learner-to-learner dialogue (communication) and other activities (problem solving, etc.). The figure shows the layers prepared for the collaborative learning goal and the collaborative work, as well as the layer containing the various learning resources to consult during collaborative learning.
To these resources belong all possible resources to which the learner has access during the learning in an Internet environment, such as learning materials, all-purpose tools, specialized tools, learning applications, various learning data, etc.

**Figure 1.5**

*The Structural Model of Collaborative Learning Environment*

Source: Okamoto et al. (2002)

In a collaborative learning situation, a learner could face a problem that s/he cannot solve, and, by interactions with his/her learning companion(s), exchange meaningful information, that can open up to him/her other person's ways of perception and help him/her find out the inconsistencies of his/her own judgment steps. Moreover, as the learning efficiency has been shown to increase in such situations, many systems try to positively encourage them with the help of computer implementations.

Figure 1.6 shows the details and various essential elements of the conceptual image of the collaborative learning model. The working place and working subjects are brought together and labeled accordingly. Learners can belong to one or more groups and can be
involved in projects or parts of projects together, therefore sharing that particular space, and work privately for the rest.

**Figure 1.6**

**Collaborative Learning Environment Components**

![Diagram of Collaborative Learning Environment Components]

Source: Okamoto et al. (2002)

The shared working place (collaborative workplace) contains the dialogue support objects for dialogue and information exchange support, the collaborative working objects for activity support, and the collaborative memory, for reference and information accumulation, as can be seen in the figure. On the other hand, the private working place contains the working depository of the private working objects, and the private memory for consultation and accumulation of private activities related information.

Moreover, the information referencing layer contains information oriented towards individual and collaborative learning goals, learning materials, various educational data, libraries, educational applications, all-purpose tools, market applications, etc.
I.6 Emergence of VHRD

A typical Human Resource Development System is shown in Figure 1.7.

Figure 1.7
HRD Wheel

Virtual HR relies on technology, ranging from multimedia personal computers to voice-response communication systems to corporate Intranets, that bring employees into direct contact with their organization’s human resource system. Moreover, with Virtual HR, many of the typical HR tasks are accomplished without the direct involvement of the HR department.”

VHRD has emerged as a new area of inquiry in the field of HRD, based on a growing interest for integrating technology into HRD practice and research. Built on a growing body of literature in HRD, parallel tracks have converged to offer initial conceptualizations for
formalizing VHRD. The term VHRD was presented by McWhorter, Mancuso, and Hurt (2008) in an innovative session at the 2008 Academy of Human Resource Development (AHRD) Conference in the Americas. In the context of adult learning, they reviewed enabling technologies for developing human expertise within technology-enabled environments.

In 2007, Bennett reported results of an empirical study of organizational culture and intranet technology. She concluded that a culturally relevant intranet enables virtual human resources, both human resource management (HRM) and development (HRD). The study formed the basis for definition of VHRD as “a media-rich and culturally relevant web environment that strategically improves expertise, performance, innovation, and community building through formal and informal learning” (p. 364), which emphasized the new virtual environment created by VHRD.

A look back at the past two decades reveals an accelerated rate of change for technology that can be characterized by three distinct phases. Inspired by Kapp and O’Driscoll’s (2010) conceptualizations of waves of Internet connectivity, three distinct phases of AHRD literature identifies people connecting to, connecting through, and connecting within technology. Each phase shows increasing technology sophistication and a greater ability to simulate real-life connections and collaboration. This framework is useful for examining the connectivity between individuals, groups, and organizations with modern technologies.

Once information technology (IT) became more commonplace in organizations, the early discussions in AHRD literature reflected how employees connected within the context of work, how work was changing due to microcomputers (in both home and work environments), the need to train on these new tools, and discussions of the potential that technology held for the transformation of HRD processes. These early connections can be
characterized as “one-way” connections (Kapp & O’Driscoll, 2010) that connect people to personal computers (PCs) and other digital tools. The discussion in HRD mirrored the level of technology during this phase, including the nuances of the microcomputer software and simple web browsers of that era.

During this time, the term knowledge worker began to appear in the literature. For instance, Nickols (1990) poignantly described himself as a knowledge worker in his home office where connecting to a new PC was a superior replacement for his beloved typewriter. Knowledge work seemed to be more recognizable due to the tools available with microcomputers.

A study described how PC training was becoming integral to the productivity of organizations, and he identified positive results obtained when an organization’s culture was connected to technology usage. McClernon and Swanson (1995) also studied a computer-supported team intervention and found that the technology seemed to lessen the effects of dominant personalities in a team and promote informal leadership.

They provided a historical review of technology during this phase, and she made an interesting prediction about technology use in HRD, “the true gain may not be reaped until 1999 or 2009”. The next phase is characterized by a leap in technical sophistication that does indeed reap greater benefits for HRD as people began connecting through technology.

As more sophisticated technology tools became available to the public, there was a dramatic change in the way technology was used. In this phase, technology evolved from one-way access-only connections to two-way communications used for sharing, collaborating, and participating through the technology tools of Web 2.0 (Kapp & O’Driscoll, 2010). Web 2.0 tools have been described as “enablers of a culture that supports co-construction, collaboration, communication, interaction, participation, and sharing”, such as
the collaborative-building platform of Wikipedia, user-generated videos posted on YouTube, and knowledge sharing on wikis and blogs.

In this second phase, HRD researchers began positing web-based technologies as a driving force in the field. In 2002, Benson, Johnson, and Kuchinke (2002) offered a framework to capture information technology tools in the digital workplace (Aragon & Johnson, 2002; Swanson, 2007). Building on this framework, they described how ICT enabled the advent of the virtual organization by leveraging ICT to accomplish work tasks becoming more “virtual” (p. 436).

The word virtual was introduced in this phase of connecting to technology to describe nascent concepts of collaboration through technology. For example, virtual teams were composed of workers connecting remotely to carry out an objective or purpose (Johnson & Jeris, 2004; van Reine & Trompenaars, 2000; Workman, 2005) and formed virtual communities of practice (VCoPs) organized around community members’ common interests (Calvin, Stein, & Wheaton, 2004; Gibb, 2004; Lien, Hung, & McLean, 2007) where new technologies facilitated the co-creation of knowledge around a specific topic (Ardichvili, 2008).

Also, virtual mentoring described the relationship between mentor and protégé who connected through the use of advancing technology (Bierema & Hill, 2005) to foster a “deliberative, reflective, and thoughtful exchange” (p. 559). Professionals formed virtual learning communities (VLCs) to gain knowledge from one another through active participation in threaded discussions, chats, and conferences (Birchall & Giambona, 2007), and VLCs were also used “in house” to facilitate the exchange of informal (tacit) knowledge.

The sophistication of technology has now developed to a new level with the advent of the immersive technologies that allow people to connect within the technology, not just
through. It is in this phase that we see an explosion of AHRD literature, suggesting that technology is far more value-added as its sophistication level increases.

Virtual worlds are not the only platform where we should be looking for VHRD. Sophisticated intranets and possibly even modern mobile technologies allow users to create a media-rich environment for the work of VHRD. The current phase is characterized by the integration of several technologies (such as voice, text, video, and graphical media) into one platform, thereby creating media-richness for VHRD.

I.7 Statement of Problem
The present study attempts to assess the impact of collaborative learning using online social media. There is a huge gap in researching this issue. There has been incremental growth in the popularity of online social media, social software and social networking, but the literature only refers to growth statistics, infrastructure issues, bottlenecks and challenges. The research, though negligible compared to studies around the globe, has been mainly concentrated on marketing and related fields.

There is dearth of understanding this growing phenomenon on Human Resource Management and Development in terms of how employees collaborate to learn and problem-solve, how it impacts individuals, teams and organisations, and how corporate can leverage this phenomenon to manage the workforce diversity, improve productivity and cut costs. This is all the more imperative given the scenario of recession and global financial crisis.

I.8 Objectives of the Research

I.8.1 Primary Objective
The primary objective of the research is to assess the impact of collaborative learning using online social media and its impact on individuals, teams and organisations.
I.8.2 Secondary Objectives

The secondary objectives of this study are:

(a) to ascertain the variables impacting collaborative learning,
(b) to ascertain various benefits of organisation learning, and
(c) to study the influence of demographic influences on collaborative learning and its impact.

I.9 Scope of the Research

The scope of the research would broadly encompass sub-themes like learning and development, collaboration, online social media, system quality, information quality, strategic benefits, informational benefits, transactional benefits, impact on individuals, impact on teams, impact on organisation and demographic profile.

The following are overall scope:

i. Which facets of quality can be distinguished as contributing significantly to satisfaction with collaborative learning using online social media?

ii. What is the level of satisfaction with collaborative learning using online social media being experienced by employees?

iii. How does collaborative learning impact individuals?

iv. How does collaborative learning impact teams?

v. How does collaborative learning impact organisations?

vi. What are the benefits of organisational learning?

vii. How do groups of employees (according to gender, age, education) perceive collaborative learning and its impact?

viii. What are the implications for human resource development especially virtual HRD?
I.10 Thesis Layout

Chapter 1 titled “Introduction” commences with the concept of Social learning. Concepts, issues and trends related to social software, Organisational Learning, Virtual Worlds and Learning, Collaborative Learning, and Emergence of VHRD are discussed. The statement of problem, objectives and scope of research follow. It concludes with layout of thesis.

Chapter II titled “Review of Literature” commences with the discussion on Online Social media followed by discussion about concepts and issues related to social software, D & M IS Success model, system quality, information quality, use and satisfaction, Impact on Individuals and Organisations, Learning in a Digital Age, Virtual Learning and Technologies, and Generational Diversity. It presents the concepts related to Individual Learning, Team Learning and Organisational Learning. It concludes with the research gaps.

Chapter III titled “Research Methodology” presents details like research design, scope of the research, sampling design, data collection design, conceptual framework, research questions and hypotheses, validity, reliability, and limitations of the research.

Chapter four titled “Analysis and Discussion” presents the analysis on Demographics, System Usage, System Quality, Information Quality, Satisfaction with Collaborative Learning, Individual Learning & Development Measurement, Team Learning & Development Measurement, Organisational Learning & Development Measurement, Structural Equation Modelling (SEM), and Statistical Tools and Techniques

The final chapter, namely, Chapter five titled “Conclusion and Recommendations” presents the summary of findings based on survey. The overall recommendations for Individual Learning, Team Learning, Organisational Learning, Collaborative Learning and Virtual Human Resource Development are followed by conclusion.