Social Networking Sites, E Learning & Students Perceptions
Abstract

The role of Social Networking Sites (SNSs) is coming under increased scrutiny as their online prowess grows. The objective of this research work is to investigate the students’ perception of this reality and try to understand their understanding of the SNSs potential for learning. The theory of Social Presence provides the academic impetus as the main conceptual framework for the study. Students of the Virtual University, Pakistan, were interviewed to understand their sense making of the SNSs role as platforms for learning in a virtual setting. The results highlight the importance of social presence dependent on myriad other factors, significant in their own right but extremely potent when they act together and thus influence the role of SNSs as virtual online conduits. It also indicates that our understanding of these networks, in the context of online learning especially in a developing country environment is still in its infancy and the numerous external environmental factors equally play a significant impact on the students’ perception of the role of these SNSs.

**Keywords:** Social Networking Sites (SNSs), Social Presence Theory, Social Learning Theory, Interactivity, Virtual Learning, E-Learning & Learning.
Acknowledgement

First of all, we would like to thank Allah (SWT) for His help to undertake this dissertation.

We are anxiously thankful to our dearest supervisors and teachers especially Prof. Dr. Anita Mirijandotter and Dr. Paivi Jokela who gave us unconditional support and encourage us during hurdles while completing this study.

We feel deeply indebted to the guidance and supervision of our tutor Mr. Osama Mansour for his precious feedback, comments, patience and thereby made the successful completion of this report a reality.

We would also like to thank our classmates who have also encouraged us to complete this work. We are indebted to our family and friends for their continuous support and encouragement throughout our studies.

We also like to mention that our visit to Sweden will always keep remember us the hospitality of Swedish citizens and we are thankful them for providing us a learning environment with real essences of peace, patience, devotion, generosity, acceptance and humanity.

We dedicate this work to our dearest Swedish citizens.

Arif & Khurram
Masters of Science in Information system
Linnaeus University
Vaxjo, Sweden
2013, October
# Table of contents

1. Introduction .................................................................................. 7
   1.1 Related Studies ......................................................................... 8
   1.2 Problem Area .......................................................................... 10
      1.2.1 Virtual University ........................................................... 12
   1.3 Objectives & Research Question .............................................. 10
   1.4 Delimitations ............................................................................ 11
   1.5 Target Audience ....................................................................... 12

2. Background .................................................................................. 14
   2.1 Theorizing the Social Aspect of Learning ..................................... 14
   2.2 Understanding Learning Itself.................................................... 15
      2.2.1 Content Delivery ............................................................... 15
   2.3 E – Learning Models: An Outline ............................................... 15
   2.4 The Social Presence Theory ...................................................... 17
      2.4.1 Social Presence & Social Psychology ................................... 17
      2.4.2 Level of Social Presence .................................................... 18
   2.5 Social Presence Dimensions ..................................................... 18
      2.5.1 Social Context ................................................................. 18
      2.5.2 Online Communications ..................................................... 19
      2.5.3 Interactivity ....................................................................... 19
   2.6 The Theory of Social Learning .................................................. 19
   2.7 Social Learning Model ............................................................... 20
      2.7.1 Being Responsive ............................................................. 20
      2.7.2 Adequate Retention .......................................................... 21
      2.7.3 Motivation ....................................................................... 21
   2.8 The Nuts & Bolts of Social Learning ......................................... 22

3. Methodology ................................................................................. 24
   3.1 Research Genre ........................................................................ 24
   3.2 Research Lens/ Perspective ....................................................... 24
   3.3 Research Approach ................................................................... 25
   3.4 Research Method ...................................................................... 26
   3.5 Research Paradigm ................................................................... 26
   3.6 Review Methods ........................................................................ 27
      3.6.1 Key Words ....................................................................... 27
   3.7 Data Collection ......................................................................... 28
      3.7.1 Primary Data .................................................................... 28
      3.7.2 Reaching out to our Interviewees ....................................... 29
   3.8 Secondary Data ......................................................................... 30
   3.9 Grounded Theory ...................................................................... 31
   3.10 Validity & Reliability ................................................................ 32
   3.11 Ethical Considerations ............................................................ 32

4. Findings ......................................................................................... 33
   4.1 Social Networking Sites: The Image, the Perception .................... 33
   4.2 The Face of Social Networking: Facebook .................................... 33
   4.3 Learning & Social Networking: In Quest of the Hidden Connection 34
4.4 Biggest Concerns & Their Impacts on Learning

5 Data Analysis & Discussion
  5.1 Data Analysis
  5.2 Discussion

6 Conclusion
  6.1 Concluding Remarks & Future Research

Bibliography

Appendix A
Appendix B
Appendix C
Appendix D
Appendix E
Appendix F
List of Tables

Table 1: Thematic Representation of Literature Used within the Study ___ 23
Table 2: Primary & Secondary Key Words ____________________________ 28
Table 3: A profile of the Interviewees in the Study____________________30
Table 4: Time, Duration & Location of Interviews within the Study_______30
Table 5: Data Bases used in the Study________________________________31
Table 6: Grid representing the themes making a +ve or –ve impact on the factors essential for Social Presence______________________________________39

List of Figures

Figure 1: Figurative Representation of how social presence connects the external and the internal, cognitive and behaviour factor to induce social learning _____ 22

Figure 2: The Inductive Logic of Research in Qualitative Research, Adapted from Creswell (2007: 63) ________________________________ 25

Figure 3: Research Philosophy Adapted from Partington, (2008) in Flowers (2000:4) _____________________________________________ 27

Figure 4: Types of Interviews, Adapted from Fisher (2007: 159) Data Analysis & Discussion ____________________________________________ 30

Figure 5: Representation of themes/Patterns developed from discussion in light of the Social Presence theory________________________________39
1. Introduction

This chapter takes into account the significance of electronic/virtual learning through an examination of the related studies from the extant literature. In addition, the chapter highlights the problem area; the research question; and the research limitation of the study in order to give an overview to our readers.

The internet has changed education, along with numerous other things, in ways very few of us envisaged in the past. When Harvard, MIT and other Ivy League institutions want to reach out to the world in a totally free way, they inadvertently make use of the internet via edX, a virtual learning concept (edX, 2013). Virtual learning has thus finally arrived big time. Universities in the recent past have flirted with electronic learning via offering online courses and in some instances complete degree programmes for a while now (Ofcom, 2008). However, the emergence of new technologies and the development of new apps have taken the concept of virtual learning to a whole new level (Hiujser et al., 2008). It [virtual learning] is no more what it was in the past: bland, one sided and practically dead thereby failing to engage students in a meaningful way.

The very concept of virtual learning has been the creation of the internet for two basic reasons. First, only the internet hitherto has the capacity to do away with geography altogether. Secondly, it is the only medium known to mankind, which is extremely cost efficient, virtually cost free, that has made communication, via voice and video apps, possible across the globe anywhere in real time. Advancement in technology and apps development will only add to the internet’s vital communication prowess.

The concept of virtual education as some has come to term it as electronic learning due to the exclusive use of internet as a platform for learning is gaining traction for a couple of reasons. Real learning is becoming increasingly costly. Tuition fees, boarding and lodging and post 9/11 the restrictions on movement across the globe are putting all adding to the costs of education and movement, an inherent feature of real education. Virtual/electronic learning comes as a cost and hassle free alternative to this problem. On the contrary, virtual learning is merely possible via a viable internet connection and a workable computer without any requirements for visas. Migration for getting real education in a different place, along with costs, also carries a significant cultural shock. Virtual/electronic education offers an easier solution. And as institutions across the globe try to catch up with the virtual education phenomenon, we will see a further reconciliation amongst their online and offline education programmes thereby “challenging the traditional assumptions of an online course” (Finder, 2013 NY).

Add to all of the above mix the emergence of the social media – Facebook, LinkedIn and Twitter – and the potential for virtual education is taken to new limits. Social media sites are a potent tool, which greatly helps reduce the gap between the monotonous blandness of virtual learning and the two way interaction that is peculiar to real learning. Hussein et al., (2012) refer to them [Social networking sites or SNSs] as, “conduits of social interaction on the internet”. Armstrong & Franklin (2008) underscores their [Social networking sites] capacity to promote and establish virtual communities and thus enable synchronous and asynchronous communication within these virtual groups.

As virtual learning continues to grow in terms of its appeal and potential, we are most likely going to see a rise in the significance of these social networking sites as an informal avenue for problem based learning. Moreover, using these networking sites would not be limited to those participants engaged in virtual learning exclusively. Rather the emergence of the social networking will help participants of both real conventional education and those enrolled in virtual learning by providing them to engage in a meaningful interaction and thus connect an array of diverse people in learning and knowledge dissemination. It is for this very reason that an investigation into the potential of these social media sites from a learning perspective
becomes all too important. Questions related to the dynamics of these social networking sites within the context of learning, as a direct means of virtual learning and complementing conventional learning, can range between the clusters of communities emerging within a specific virtual programme/course, to an array of an open community formation for a specific topic. The interaction within these communities and the opportunities for learning in a strictly problem based learning lends itself to an interesting study; one which would not only enhance our understanding of how these virtual communities help propagate knowledge and learning but also its contribution towards creating an alternative cost effective alternative to our perceived methods of learning.

1.1 Related Studies
Electronic learning is becoming indispensable as it continues to tick all the right boxes integral for learning in the 21st century (Danyaro et al., 2010). Learning happens, in any context, in the presence of internal motivation through four unique self-directed actions: observation, interaction or communication, actions and reading, features (Deci & Ryan, 2000), activities inherent to participation on SNSs.

Virtual communities have become the bedrock of virtual learning in a way that it provides participants to engage in a vigorous and meaningful discussion (Hussain et al., 2012). By sharing ideas, research and experience, these communities to an extent compensate for a real learning environment, the learning we all have come to know to-date as in a bricks and mortar settings (Armstrong & Franklin, 2008). The benefits of ‘zero geography’ are ever visible as the facilitation, promotion and support of diverse knowledge ideas are shared across these communities in an uninterrupted real time scenario (Hussein et al., 2012). Research interest continues to grow in SNSs, social networking sites, ability and potential to unleash the learning capacities of mankind en masse (Boyd & Ellison, 2007). As per expected, the research to – date is to a greater extent skewed in favour of the developed world but there is a growing body of research being done on the potential of SNSs potential for learning in a developing world context, primarily for it has the potential in this instance to act in most instances as the prime mean of learning and access to learning (Kolko, Rose & Johnson, 2007). SNSs ability to boost learning within a virtual setting can be attributed mainly to the notions of “participation, belonging, communities and identity construction” (Pimmer, Linxen & Grohbiel, 2012: 3) in wide contrast to the unidirectional learning of the internet otherwise. By creating a “sense of place in a social world” (Merchant, 2011), SNSs are a “multi – audience identity production sites” (Zhao, Grasmuck & Martin, 2008) successful in creating the right virtual environment for learning. Virtual community creation also tends to complement formal education as diversity of views are brought together on a single platform in a collaborative fashion (Arnold & Paulus, 2010).

The ability of the various SNSs in terms of their potential for virtual learning varies invariably in accordance with their target audience and the nature of communication it supports (Junco et al., 2013) and something we must understand in order to correctly identify the vast potential for these platforms for electronic learning. The interactive features of a social networking site often are directly linked to the magnitude of traffic it attracts, as students/participants are getting savvier with time (Danyaro et al., 2010). Social networking sites nowadays often support all Web 2.0 interactive features such as forums, discussion boards and blogs thereby enabling a two way interaction (Downes, 2005). Facebook, as research indicates, is mostly preferred by people interested in a more in –depth discussion and learning, whilst Twitter tends to attract people who want to be part of the public debate in a less detailed comprehensive manner (Antenos – Conforti, 2009; Smith & Caruso, 2010; Junco, Heiberger & Loken, 2011; Rohs & Meyer, 2010; Grosseck & Holotescu, 2009; Schroeder, Minocha & Schneider, 2010). Mirvis, Sales & Hackett (2006) argues against perceiving the effectiveness of SNSs, in terms of electronic learning, as absolute and instead points to a number of factors such as context, implementation methods and the participants’ familiarity with the given platform to be essential to trigger successful electronic learning.
Gunawardena et al., (2009) attributes enhanced learning and engagement to the use of SNSs. Similarly, several studies have found a positive correlation between the participants’ use of Facebook and engagement (Heiberger & Harper, 2008; HERI, 2007; Junco, 2012a). Lampe et al., (2011), identifies the Facebook’s peculiar features that help attract students in order to ease co–ordination and reduce ambiguity (Ellison et al., 2007) in formal and informal settings (Selwyn, 2009).

Social networking spaces occupy a unique position – in an online context – between the formal portals of the institutions that students often are part of and the virtual Second Life, an electronic imagery of the real world multi –dimensional nature (Thomas, 2010). This uniqueness itself makes it a transit point as students constantly move around between the two making these SNSs both ‘flexible and recreational’ environments for learning (Graetz, 2006: 70). Furthermore, the development of smart phones – being able to access SNSs anywhere – is adding to the lure of virtual learning as time, location and cost constraints are further reduced and flexibility enhanced (Liu, 2009).

SNSs owe its efficacy to another human dimension of these virtual platforms: ‘facilitating the emergence of a social space’” (Kirschner, 2004: 43 3). The emergent social place thus enables a network of human social relationships amongst the groups’ participants thereby enhancing trust and collaboration necessary for meaningful learning and engagement (Thomas, 2010). Katz in Calhoun (2006: 51- 52), takes this human network a level further in describing the SNSs network as a dynamic ‘ecosystem’ where all participants acts in perfect harmony towards their mutual objectives of learning.

Along with a positive impact on the students learning outcomes, participation on SNSs has been documented to impact students’ social behaviour in a favourable manner as well (Huijser et al., 2008), an outcome most probably the result of belonging to the virtual communities.

However, there are a number of studies that show a negative co – relation or no co – relation at all between student learning and Facebook citing less optimal time utilization and Facebook’s ability to distract and divert attention easily, a determinant factor in learning (Junco, 2012b; Kirschner & Karpinski, 2010; Kolek & Saunders, 2008; Pasek, More & Hargittai, 2009).

Additionally, one can make an argument against the efficacy of electronic learning in a virtual setting triggered by SNSs from an ‘influence’ perspective (Thomas, 2010). Traditional brick and mortar learning influences a person learning experiences outside the context, whereas SNSs learning is predominantly context based (Thomas, 2010). Learning done in such places is easily transferred via sensory memories through a concept called the ‘broadcast model’ of learning (Long & Ehrmann, 2005: 42). Learning of this kind continues to affect the participants cognitively and behaviourally via ‘powerful emotional attachment’ resulting in enhanced learning (Graetz, 2006: 62 3). SNSs learning cannot replicate the experience as such learning is space dependent and thus learning done in such an environment continues to stay with the student long after s/he may have left the space (Thomas, 2010).

Another shortcoming in the concept of SNSs led virtual learning is its inability to inculcate ‘a physical representation of the institution’s vision and strategy for learning’ (JISC, 2006:2), which is highly essential for a 21st century learning embedded in the promotion of innovative ways of thinking (JISC, 2006: 14).

An increase in academic misconduct – plagiarism and coursework outsourcing – and social aberrations such as cyber bullying and privacy related issues have raised concerns about the viability of internet as a teaching conduit (Danyaro et al., 2010).

In no way discounting the benefits that these SNSs brings to learners in the form of free and open communication platforms, it is important that participants realise the limitations of learning online via these interfaces and are vigilant to the myriad risks these social networking sites inherent, both academic and social (Lorenzo, 2007).
1.2 Problem Area
Several studies have been undertaken to investigate the usefulness of social networking sites [SNSs] in terms of their educational value (Boyd & Ellison, 2007), but the work done thus far has been predominantly carried out within the developed world and thence very little is known about the subject within a developing world context (Kolko, Rose & Johnson, 2007). With the spread of the internet, smart phones and the emergence of exclusive virtual education institutions along with e-learning becoming part of real learning within developing countries, we strongly feel an investigation into the role of SNSs capacity to disseminate knowledge becomes an interesting subject.

On the methodological side, the extant literature is mainly skewed in favour of surveys and questionnaires (Danyaro et al., 2010; Junco et al., 2013; Liu, 2009). While in no way discounting these methods’ efficacy for the given topic, we feel such methods often fail to recognise the human aspect of the subject, which can be heard best in an interview with all its subtleties (Liu, 2009; Roreger & Schmidt, 2012).

Graetz (2006: 62) cites ‘powerful emotional attachment’ as a significant factor for enhanced learning in a virtual setting. In our case, the absence of any physical existence of the students’ institute, essential for this emotional attachment, could be an interesting scenario as we would like to investigate how that absence influences the learning of our participants as the learning is exclusively done in a virtual setting.

Next we feel a brief description of our case would enable our readers to understand the background in a more profound manner and also help introduce our study data case.

1.2.1 Virtual University
An institution of its kind in the country, Pakistan, Virtually University has been trying to transform education in a place where the basic literacy rate of the entire nation is a mere 70% (World Bank, 2013). Moreover, in an environment literally hostile to learning and beset with practical limitations to real life learning due to the country’s deteriorating security situation, the concept of virtual learning appears to be an elaborate concept. It also spells a more practical option for women’s education enhancement, a paltry 61% according to the World Bank, otherwise restricted by the social code in a real conventional education setting (World Bank, 2013).

Opened in 2002, Virtual University has expanded its reach to over sixty cities in the country as well as keeping its doors open to Pakistanis students outside of the country (Virtual University, 2013). With a not – for – profit nature, Virtual University exclusively relies on virtual dissemination of knowledge sticking truly to its name. The university uses free to air satellite television broadcasts as well as the internet for learning and make uses of top talent across the country to design the course content and its learning activities (Virtual University, 2013).

With its entire learning virtual in nature, Virtual University made for a perfect research case for our topic. The absence of a brick and mortar reality enables us to investigate the dynamics of learning in a strictly virtual setting. The virtual nature of the learning involved also gives our participants an added degree of relevance to our topic as their entire learning process depends on the use of social media. Additionally, by offering entire degree programmes without having a real campus, the university lends its learning processes for a thorough investigation within the context of virtual learning.

1.3 Objectives & Research Question
Through interviews, semi – structured interviews, we feel we would be able to present the human dimension that is so inherent to the very emergence and popularity of SNSs in the first place. Through our interviews our aim is to understand the understanding of the students, the major block of the virtual puzzle, vis-à-vis SNSs and their perceptions of these SNSs potential for learning in a virtual environment. Moreover, our study will try to explore for any hints of the drawbacks of SNSs as students try to engage in virtual learning. We feel it is
extremely significant in our study case for an obvious reason: the choice of our study area, Pakistan. The extreme socio–economic turmoil within the area not only leave little room for leisure activities but also restricts movement severely. The appeal of SNSs couldn’t be any higher as such sites are used as a tool for fun, communication, interaction and also offers a safer way of learning, in groups and as an individual.

We do feel to highlight the fact, for our readers’ sake and for the sake of clarity, that the two words – social media and social networking sites SNSs – are interchangeably used throughout the study unless otherwise mandated by the context to be used in their strictest technical form.

Precisely to investigate the students’ perception of SNSs in a Pakistani context, our study focuses on finding answers to the following research question:

**What role does student perceptions’ plays in Social Networking Sites (SNSs) ability to instigate electronic learning?**

1.4 Delimitations

Apart from their social and communicational use, social networking sites [SNSs] are used worldwide for electronic learning, as an exclusive virtual learning tool or as a means of complementing real learning. In our study we limit our research to a set of students of a single institute of learning, the Virtual University in Pakistan. Since the university prides itself in offering education to the masses via the internet and broadcast television, it makes for the best possible case within a developing world context to investigate our research questions. Similarly, the university’s students make them particularly relevant for our study as they rely exclusively on the internet and broadcast media for their learning. On the contrary, this very strength of our research case would be hard to replicate anywhere else as students in general use SNSs as a complementing tool for their learning.

The generalisation of the research will be harder on another level too. The format and the medium of instruction of the university, an all online virtual learning experience, leave its students absolutely reliant on a virtual experience of learning and totally void of any real life learning exposure. Whereas it makes for a unique set of research subjects, we would not know if the absence of any sort of real learning experience might in some way influence the students’ understanding of these SNSs as a learning tool.

Similarly, the absence of a clear state’s cyber policy means an inconsistent and often dubious response of the government vis-à-vis social media. A case in point is the yearlong ban on YouTube and the recent ban on Twitter and Viber on grounds of security concerns has compelled us to use the word social media and social networking sites, primarily face book and Twitter, interchangeably as in some instances social media in our case is merely reduced to Facebook and the institutional portals. We feel it as a kind of limitation as the full breadth of the word ‘social media’ which is definitely more extensive than SNSs cannot be fully investigated for its learning capabilities with. Contrarily, we feel this contraction of the research range would enable us to milk our research data more extensively and thoroughly and thence allow for an in-depth analysis.

The use of the social presence theory itself as the bedrock of the study’s conceptual framework has several shortcomings within the context of our data. The problem is not so much with the theory itself, as it has been described in studies after studies to be a great tool for our understanding of learning in a virtual setting; it’s the limitations of our data set due to time and resource constraints that obstructs the level of in-depth understanding we would have wished for our study. Conversely put the lack of diversity within our data set and the emphasis on a single institute’s users we in hindsight feel would lead to a more homogenous or herding behaviour amongst the users, a fact that severely reduces the potential of the social presence theory. However, a more direct limitation of the theory itself, with its partial reliance on the ‘subjective quality’ (Short et al., 1976; Walther, 1992) of the Virtual
University’s portal as perceived by the users, that in our case are the interview participants. Subjectivity here becomes a relative term and in our view depends on the students’ exposure to a set of different portals or their overall exposure to the different tools of social media. Without a standardized objective metric, we feel the results would be hard to replicate as its dependence would vary across every users personal perceptions and experience.

Moreover, social presence theory remaining partial reliance on the ‘objective quality of the medium’ (Gunawardena (1995), Gunawardena & Zittle (1997), and Perse et al., (1992), (HsiungTu, 2000), as perceived by the users we feel would in a way distort the true picture for a simple reason. The users exposed to Facebook and other social media platforms in their private capacity would more definitely discount this objective quality of their university’s portal, their main social media tool for electronic learning. Such a reduced perception would be closely linked to a decrease in the social presence on their portal and thence would minimize the impact of that particular medium for virtual learning.

Social presence theory is strongly rooted in its psychological explanation of learning, a feature celebrated for its great potential in its explanation of the learning process. It presence thus is linked directly to the intimacy factor within these virtual communication. Since this intimacy factor is significant for the degree of social presence within virtual communication, we have found out through our interviews with our participants that like real face to face communications, the cultural factor cannot be easily isolated even in online communication and thus making the existence of social presence more fickle in our study context. In other words, the ‘private public’ email conundrum described by (Steinfield, 2003) and to an extent distorts the ‘intimacy equilibrium’ in an otherwise situation (Short et al., 1976). Moreover, we feel the cultural factor of our interview participants also influenced the level of privacy (McLaughlin, 1986; Champness, 1972) and the style of their conversation with Rice & Love (1987) in a very vivid way thereby affecting the degree of social presence and thus the virtual learning potential. Since learning has never been out of the psychological and philosophical spheres, an understanding of the culture and the nature of the users themselves, similar to learning in real life, would best inform the development of the next generation of social media tools for maximum virtual learning. For long we have failed to understand introverts and extroverts in real life, our understanding of what works in a virtual setting using the social presence theory might just help us their [introverts and extroverts] equivalence in an online setting (Cain, 2012).

1.5 Target Audience
The intended target audience is a set of researchers trying to understand the role of social media impact on virtual/electronic learning within a developing world context. More so, those people who are interested in understanding students’ perception of social media as a serious tool for learning, especially those students who rely exclusively on the internet for their study we feel would also benefit from the study’s finding. Such students would also include the vast numbers pursuing online courses or degree programmes, with or without the brick and mortar reality of their institutions.

The findings can also offer insights into how these various segments of social media can be internalized into the intra-school/university portals for maximum effect in terms of learning. Since the institute portal remains to be an active platform for course discussions and interaction amongst students and in some instances with their teachers, a greater understanding of the design of these portals in accordance with the social presence theory would have positive implications for enhanced virtual learning as a result and would truly add value to the on-going research into learning understanding in a virtual manner.

Lastly, the study would most definitely benefit the management Virtual University, Pakistan as it will give them an insight into their students’ perception of social media capacity as a learning tool, a tool they exclusively make use of. It will also help them with the design and
presentation of their course content using their internal portals to best interact with their students and strive for a better online learning environment.
2 Background

The following chapter primarily consists of the conceptual and theoretical framework of the study. In the initial section, we try to discuss the relevant literature essential for the understanding of our research question as well as attempting to place our research question firmly within the extant literature. In the final section of the chapter, we attempt to discuss the two prominent theories, the theory of social presence and the social learning theory, that form the foundation of our framework and would be used later on in the study to interpret and discuss the results.

Social media occupies a unique place in terms of its learning capacity: it straddles the formal and informal learning environments (Chen & Bryer, 2012). In order to investigate our research question in an exhaustive manner, it is important to understand the concept of learning first before we delved into learning in its formal and informal connotations. Understanding the concept in its entirety is essential for in the case of social media its simultaneous manifestation in either form makes virtual learning unique as well as challenging.

2.1 Theorizing the Social Aspect of Learning

Social learning with its roots in social constructivism attained prominence in the 1960s (Vygotsky, 1978). As Vygotsky (1978) explains social learning, amongst students, transpires primarily in a careful, deliberate and supervised approach to collaborative problem solving tasks (Chen & Bryer, 2012). Collaboration and supervision are essential as both aspects assist group exchanges. A theme that often comes to light when learning is discussed in a social media context especially in light of the myriad hazards unsupervised situations may present. However, the theory puts ample credence to individualism as it stresses for each participant within the group to self-select a particular learning activity in order to get an insight into the problem itself. However, it soon became obvious with further research that social learning is not conducive to solo flying as in an individualistic fashion and instead in primarily an exercise in social discourse (Hanson & Sinclair, 2008; Jonassen, Howland, Moore, & Marra, 2003). Studies after studies, thence, have found that collaborative learning benefits far outweighs an individualistic approach to learning and can contribute to enhanced motivation, improvement in achievement (Johnson, Johnson & Stanne, 2000; Slavin, 1995, Snowman, McCown & Biehler, 2009). Learning, especially meaningful learning, from a social media perspective transpires only with collaboration at its heart making the ‘socially connected collaboration’ and similar research lines relevant to our research study.

In order to re – connecting the discourse on social learning with social media learning, our study’s aim, we need to examine the research work of Siemens (2004; 2005) along with a study done by Downes (2007) suggesting a concept of ‘connectivism’ that incorporates the tools of social media – social networking sites – into the paradigm of social learning. Since social media and social learning are in themselves outward looking concepts, the connectivism concept insistence on the fact that learning is less of an individualistic and internal activity and more interconnected gains credence. Furthermore, as Siemens (2004) goes on to explain according to the theory of connectivism, learning in a social media context is an outcome of linking with others via the different social media platforms, Twitter, Facebook RSS. Learning often in such an instance depends more on the capacity to learn than the prior knowledge of the participant (Siemens, 2005). The role of the teacher, within a social media learning context, takes back seat as they according to the connectivism theory need to realise that their main task in facilitating learning is to facilitate leaners in reaching out to each other and to knowledge sources (Anderson & Dron, 2011).

Brandsford, Brown & Cockling (1999), adds succour to the social nature of learning as they allude to the contention of most educationalist and theorist who propagate that learning is
indeed social in nature. Even Plato, it is asserted, dismissed writing as malicious for it obstructs the social interaction between students and tutors (Swan & Shea, 2005). Dewey (1963) also vehemently reasoned for a social approach to learning.

2.2 Understanding Learning Itself

As we mentioned earlier, learning can be differentiated into two distinct categories: formal learning and informal learning (Chen & Bryer, 2012). Since learning in a social media context overlaps both forms, it only makes sense to touch upon them in a minimal way at this point.

An extensive study of both formal and informal learning by Banks et al., (2007), helps enrich our understanding about the concept. According to the study, the role of formal learning within a person life is minimal as compared to informal learning, about 19% towards college years and steadily declining to 8% at the undergraduate level and 5% at the graduate level. Interestingly, according to Banks et al., (2007), the decline in formal learning is matched by a rise in the informal learning and is less time and space dependent. More so, informal learning is primarily derived from the interconnectedness with others, an aspect not lost on social media. Astonishingly, Banks et al., (2007) finds that the social media tools often associated with formal learning like the course management systems (CMS) have a limited impact on the students learning precisely for being less social, mostly associated with the school, college or institute of learning. However, social media tools that are more open like Wikipedia, LinkedIn, Facebook tends to enhance students learning in a more profound manner due to their higher degree connectedness. The enhance connectedness not only greatly expand and enrich the virtual ecosystem but due to the diversity of the participants, can mimic real life scenarios helpful as a means of informal learning.

2.2.1 Content Delivery

The learning environment – formal or informal – while significant in a social media context doesn’t necessarily is the sole determining factor. Content delivery plays an important role when it comes to virtual learning (Jethro, Grace & Thomas, 2012). Synchronous delivery makes for a more interactive and animated learning experience with a greater degree of simultaneous and instant human connection. Chats, video conferencing and teleconferencing are all synchronous in nature. Asynchronous content delivery, on the other hand, is less real time in nature and less simultaneous, examples of which include emails and blogs.

Our discussion thus far in this section has been largely occupied by making a general ground for our conceptual/theoretical framework by examining learning in all its manifestation, especially in the forms relevant to a virtual context. And before we try to lay out the details of our basic theory on which to further analyse and conceptualise the study, we feel an overview of the e–learning models would further embed the study firmly within the relevant literature and help with the understanding of the research topic in an extensive manner.

2.3 E–Learning Models: An Outline

An extensive review of the extant literature on electronic learning, astoundingly, fails to come up with a specifically designed model for e–learning and instead seems reliant on the general theories of learning (Mayes & De Freitas, 2004). It does, however, makes ample sense to witness an array of models and theories from different disciples, as diverse as strategic management and psychology, to have been used to explain e–learning. Moreover, the subtle modifications, highlighting technology’s role in learning, seem to be an invariably common feature amongst these models (Jamal & Shanaah, 2011).

Recently, however, constructivism has come to the forefront of these neo e–models due to its [constructivism] emphasis on promotion of learning via knowledge construction (Koohang et al., 2009). Jamal & Shanaah (2011) terms this development as best for e–learning as it guarantees learning amongst leaners, a contention they fail to back up with evidence though.
The validity and relevance of constructivism within the context of virtual learning is pretty mainstream mainly, but not exclusively, for the fact that its roots come from philosophy and psychology, amongst other fields, with an aim of finding answers to the elusive and challenging notions of learning (Glasersfeld, 1989). Sener (1997) describes it as a philosophy, primarily an education philosophy, striving to unlock knowledge within each individual perceived to contained within them naturally in a quest to make knowledge as unique as their beholders. Meyer (1992) seems to take a similar stand with his ‘dynamic fabrication of knowledge by humans’ viewpoint. Karagiorgi & Symeou (2005), following a similar line of reasoning contends that knowledge is impossible to transfer in an intact form amongst individuals, but instead through learning knowledge is transferred but the transferred bit is one that is unique to that particular individual as s/he understood it thereby giving it its distinctness. It is this dynamism of the constructivism theory of learning that is not just appealing to understanding learning in a general context but to it in a virtual context. Our understanding of the theory, in close relevance to our research question is that the vastness of the virtual world, as for its potential for learning, which also lack the neatness and order of the real world learning puts it in close proximity to informal learning, or learning without borders thereby making the theory of constructivism a perfect tool with which to examine virtual learning. Furthermore, the idea attains more traction when one reads more into the contention of Jonassen, Peck and Wilson (1999:6), that learning within a constructivist form comes from making sense of things not as they are but as one perceive them. In order words, constructivist learning is being engaged in active negotiation of meanings for the sake of enhancing learning. A closer examination of the virtual learning, or to be more precise learning on the social media, clearly resembles this idea in all its manifestations. Social media can be stripped down to nothing more than a platform where knowledge and ideas are challenged beyond the possibility in real life as everyone strives to search for their own interpretation of the knowledge by giving them their own meanings. The speed with which new words are being created has been unprecedented in human history, thanks in large part to the buzz of the social media (Oxford Dictionary, 2013). New words indeed are an expression of channelling out this zeal for learning in one’s own way.

The idea of learning, as floated by the constructivism theory, at its heart is based on experimenting and tinkling with knowledge as it is in order to mould it into our individual sense making (Kanselaar, 2002). It has been quite difficult for it to thrive in the established conventional real life learning practises as pushing the boundaries were not so easy. However, we feel that the theory sits perfectly in place with the idea of learning on social media as both thrives in a positive chaos where testing new ideas and challenging the conventional wisdom comes as a second nature to social media and its participants. We also feel that learning takes a back stage on social media and instead the focus is more on the participating and the activity of learning as opposed to what is actually learnt, an idea integral to the constructivism theory of learning thereby making the two – constructivism theory and virtual learning – natural allies.

The social aspect also features prominently amongst these e – learning models, a feature this very study supports as well (Jamal & Shanaah, 2011). By focusing on the various forms of interactions within a virtual setting – learner to learner, learner to instructor and between learner and content – these models emphasis the significance of these social interactions and term them essential for the enhancement of group process skills and communication skills, both social in nature (Dabbagh, 2005; Jamal & Shanaah, 2011).

Within the extant literature related to learning in particular and by extension to e – learning in general, the various models falls into three distinct categories: Social, cognitive and constructive models of learning (Hadjerrouit, 2008).

In order to construct a theoretical framework for our study, one that will also serve as the conceptual model for our work, we would next lay down the e – learning model in the next part of this section. Our model, as we would try to argue, fits neatly into the category of the
‘social’ model of e–learning, as pointed out above. By using the ‘social presence theory’ in tandem with the ‘social learning theory’ we will not only try to embed our research work firmly into the literature but will also attempt to analyse and discuss our data in the later sections with the help of this model itself.

2.4 The Social Presence Theory
The importance of social presence can hardly be exaggerated in virtual or distance learning (Rice, 1993; Short et al., 1976; Walther, 1992). Admittedly, one might wonder the relevance of the social presence theory with learning social media or best computer mediated communication (CMC) (Hsiung Tu, 2000). As a matter of fact it isn’t in its current state, unless we redefine the social presence theory for virtual learning (Hsiung Tu, 2000). For social presence theory to have any efficacy for learning in a virtual setting, we need to understand it operationally as well as adequately define it (Hsiung Tu, 2000).

At its surface social presence’s definition amounts to nothing more than the ‘consciousness of another person in an interaction and the salience of an interpersonal relationship’ (Hsiung Tu, 2000: 27). But Biocca (1997) argues that such a definition is too simple for its relevance and instead argues for a more detailed one. According to Biocca (1997), at a very minimal level, social presence occurs when a user detects the existence of intelligence through behaviour sensory experience or form. The degree of social presence, however, would be directly proportionate to the user’s perception of “access to intelligence, intentions and sensory impressions of another” (Hsiung Tu, 2000: 28). In a real life situation that might amount to the verbal, non–verbal and tonal signals. More so, according to Gunawardena (1995), Gunawardena & Zittle (1997), and Perse et al., (1992), the degree of social presence’s perception will invariably be different for each user. In a virtual setting then, especially in the case of social media, social presence would be no more than the subjective quality of that particular social media tool (Short et al., 1976; Walther, 1992), which would further be reliant on the objective quality of that particular medium.

2.4.1 Social Presence & Social Psychology
Intimacy, depending on a number of bodily factors, senses as well as the conversational topic will vary proportionately in accordance with perceived changes in any of these factors (Short et al., 1976). An enhanced level of these variables will most certainly result in a greater level of intimacy (Burgoon et al., 1984). But the point isn’t about the varying level of intimacy but hitting the right level of it, an equilibrium point of a sort, for the communications to flow in an optimal level, a fact explained by the equilibrium theory (Short et al., 1976). Short et al., (1976) contended that the low social presence of telephone would ensure its status as a cold medium of communication. Thence, taking Short’s et al., (1976) contention and generalizing it to a degree, the social presence of the communication tool itself would contribute to the level of intimacy of the communication. Moreover, ease and comfort with the discussion theme would be yet another contributing factor to the overall degree of intimacy (Argyle & Cook, 1976).

Distance, between two people communicating, is important in any communication and in psychological terms is referred to as immediacy (Wiener & Mehrabian, 1968). In a virtual setting then, the immediacy would take two forms. First, the technical immediacy dependent on the level of information communicated (Heilbronn & Libby, 1973: 15); and the second is social immediacy contingent on the verbal and non – verbal communication (Short et al., 1976, Walther, 1992). While the former stays constant, the latter might be changed depending on several variables. Gunawardena (1995) maintains that the level of social presence is directly proportionate to immediacy.

In normal circumstances, that is to say real situations, immediacy amounts exclusively to its verbal and non- verbal constituents (Hsiung Tu, 2000). However, that is not the case in a virtual situation, quite constrained due to the limitation of the non-verbal bits of
communications, where it relies on paralanguage (Gumper, 1990) to compensate for the absence of the non-verbal bits. The dependence on paralanguage, within a virtual setting, is quite profound with Rice & Love (1987) noting it to amount to almost one third of the communication on social media.

2.4.2 Level of Social Presence

The level of social presence inherently depends on two things: the participants’ perceptions and the features of the communication tool involved (Hsiung Tu, 2000). Moreover, the dynamism of social presence contributes to its variability at different degrees in accordance with the medium involved. In terms of social media and for simplicity reasons if we take the computer as the only medium involved, the personification of computer by some ensures its status as a ‘social actor’ in a virtual setting. While it may strikes as a subtle feature with little or no real implications, on a close look this act of personification transform the computer in a way that enhances its social presence in an unprecedented way with great ramifications for learning and communication in a virtual setting. In terms of social media and learning in a virtual setting, it can be enormously useful as it tries to re–create the environment of a real life face to face communication while at the same time maintain the conducive environment of a virtual setting to experiment and test conventional knowledge and ideas in a pure constructivism fashion. It appears as one of the most important feature of a virtual learning environment and learning done on this level is undoubtedly of an enhanced degree. A fact not lost on Goffman (1959) when he coined the term ‘self-presentation’ where social presence attains the internal image of the user perceptions. In terms of the ability of the users to perceive the level of social presence, several studies support the idea (Walther, 1992; Perse et al., 1992).

An encouraging feature of social presence is the fact that it can be actively managed in a deliberate way (Johansen et al., 1988) by changing the message quality (Short et al., 1976). Additionally, one of Gunawarinda’s (1995) finding focuses on the interaction abilities of a teacher and hence argues that it greatly impact the pupil’s perception of social presence. In that case, the quality of virtual learning can be greatly enhanced simply by improving the communication and interaction skills of the instructor involved.

2.5 Social Presence Dimensions

In order to keep the discussion within the confines of the scope of this study, we would try to examine the more prominent dimensions of the social presence theory. Therefore according to (Hsiung Tu, 2000), the dimensions of the social presence theory amount to the following three major ones: the social context, the online communication and interactivity.

2.5.1 Social Context

Social presence theory has several dimensions to it (Hsiung Tu, 2000). First, there is the social context which influences the level of social presence within different factors the discussion topics (Walther, 1992; Argyle & Dean, 1965), the level of perceived privacy (MaLaughlin, 1986; Champness, 1972), the task orientation (McLaughlin, 1986), the association of the users (Walther, 1992; Williams & Rice, 1983) and the involved social processes (Walther, 1992). Social presence, according to Walther (1992), can be influenced by diversity in the social processes, contexts, environments and objectives. On a nuanced level, it practically calls for a different and focused understanding of each of the social media segments as we try to understand their potential for virtual learning as every tool or medium of social media represents or re–create a different set of contextual factors, which are in their own way distinct and thus do not lend themselves to generalisation.

Within the social context dimension of social presence, the nature of activities involved more directly impact the level of social presence and thereby the communication and interaction processes (Hsiung Tu, 2000). For simplicity sake, Hollingshead & McGrath (1995) suggests
four categories of activities. The first kind involves the task that results in the creation of ideas. Secondly, there are the tasks that focus on coming up answers and solutions. Next comes the more combative type of tasks that involves dialogues about differing opinions. The last category involves those sorts of tasks that trigger competition. Learning in a virtual setting, on closer inspection, involves all these types of tasks a user has to go through depending on the context and social setting involved.

Similarly, the privacy or its perception also impacts the level of social presence and is inversely proportionate (Champness, 1972), a fact the researcher studied by documenting the decreased level of social presence within a conference with the addition of a video camera. Moreover, on a similar footing, research indicates the decreased level of social presence and a negative state of mind in control experiments with the thought of eavesdropping (Ryan, 1976). Furthermore, the same phenomenon is noticed by Steinfield (2003) in the disinclination of users using emails for personal reasons. The same study concludes that emails are perceived more private in a ‘one to one setting’ and are considered public in a one to many environment. Applying this very notion on the different level of social presence in the different segment of social media or for that matter in the virtual settings is quite insightful. A case in point is the higher degree of social presence of users on Facebook as opposed to a much lower level of social presence on Twitter comes down to this very notion of private vs. public perception of the intended message. The context perception on the private public lines can even have huge ramifications for learning in more controlled virtual settings like the black boards, e – portals, of learning institutions where to a greater extent they are perceived as more skewed towards the public domain (Cain, 2012).

2.5.2 Online Communications

Collaborative learning – in an efficacious manner – in a virtual setting requires a degree of familiarity with online communications, so as to ease the users’ anxiety with textual communication, a phenomenon profound in a number of people (Phillips, 1983). A greater level of social presence on Computer bulletin boards existed as per the users’ perceptions, according to Garramone et al., (1986) and Perse et al., (1992). Interestingly, this higher level of social presence positively correlated with the students’ upbeat perception of their learning within that context.

2.5.3 Interactivity

Interactivity defined as the tasks users on social media engage in and their corresponding communication style acts as a major contributing factor of social presence in a virtual setting (Williams & Rice, 1983). Interactivity in a direct way impact social presence and a reduction in interactivity within a virtual setting decrease the level of social presence. Within the context of an electronic bulletin board, Garramone et al., (1986) found a direct link between interactivity on the bulletin and its impact on social presence. In an amazing way, the same link between interactivity and the existence of social presence is described by Gunawardena (1995) by linking social presence to the user’s level of interactivity on the platform, the most actively the user is interacting on the platform the higher degree of social presence there is. Conversely, he puts it as if a message or communication signal gets noticed on the platform, it means the existence of social presence therein. Yet again the implications of such a finding for a more generalised discussion on learning within a virtual context are enormous. It also calls for a more interaction design of the institutional platforms, one designed exclusively for learning in an electronic way.

2.6 The Theory of Social Learning

Now that we have analysed the social presence theory in an extensive manner, we would now turn to briefly understand the theory of social learning of which the social presence theory is but a major vehicle essential to foster virtual social interaction (Hsiung Tu, 2000). Conversely, the social presence theory acts as a major channel within the social learning
ecosystem with respect to the social interaction online, which in turn is central to the understanding of virtual learning.

Therefore, it’s important to understand and discuss the social learning theory to cement our understanding of the social presence theory and solidify the theoretical framework of our study in an exhaustive fashion.

To Bandura (1977), the theory of social learning rests squarely on the postulate of a dynamic, uninterrupted and mutual interaction between a user’s internal forces and his/her external environment. Learning, thus, in a social setting never occurs in isolation but instead due to these resultant, internal and external, forces at play where an individual in a real social setting or a virtual one constantly updates his perception greatly shaped by the social presence theory. Observation, as a means of an attempt to interpret, and experience, as a way of feedback, together thus help trigger social learning (Bandura, 1977). Consequently, the social learning theory postulates that human behaviour, a key to learning, is the outcome of users’ social interaction and the environments they operate in (Walther, 1992). Furthermore, according to the social learning theory, human behaviour is a sum of unceasing mutual interaction amongst three major elements: the environmental, the cognitive and the behavioural (Hsiung Tu, 2000).

The social theory of learning gets interesting and in our study case more relevant to our main model of the social presence is interaction takes centre stage in the whole social learning process. Learning transpires only in the presence of interaction (Gunawardena, 1995) and this is where the social presence theory mentioned earlier attains the shape of a vehicle to nurture this social interaction. A graphical illustration based on the social presence theory and the social theory of learning is drawn at the end of the section to demonstrate how the social presence theory acts as a conduit in facilitating social interaction between the three forces within a social learning context. Social interaction on CMC, and for that matter on social media, is thus greatly influence by the social presence (Hsiung Tu, 2000). Social presence thus provides an enabling environment to foster social interaction essential for social learning, of which virtual learning is an integral part.

2.7 Social Learning Model

In order to understand the social learning model, we need to explore the four observational learning processes (Bandura, 1977): monitoring the relevant tasks, events coding for memory, retaining what has been learnt already and producing the right amount of motivations for learning.

It is important to understand that social presence is highly significant in observational learning in the absence of context clues. More so, in the absence of social presence, social learning behaviours would not conform to expectations and would be extremely hard to predict (Hsiung Tu, 2000). Finally, ceases to materialise whenever any of the four observational processes are overlooked.

2.7.1 Being Responsive

At the centre of learning through observational processes comes the ability to be responsive/attentive to instructor’s major characteristics (Bandura, 1977). On a more personal level, attention is of a higher degree thereby enhancing the level of social presence, within a social media context, and thus fostering learning (Walther, 1997). Failure to capture attention removes all opportunities of social presence and thereby of any learning activity via social media. Learners attention also depend on the quality of interaction – with quality of the interaction being directly proportionate to social presence – and a less than interesting interaction would no doubt fail to capture the attention of the leaner and thus curtail the virtual learning process.
Conversely, as the online learning of a student increases it directly affects his attention level, which is also contingent on the student’s past experience with the topic and his/her overall beliefs, values and attitude (Bloom, 1956). However, the instructor’s role is significant to trigger an affective learning. His role, positive or negative, is a direct result of the level of social presence between him/her and their students and a greater level of social presence between the student and the teacher can even influence the personal attitude, values and beliefs of the student and enhance his learning in a virtual setting (Kearney et al., 1985). Anderson et al., (1981) came to similar conclusions as they studied the interaction style of the teacher vis-à-vis their students in a virtual setting and having a positive impact on the social learning process.

It is essential to understand the centrality of social presence for social learning, especially in a virtual setting. A minimal degree of social presence is essential to trigger social learning online. However, social presence is a complex phenomenon and is being influenced by several other factors, including the interaction style, ease with computing, and language skills along with other social and cultural variables.

2.7.2 Adequate Retention

Observational learning, the kind of learning one must expect on social media and in a virtual setting, relies predominantly on two types of retention models: imagine-al and verbal (Bandura, 1977). Less information is retained either ways, learning online is impossible. There is, however, a sharp distinction between the way social learning transpires in a real environment and for learning to happen in a virtual one. In the former instance, retention of knowledge primarily depends on the visual/imagine-al type while its absence in a virtual setting often inadvertently rests on the latter, the verbal type. As it happens verbal communication is bland and less interesting, in the absence of the visual aspect, and lacks to invigorate visual stimulation thereby reducing the quality of communication and thus lower the social presence level. One way to avoid such a situation, in a virtual setting, is to make use of the emoticons or paralanguage, which to a greater extent help stimulate the visual sensors and improve the social presence level. Improved sensory stimulation also helps the brain to rehearse and retain knowledge and information (Bandura & Jeffery, 1973).

2.7.3 Motivation

Social presence here becomes significant again as learners would only react to behaviour that they value, and their valued behaviour depends on the presence of an enhanced level of social presence (Gunawardena, 1995). Therefore, the use of emoticons and other social presence enhancing tricks would stand a better chance of enhancing social presence and triggering a motivational response to learning online. On the other hand, however, coldness and insensitive platforms of social media would result in a reduced degree of social presence and by an extension less likely to trigger a motivating response from users with adverse implications for electronic learning. Research has shown that social media platforms allowing users to communicate non-verbal cues has a higher degree of social presence and a much better chance of enhancing social learning in a virtual setting (Gunawardena, 1995). Learning online transpires in a social setting but of a virtual nature. Learning, and effective learning thus on social media, a segment of the online world, requires an adequate level of social presence to connect the internal – cognitive and behaviour factors – and the external environmental factors of the virtual users to foster social learning. Akin to a chemical reaction, the social presence simply acts as a catalyst for all of this to happen in a virtual social setting, but one without which the reaction to learn cannot simply take off.
2.8 The Nuts & Bolts of Social Learning

Figure 1: Figurative Representation of how social presence connects the external and the internal, cognitive and behaviour factor to induce social learning

The above figure represents the process necessary for social learning, according to the social learning theory, to take place. It's important to understand the essential parts of the process which can be categorized into two main parts: the internal and the external environments. The internal environment in itself is further divided into the cognitive and the behavioural parts together thus making the human behaviour. For social learning to take place, it's important that the two, the internal and the external environments, connects. It is in this context that the significance of the social presence becomes central to the whole idea of social learning. Social presence provides the linkage of the otherwise two separate parts and akin to current flowing through two mediums via a connector, social presence acts as they special connectors and vehicles to connect the two important learning bits. The above figure represents this whole process in a reader-friendly manner.
<table>
<thead>
<tr>
<th>Formal &amp; Informal Learning</th>
<th>Chen &amp; Bryer (2012); Banks et al., (2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructivism</td>
<td>Vygotsky (1978); Koohang et al., (2009); Karagiorgi &amp; Symeou (2005)</td>
</tr>
<tr>
<td>Connectivism</td>
<td>Siemens (2004; 2005); Downes (2007); Anderson &amp; Dron (2011)</td>
</tr>
<tr>
<td>Social Learning</td>
<td>Brandsford et al., (1994); Dewey (1964)</td>
</tr>
<tr>
<td>Content Delivery</td>
<td>Jethro, Grace &amp; Thomas ( ) Mayes &amp; De Freitas (2004); Hadjerrouit (2008);</td>
</tr>
<tr>
<td>E Learning Theories</td>
<td>(1 – 4c ); C; 5c; Biocca (7c); Gunawardena (8c); Gunawardena &amp; Zittle (9c); Perse et al., (10c); (2, 3c); 2c; 11c; Short et al., 2c; Argyle &amp; Cook (13c); 14c; 15c; 8c; 17c; Rice &amp; Love (18c); Goffman (20c); (3, 10 c); 22c; (23, 24c); 25c; 26c; 27c; Cain (2012);</td>
</tr>
<tr>
<td>Social Presence Theory</td>
<td>Garramone et al., (30c); Perse et al., (10c);</td>
</tr>
<tr>
<td>Online Communications</td>
<td>Garramone et al., (30c); 25c; Gunawardena (8c)</td>
</tr>
<tr>
<td>Interactivity</td>
<td>C; Bandura (6c); 3c; 8c; 6c; c, 32c; 33c; Kearney et al., (34c); Anderson et al., (35c); 6c; 37c; 8c</td>
</tr>
<tr>
<td>Theory of Social Learning</td>
<td></td>
</tr>
<tr>
<td>Social Learning Models</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Thematic Representation of Literature Used within the Study
3 Methodology

The chapter consists of the research genre, research perspective, research methods employed and the research philosophy of the study in an attempt to find answers to our research questions. In here, readers will come to understand the research inclinations, its philosophy and the research context of the study. It will also shed light on the research methods used within the study for data collection and for data analysis. Finally, the chapter will answers questions about the research validity, authenticity and question with a take on the ethical considerations at the end.

We begin this chapter by discussing the research genre before we move onto the theoretical lens or the perspective of our research study in order to give our readers an idea of our research inclinations and to firmly place our research in the context of qualitative research. In the words of Creswell (2009), the theoretical lens map the research structure of the study and chart the research in a specific manner through a particular set of questions being asked and methods employed. In our view, it simply sets the tone of the research within the study.

3.1 Research Genre

The nature of our research question and the ensuing research methods and philosophy firmly puts the research genre/ nature of our study in the broader ‘qualitative’ research side. We feel it is important to discuss the research genre of the study as it will set the tone of the rest of the chapter as well as its significant influence on our findings and methods primarily shape the study.

The research genre of our study has its roots in our research questions, focusing principally on the ‘perceptions’ of the students. In order to answer our research questions the focus thus has to been examining the feelings of our study participants, best tackled in a constructivist/interpretivist approach. Thence, the very nature of trying to explain on a deeper level the understanding, the feelings and the perceptions of the study subjects rules out any possibility of a quantitative approach. It plays right into the strength of qualitative research as we explore the challenging issue of virtual learning and student understanding of it for enhance learning. Moreover, our attempt to broaden our understanding of the previously held notions of virtual learning calls for a qualitative approach (Bryman, 2009).

Our study’s data set and the nature of our data, with almost our entire primary data generated via semi–structured interviews, makes no allowance for a quantitative more statistical approach to the data and instead is left to the abilities to make sense of it (Kalof et al., 2008).

As with any qualitative research work, our work would undoubtedly attract criticism of subjectivity and researchers’ bias, a fact we have been aware since the decision to pursue this genre of research for our study topic and have tried our outmost to minimize the researcher bias effect by minimizing our data set contamination from our personal views and biases and presenting the data and analysing it as neutrally as possible (Fisher, 2007). However, we do understand it as one of the limitation of a qualitative study.

3.2 Research Lens/ Perspective

By now we understand the qualitative nature of our research would have dawning upon most of our readers but none could guess the research perspective and the study’s research philosophy, which to a greater extent will shape all issues of the research methods used, the nature of the questions asked, the validity and reliability issues and the ethical considerations.

The significance of the research perspective could hardly ever be exaggerated, as it provides the framework for the research study right from the start to the conclusion (Bryman, 2010). Thus far, we have found that to be perfectly true as it was our research perspective that guided us onto to the choice of this particular subject, the issue of virtual/online learning,
thereby helping us with the issue of ‘interest’ in a particular topic (Fisher, 2007). It also provided the impetus then to help us choose the right sort of subjects/people, in our case students, for our research to be directional and relevant (Creswell, 2009).

A research perspective, where it is useful to help resolve issues of a topic interest, is also helpful in understanding the relevance of the research topic under consideration (Fisher, 2007). More so, the research perspective can also come handy in deciding about the durability, if the issue would still be there in a year’s time or will fizzle out in a day; deciding about the access to material essential for research and the risks and security issues related to data generation and gather (Fisher, 2007).

Research lens or perspective is helpful beyond the recognition of the topic and the research range, although it is the major issue at the beginning. Its most important role, however, comes at the research design stage. It is at this stage where the research perspective influences the research design of the study with an impact on: the ‘methodological stance, one’s role as a researcher, choice and nature of research method as in a case study or a survey, the main research methods employed and the ethical considerations’ and ramifications of the research (Fisher, 2007:50).

3.3 Research Approach
The choice of our research topic and question along with the qualitative inclination of our research nature made a perfect sense for an ‘inductive’ logic of research. We intend to build broader themes from our data culminating in a final generalized model thereby perfectly fitting the inductive process of generating themes, models and theories (Punch, 2005). Below is a graphical representation of our study’s inductive process.

Figure 2: The Inductive Logic of Research in Qualitative Research, Adapted from Creswell (2007: 63)

The figure above summarizes the process of induction which begins with data collection and gradually narrows down at the formation of theories and themes.
3.4 Research Method

At this stage in our study, well aware of the qualitative nature of our study and amply guided by our study’s research perspective and its inductive nature, we have to decide upon the research methods, extremely essential for the data gathering of the study. While the choice of the research method would undoubtedly be important for the richness and depth of our data; it will indeed influence the quality of our analysis as well and therefore the choice had to be considered cautiously.

We considered the various options available to us: the interviews, questionnaires, panels and focus groups and observations in order to pick the right method for data gathering and generation. While each method had its merits and de–merits, an issue outside the realm of this study, our final choice, going for semi – structured interviews, was determined by several factors.

First, as indicated above our inductive research required a more in–depth data, which could possibly come from a more semi – structured interview sessions. Secondly, the constructivist approach best suited to our research question also mandated a more open discussion with the students in face to face sessions. Thirdly, as our research questioned primarily involved the understanding of students’ understanding and perceptions of the issue, i.e. the role of social media in virtual learning, we felt semi – structured interviews gave the interviewees the best opportunity to express their concerns and feelings about the topic, something none of the rest primary research methods afforded.

3.5 Research Paradigm

Here again our research question holds the clues to our research paradigm or research philosophy in a broader way. It is about interpretation of interpretation. Understanding someone else, the students’, understanding of an issue, the role of social media in electronic learning as they see it. We can only truly do that, i.e. understand their understanding of the issue, if and only if we truly take into the idea of ‘multi realities’ the bedrock of interpretivists/constructivists reasoning (Denzin & Lincoln, 2003).

A constructivist approach to some comes as anti – positivist (Hatch & Cunliffe, 2006); others simply call it post – positivist (Blaikie, 1993). Irrespective of how its seen from a positivist perspective, the notion that reality is not static and is re – constructed via time through different interpretation itself makes it a dynamic paradigm and one that perfectly fits into our inductive approach to our research question.

Working with others to understand and create meaning is exactly what our topic requires and is fundamental to a constructivism (Saunders et al., 2007). It gets more aligned to our topic as we examine its reason for the re – creating of meaning and understanding. It argues for the researcher to view the world through the eyes of the ‘social actors’ in our case the students or participants of the interview in order to give meaning to the topic of social media role’s in electronic learning.

It also brings us back to one of our delimitation of our study, i.e. the difficulty to generalize the study’s finding. Saunders et al., (2007), opines that since a constructivist approach is more ‘contextual’ in nature, its replication is generally not easy, a fact we readily recognise.

The constructivist approach seems readily aligned with the choice of our research method, interviews, as well. Easterby – Smith et al., (2008), concludes that communication, verbal and non – verbal, are central to re – creation of meaning and therefore to a constructivist approach. Such a conclusion, we feel, gives succour to the choice of our research methods,
i.e. selecting semi–structured interview in order to gather and generate primary data for our study.

Figure 3: Research Philosophy Adapted from Partington, (2008) in Flowers (2000:4)

The above figure represents the process, dynamic in nature, of how the research philosophy connects the various important aspect of research in a web manner where ever indivudual and otherwise separate part of the research process is inherently and intricately linked to every other part.

### 3.6 Review Methods

Identification and selection of relevant extant research had never been easy for our topic, primarily for its interdisciplinary nature. Moreover, our research design and methods made it further broad in fields as far as sociology and anthropology in addition to the more obvious ones like computing, management and informatics.

Recent and relevant research material thus became a serious issue of time and resource management. We also risked the danger of losing our way around the problem and therefore had to find a more standardized way to search the extant literature for relevant works. The significance of our relevant research material as an academic/theoretical framework to our research topic might come as an obvious reason; however the identification and mapping of relevant research also involved secondary data collection and therefore had implications for our data pool and the ensuing data analysis section as well.

#### 3.6.1 Key Words

An ingenious yet simple solution to our presumed ‘squaring of the circle’ problem came from Fisher (2007), which identified the use of key words, for such situations. The key words not only helped identify relevant research, it also helped map the research and provided a clear path of least resistance in terms of the huge cache of literature material available to us. We divided our key words into two categories, based on their context of relevance to our research question into primary and secondary key words.
**Table 2: Primary & Secondary Key Words**

Boolean logic along with strings made using our keywords helped narrow down our literature search. An example of a Boolean string, used for our research is as following:

**SOCIAL MEDIA AND E-LEARNING AND USERS PERCEPTIONS**

The above method for researching literature had been extremely helpful in a time efficient manner for our study. Another, unlikely use of these key words has been their help at the later stage of creating themes for our analysis. A constant referral to the key words helped align closely our thematic section with our research question.

### 3.7 Data Collection

Data collection within the study is segmented into two parts, dependent on the nature of the data collected. While our study is mainly based on primary data, however we did try to collect secondary data in addition to the literature search.

#### 3.7.1 Primary Data

The moment our research question set the tone of our research paradigm and research perspective it only made sense for a primary data based research method, harmoniously fitting the constructivist approach. Hence, collecting primary data via semi-structured interviews simply fitted the structure of our study. It enabled us the privileged position of being part of the process and context and understand the issue from the viewpoint of our participants. Being vigilant to the subtle verbal and non-verbal gestures of our interviewees added a layer of richness to our data no other method, we think, would have allowed for.

![Figure 4: Types of Interviews, Adapted from Fisher (2007: 159)](image-url)
The figure above represents the continuum-ish nature of interviews with the unstructured and structured ones at both the extremes.

We opted for a semi–structured nature of interviews for a number of reasons. Open interviews, indeed, costs time the luxury of which neither our interviewees nor we had. More over the logistic problems, as the Virtual University exists only virtually, made tracking and reaching the participants extremely difficult and thence a less open and shorter interview with loosely defined parameters was the obvious option.

The option of a more controlled, as in pre–coded, interview was ruled out for it would have limited the input of our participants and therefore increased the chances of a researcher bias within the data set. Our thinking was it would fit less perfectly with our constructivist approach and adversely impact the quality of our data.

3.7.2 Reaching out to our Interviewees
The objective of conducting the semi–structured interviews was to generate primary data of the highest quality. In order to do that the first step was to identify and select a panel of interviewees who are relevant to the research question in a direct way. Therefore, the decision to interview students of the Virtual University, Pakistan, made sense on all fronts.

Identification and soliciting the right candidates began at the Virtual University’s Facebook page (See Appendix A). But prior to sending requests to students identified on the university’s Facebook page and requesting their consent to be part of the study, a letter (See Appendix A) was sent to the regional manager of the university for an official seal of approval from the university itself before consent was sought from the individual participants of the study. After a positive response from the University’s authority, 30 students via the university Facebook page were sent the initial emails in order to gauge their response and interest. 19 students responded back showing interest, at this earlier stage, to be part of the study conditioning their consent contingent on further information about the topic.

In the second stage, a second email was sent to those 15, out of the initial19 who responded, students along with two attachments: a consent form and an information form giving a brief introduction about our study and its objective along with clear guidelines about their role in the study (See Appendix B). The 15 selected were based on their relevance to the study in terms of their educational background. Eventually, we were able to interview only 10 out of the 15 students with the other 5 withdrawing out for personal reasons. The table below gives a detailed profile of the 10 students interviewed for the study (See Appendix D).

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Sex</th>
<th>Computer User</th>
<th>Study Program</th>
<th>Avg. daily use of SNSs</th>
<th>Sociability</th>
<th>Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>Advanced</td>
<td>BBA</td>
<td>2 Hours</td>
<td>E</td>
<td>Time wastage</td>
</tr>
<tr>
<td>2</td>
<td>M</td>
<td>Advanced</td>
<td>BSCS</td>
<td>3 Hours</td>
<td>E</td>
<td>Time wastage</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>Advanced</td>
<td>BBIT</td>
<td>3 Hours</td>
<td>I</td>
<td>Privacy</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>Proficient</td>
<td>BBIT</td>
<td>2 Hours</td>
<td>I</td>
<td>Privacy</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>Advanced</td>
<td>BSCS</td>
<td>3 Hours</td>
<td>I</td>
<td>Privacy</td>
</tr>
<tr>
<td>6</td>
<td>M</td>
<td>Advanced</td>
<td>BSCS</td>
<td>4 Hours</td>
<td>E</td>
<td>Unstructuredness</td>
</tr>
<tr>
<td>7</td>
<td>M</td>
<td>Advanced</td>
<td>BSCS</td>
<td>3 Hours</td>
<td>I</td>
<td>Privacy</td>
</tr>
<tr>
<td>8</td>
<td>M</td>
<td>Proficient</td>
<td>BSIT</td>
<td>2 Hours</td>
<td>E</td>
<td>Time wastage</td>
</tr>
<tr>
<td>9</td>
<td>M</td>
<td>Literate</td>
<td>BBA</td>
<td>2 Hours</td>
<td>E</td>
<td>Crowdedness</td>
</tr>
<tr>
<td>10</td>
<td>M</td>
<td>Advanced</td>
<td>BSCS</td>
<td>3 Hours</td>
<td>E</td>
<td>Directionless</td>
</tr>
</tbody>
</table>

Table 3: A profile of the Interviewees in the Study
E* stands for being an Extrovert. I* means an Introvert. These are the participants own description of themselves within a social context.

The interviews on average lasted for around 55 minutes each. The table below gives a detail of each interview’s duration along with the time and the date it was conducted on.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Date</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>09/4/2013</td>
<td>10:00–11:00</td>
<td>Pearl Continental, Lahore</td>
</tr>
<tr>
<td>2</td>
<td>13/4/2013</td>
<td>09:00–10:00</td>
<td>Pearl Continental, Lahore</td>
</tr>
<tr>
<td>3</td>
<td>13/4/2013</td>
<td>14:00–15:00</td>
<td>Avari Towers, Lahore</td>
</tr>
<tr>
<td>4</td>
<td>14/4/2013</td>
<td>10:00–11:00</td>
<td>Pearl Continental, Lahore</td>
</tr>
<tr>
<td>5</td>
<td>15/4/2013</td>
<td>10:00–11:00</td>
<td>Avari Towers, Lahore</td>
</tr>
<tr>
<td>6</td>
<td>15/4/2013</td>
<td>14:00–15:00</td>
<td>Dream Lounge, Lahore</td>
</tr>
<tr>
<td>7</td>
<td>17/4/2013</td>
<td>09:00–10:00</td>
<td>English Tea House, Lahore</td>
</tr>
<tr>
<td>8</td>
<td>18/4/2013</td>
<td>09:00–10:00</td>
<td>Dream Lounge, Lahore</td>
</tr>
<tr>
<td>9</td>
<td>18/4/2013</td>
<td>15:00–16:00</td>
<td>Pearl Continental, Lahore</td>
</tr>
<tr>
<td>10</td>
<td>19/4/2013</td>
<td>10:00–11:00</td>
<td>Café Aylanto, Lahore</td>
</tr>
</tbody>
</table>

Table 4: Time, Duration & Location of Interviews within the Study

Questions were finalized and preparation was made prior to each interview in order to minimize time wastage. While the interviews lasted for an hour, 5 minutes each was spent on niceties and making a rapport with our interviewees.

Questions were kept deliberately to a minimum, and questions were mostly thematic and open ended in nature. The objective was to let the interviewees talk as much about their perceptions about SNSs and only occasionally was redirected towards the topic (See Appendix C for a sample of questions).

The interviews were paced in a gradual way so as to ease the interviewees into the discussion. Initially, general relevant questions were asked with a gradual in-depth discussion on the issue at hand. The method proved useful as not only that the discussion went without needless distraction but helped the interviewees settle down easily into the discussion. An effort was made to ensure that the interviewees were thanked at the end of the interview and any apprehensions they had about data or any part of the interviews allayed.

3.8 Secondary Data

Two issues were of prime concern with regard to secondary data. First, care has been taken to ensure the quality of research in order to maintain the research integrity of the study (Bryman, 2009). Secondly, the other consideration vis-à-vis secondary data was access and availability. It is important to mention here that secondary data, in this instance, also includes the literature used within the study as well as the data involved with regard to virtual university and other social networking sites, SNSs.
A sample of databases used to search for literature within the study is given below. Google Scholar was the main search engine for secondary data on Virtual University and social networking sites and social media from online magazines, newspapers and websites.

<table>
<thead>
<tr>
<th>Database</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emerald</td>
<td><a href="http://www.emeraldinsight.com">www.emeraldinsight.com</a></td>
</tr>
<tr>
<td>Science Direct</td>
<td><a href="http://www.sciencedirect.com">www.sciencedirect.com</a></td>
</tr>
<tr>
<td>Google Scholar</td>
<td><a href="http://www.scholar.google.com">www.scholar.google.com</a></td>
</tr>
</tbody>
</table>

Table 5: Data Bases used in the Study

3.9 Grounded Theory

The choice of grounded theory, as a data analysis tool, was mandated to the most part by an attempt to make use of a qualitative analysis tool in strict adherence to an inductive constructivist approach. In addition, the nature of our primary data, data extracted from semi-structured interviews made the choice much simpler and well thought. Glaser & Strauss (1967), credit grounded theory as a theory generation tool. They define it as, “the discovery of theory from data systematically obtained from social research” (Glaser & Strauss, 1967:2).

Crooks (2001) define it as an ideal qualitative analysis tool for the exploration of social relationships that are integral to groups or individuals in the presence of contextual factors. In our study’s case, that translates into the study of the social relationships between users – students – and their relationship with the social networking sites within the context of social learning.

However, much like qualitative research in general, grounded theory has come under criticism for several reasons thereby limiting its validity. Grounded theory lacks a standardized version, something its critics often cite as its most basic shortcoming. However, to its proponents, grounded theory beauty lies in its ability to lend itself to every grounded theorist in a personalised way. Dey (1999:2) trying to count its different version concluded as, “probably as many versions of grounded theory as there were grounded theorists”. But since its emergence, grounded theory has been a formidable qualitative analysis tool. The theory is so deeply embedded in the constructivist philosophy that Charmaz (2006) called it the constructivist grounded theory.

Grounded theory relies extensively on coding as it tries to analyse data. However, this particular feature of grounded theory is also the one that attracts the most criticism from either sides of the spectrum, the subjectivists and the objectivists. Those arguing for more objectivity in qualitative research decry it for the subjectivity involved in coding as its every researcher own interpretation of the coding (Pole & Lampard, 2002). Qualitative purists, on the other hand, discard it on the grounds that coding within it robs it of the richness that comes with qualitative research (Seidel, 1991). Within the study, an attempt has been made to balance the two delimitating aspects of coding (See Appendix E).

Charmaz (2006) points to another issue, which goes beyond the criticism of subjectivity vs. objectivity and one that has serious research implications as it goes to the heart of research integrity. His contention is that the theory’s flexibility and lack of standardization gives too much leeway to researcher bias and in its extreme form the interpretation is more of the researcher than of the participants.
3.10 Validity & Reliability
In order to understand the significance of validity and reliability, two of any research’s most integral features, we need to take a closer look at Creswell (2009) explanation of both these terms and understand them in relationship to the researcher. He [Creswell] argues that the validity and reliability of a research tells a great deal about the meticulousness of the researcher’s approach towards his data, findings and methods. Validity thus ensures the researcher goes through a certain check list in terms of the procedures he employs within his research for the precision of his findings (Hammersley, 1990). Reliability, on the other hand, indicates to the consistency across myriad research undertakings Seale (2004).

However, Creswell (2009) understands the criticism qualitative research, particularly within the social sciences spheres, attracts and therefore calls for certain internal validity tests to enhance this particular feature of the research work. Some of Creswell (2009) strategies include:

- Data triangulation to minimize the occurrence of outliers. In our case, the reliance on may interviewees as data sources help root out any anomalies within the data and thereby enhance its validity. Yin (2009) supports this assertion of data triangulation as well.
- Interview transcripts to avoid data contamination require attestation by the interviewees so as to deter potential manipulation.
- Random checks amongst the member researchers must be encouraged to discourage unscrupulous behaviour and enhance the research’s reliability.

3.11 Ethical Considerations
One of the salient features of modern research practises has been its protocols steeped in ethical considerations. To Parse (2001) ethics alone ensures scientific excellence, research veracity and the centrality of the participants’ rights. Scientific excellence has practical value for future research. While it ensures research is carried out in a scrupulous manner to ensure its validity and reliability; it also pushes the boundaries of our existing knowledge step by step. Only scientific excellence can ensure research continues unabated as it is seen to be a cause of new advancement with solid footings. Any attempt otherwise would not only discredit this integral feature of research but will also be of less scientific value for the advancement of human knowledge and understanding. In our study thus, we did our best to document each and other aspect of our data collection and ensuring a transparent process is maintained throughout every aspect of the study.

Protection of the rights of the research participants is a notion bedded in the idea of basic human rights (Callahan & Hobbs, 1998). Any research at its beginning is a jump into the unknown and at times can have unintended adverse impacts. It is therefore essential that the rights of the participants be protected at all costs through steps like disclosure of the risks associated if any and requesting for their consent before they become part of the study. In our study we made sure at every stage of the study to safeguard the rights of our interviewees and adhere to strict rules of privacy and disclosure protocols.

In order to maintain the integrity of our study, a significant effort has been made to record and report the data and findings in as clear and transparent way as possible. Accuracy of the facts and findings has been at the core of our study.
4 Findings

In this chapter we would like to present the findings from our data. In order to make them readable easily, we have categorized our data findings into separate yet connected blocks in accordance with the themes they represent.

It has been an astounding experience as an effort to understanding the perceptions of student vis-à-vis social networking sites in terms of their electronic learning role. In order to give structure to our findings, we have arranged the findings in accordance with their thematic representation. The obvious benefit is to give a structured shape to our findings as well as help to map the patterns emerging with respect to the different aspects these findings shed light on. The themes are in an order of moving from the generalised to the more specific patterns, though all connected.

4.1 Social Networking Sites: The Image, the Perception

Why do you think we have social networking sites? According to one interviewee, “It is great because, less government stop meddling social networking is the best and often only way of getting connected with friends and everyone. To me its connectivity in the real sense” (Interviewee 9, 2013). “To me personally they offer a private secluded space, my space in real terms where I get to do what I want when I want. Its freedom like never before” (Interviewee 3, 2013). To another the image of these networking sites was, “the moment I log onto my networking site, I feel relaxed and at ease. It has this calming effect on me the instance I see the image, the homepage” (Interviewee 5, 2013). Yet one of the interviewees wasn’t very sure about the image of these sites yet still actively used it, “it is more out of habit than I really enjoy it no more. It is getting predictable in every sense of the word and coming onto it is more of a routine work like you walk or rest or something like that than actual fun no more” (Interviewee 7, 2013). To one interviewee, the image or perception of social networking wasn’t static but changed on an event to event basis, “the fact that Facebook has little concerns for people’s privacy and more about their corporate clients has affected my thinking of it, definately. I think it lost its social bit in the social networking and now just remains a networking site like the rest” (Interviewee 4, 2013). “For me its connectivity on a masssiveeeeeeee scale. That is the image of social networks, a true image of internet with no boundaries and the word right next to you” (Interviewee 2, 2013). For some the image was stuck to a momentous event they shared or became part of on a social networking site, “I will always feel that buzz generated by our party [political party] during the election days. I would literally sleep with my Facebook on. That will always be my best image of it” (Interviewee 10, 2013).

4.2 The Face of Social Networking: Facebook

How many social networking sites do you often use and why? “Facebook. Social networking... that’s it. I mean, really Facebook is THE social networking all in one. It has got everything from fun to entertainment to education to infotainment” (Interviewee 2, 2013). “Facebook is the social networking. I don’t use anything else and know nothing of anything either. I don’t very often use the VU LMS even” (Interviewee 5, 2013). “Why would anyone use any other site, even a news site, when Facebook exists” exclaimed Interviewee 3 (2013). Similarly, according to Interviewee 7 (2013), “I seldom hear the word social networking or something like that. All I hear and understand is Facebook. It is cool and I think an image should be cool”. While some were dismissive of the image thing when it came to social networking, others, amazingly, used it exactly for the image reason. “I got hooked onto Facebook because of my friends. Since, every one [of my friends] were constantly on it, I felt left out but social and in terms of my homework so I joined it too. It definitely is awesome to be connected round the clock with your friends” (Interviewee 8, 2013). “Since everyone is using it, it definately is cool, aahaa a. And I don’t use any other
social networking site... I don’t even think I know of any other nor does any of my friends for that matter’’ (Interview 4, 2013). On the question of the social networking sites being a lot more than just Facebook, there was little variation in the responses. ‘‘Not here, no. It is Facebook. Facebook is like the Pepsi in Pakistan. Maybe Coke sells better in the rest of the world but we Pakistanis simply love Pepsi. It’s the same, Facebook has crept into our psyche at least amongst us young people this is it’’ (Interviewee 1, 2013).

4.3 Learning & Social Networking: In Quest of the Hidden Connection

Do you ever face books on Facebook? ‘‘Absolutely. While you can definetly engage with your classmates and friends and discuss a topic. But learning on Facebook is much deeper than cramming or learning in class. You are absolutely free to think and say and write off course within the limits but much more free than in the class room ever’’ (Interviewee 8, 2013). Similarly, another put it as, ‘‘just like the concept of social networking and the internet and the online world is different, so is the meaning of learning. If you think of learning as most people would do in a real life then you won’t ever understand learning in that context. Learning is much more subtle yet on a deeper level there than in the class room where so much else is going on in your head and the outside environment is constantly nagging you. On a social networking site, the freedom it affords you enables you to be yourself and that in my view is the key to learning’’ (Interviewee 4, 2013). ‘‘Learning is much more fun and easier when done in groups. Social networking makes it easier to come together as a group and engage in learning at your own pace in your own time, that is important in my view for learning and that definetly is the case with me personally’’ (Interviewee 2, 2013). The same concept of collaborative was further stressed by Interviewee 8 (2013) as, ‘‘Groups made of real life friends, like class mates are very effective in terms of learning. It helps you go through your class work or homework in a more efficient and structured way and enhance group work, which also at times translates into the real world. Learning is more fun when do in group as everyone chip in their views about the topic and discussion takes a whole new meaning’’. Interestingly one interviewee connected learning with, ‘‘Learning requires a specific state of mind. In the normal real life learning you just go to school because you have to no matter how you feel about it. You come onto social networking site on your own free will. That is when learning is more voluntary and more fun’’ (Interviewee 5, 2013). Commenting on learning and its connection with behaviour, one interviewee put it as, ‘‘People on social networking sites often, and I mean the majority of people, behave nicely than they would maybe in real because of the real danger of getting blocked for good. This create a cycle of positivity with everyone behaving nicely adding bit by bit of something useful to the conversation and fostering an informal learning environment. Of course it can be about a specific classroom problem or an otherwise engaging discussion about some issue but it certainly comes under the learning thing’’ (Interviewee 1, 2013). Collaboration came in again and again as an important and definitely well understood concept for virtual learning. ‘‘Yes it [collaboration] helps. It does. Whether you are working in a group about a topic or even working online on SNS with your teacher, the dynamic of group changes and everyone tries to be more productive and add in value to a group, I think it makes you feel rather good to deliver just like in real life’’ (Interviewee 1, 2013). Learning was connected to connectivity in itself as one interviewee put it, ‘‘When you are on SNSs for a while maybe you do your thing and like niceties with friends in real life before you turn to some topic someone has brought up. In a group often made for the class the discussion is definetly about some topic, some issue some problem and thus being connected itself triggers the very act of learning’’ (Interviewee 7, 2013).

‘‘Right conditions are the key to learning. Right conditions as in the right people, the right topic, even your right mood which often is or else you don’t pop up on SNS. The right language and tone is important to me as a mean comment is often a turn off. And I really hate
it when people get busy in the midst of a conversation, I mean come on online you cannot be a lazy thing before you kill the conversation’’ (Interviewee 3, 2013).

The brick and mortar effect was interestingly described as both good and bad when one of the interviewees described it as, ‘‘I mean it does help to have friends from a real life school because it is easier on the mind to connect learning with a place you associate with it so it definitely helps. But I think it has the negative effect too. If you don’t like your school and you are miserable each day going there then it ruins the online virtual learning thing on SNS too, especially you don’t want to be reminded of the same people and with it the same place you so detest everyday’’ (Interviewee 8, 2013). But on the contrary another interviewee termed it as a great factor for virtual learning on SNSs as, ‘‘Being connected with people you know from school, the sense of school which almost everyone associate with learning makes the group special giving it an identity of its own. The group identity fostered online also helps within the school as you are associated with a special school and maybe that group is real popular online and that is easily transferred into the real world, in school, so it is a good feeling and doing your part in the group process often involved in learning makes sense’’ (Interviewee 1, 2013).

About the usefulness of content delivery, one interviewee described it as, ‘‘you don’t talk to people in real life if you aren’t happy with the way they talk to you, right? It is even more important online or on SNS as your level of tolerance for crap is much lower. So if someone is nice and engages in quality relevant discussion fine else social networking is a huge place they can jog on. So is the tone of the discussion as people tend to be more nice on SNS maybe because they are aware they are in everyone else’s eyes and maybe because it stays there like they leave their foot prints behind’’ (Interviewee 7, 2013).

To a question on how learning on social networking sites can be less efficient and effective due to their free for all nature, maximizing the chance of time wastages, the answers ranged from total disagreement to a qualified admittance to the fact that social networking sites can have an adverse impact on the time management skills of the users. ‘‘Maybe if you don’t track how much time you spend and doing what then maybe. But that isn’t restricted to ones presence on social networking sites. It can happen in real life. It is hardly to be on a social networking site and be alone. So unless you find someone just like yourself only there to waste time then maybe else I feel it would be a lot harder to waste time there than in real’’ (Interviewee 7, 2013). Time wastage to one interviewee was more dependent on who you talk to while being on the social networking site, ‘‘if you are in a group of your class you sure have no reason to waste time and instead focus on doing something useful like discussing the next day lecture or today’s lecture’’ (Interviewee 9, 2013). In an interesting comment about learning and social networking, and one we feel have implications for the learning institutions internal portals and Blackboards, one interviewee commented on the question of whether he used thought his internal university portal was a better place to engage in a meaningful full discussion and learning or the more open ended social networking sites, his answer was, ‘‘Compared to Facebook, it is nothing. I only go there to get my homework and get an idea of what is happening. I don’t remember ever participating on my own free will in any learning activity there. It is because it has the same few people and it gets boring. It is more fun to throw a question for discussion on Facebook and then read the comments and the views. I feel the diversity of opinion there makes for a more holistic learning’’ (Interviewee 10, 2013). Interviewee 3 expressing his opinion about the learning capacity of these social networking sites said, ‘‘I feel it to be the most potent tool for learning for a couple of reason. It helps you create content, which in my view comes from real learning and understanding. Secondly, it gives you an unprecedented access to people and through them to forms of information never heard of before. There is no doubt about this great power of learning of these social networking sites, what we need to do is to harness it in a right way through right strategies. Properly utilized its power for good can equal the industrial revolution’’ (2013). ‘‘It is a blessing for us in here. When it is so scary to go out simply to meet friends, social networking is the safest and most efficient way to engage in any activity
with friends. We do most of our group work on Facebook. We share content almost on an hourly basis and most of the time it’s about sharing ideas” (Interviewee 3, 2013).

The issue of constructivism long associated with social learning and especially learning on SNS reared up when the discussion turned into the meaning of learning itself. One interviewee put it as, ‘everyone has a different view about what they come to achieve especially in terms of the group discussion about work. If they are fine with the way things are going, OK else they leave and can connect with some other group and engage in some other learning activity. That is the best part of learning on SNSs, you decide what is learning to you and if people agree with you fine else they move on. You make your own content and share what you think might be useful, that is what I call learning’’ (Interviewee 3, 2103).

4.4 Biggest Concerns & Their Impacts on Learning
Moving forward, now that for most of us social networking is a way of life, what are your biggest concerns in terms of learning on these social networking sites? According to one, “the information is simply overwhelming. If there was some sort of sense making, like some moderator of sort then the learning capacity would simply shoot” (Interviewee 9, 2013). Interviewee 2 (2013) thinks, “as long as they [social networking sites] don’t lose their social aspect, and remain to be social networks in real as they are now, social wisdom would find ways to enhance their learning capacity. We see it on regular basis these new apps and new features coming onto these sites pushing the boundaries further”. Now this might come as a peculiar thing to those of us not used to government meddling in almost anything but to the interviewees it came as a real concern. “SNSs because they aren’t local make you feel out of the prying eyes. You know they are relatively safer from being hacked into and you know they aren’t unpredictable as everything else is in our place. But the recent bans on YouTube, Viber and other social media tools makes you apprehensive that they aren’t that other worldly” (Interviewee 6, 2013). To another, “the privacy breaches we often come to hear about are making quite a few people worried. I feel if this continues and people don’t feel secure being on these sites then I think we would lose a lot of this magic that comes with being feeling real relaxed and simply oneself and that in my view will have a detrimental effect on learning and the overall communication and interaction quality on these sites” (Interviewee 5, 2013). Another had similar views when he described the phenomenon as, “while they can easily block our mobile phones for made up security concerns when all they want to do is blockade people connecting and talking about their dismal performance. SNSs, they know, is the most potent tool for social organization and awareness and that scares them a lot and I am fearful they might be thinking about it as we speak of somehow manipulating it if not outright banning and blocking it” (Interviewee 9, 2013). I reckon in many countries it does happen so their concerns about government over reach in such places isn’t out-rightly wrong. Another put the same concern in a different way as in, “the presence of these fake ids makes me squeamish and has restricted me to my real life friends only. This isn’t good because it is the same homogenous bunch of people I get to meet in real too. Social networking sites were supposed to connect you to the world. I wish they would do something about these fake ids with one person having so many. It should be like the vote, one person one vote. I don’t feel safe adding people now and it is no more fun and less exhilarating” (Interviewee 6, 2013).
5 Data Analysis & Discussion

In this chapter, we would try to analyse the findings in the previous section using coding in grounded theory and subsequently discuss the findings in the earlier chapter in light of the conceptual framework. Theories from the extant academic literature would be discussed in light of the findings to understand the dynamics of social learning in light of the recent research and identify similarities and contrasts between the developed and the developing context and further our understanding of electronic learning especially on SNSs.

5.1 Data Analysis

In this section the focus would be on the analysis of the previous section data to analyse it for discussion later on in this section in light of the extant literature. Since, the grounded theory has been primarily used, the section would be presented in the themes and patterns generated using the data. Below are the themes produced from the data using coding for analysis in grounded theory.

![Figure 5: Representation of themes/Patterns developed from discussion in light of the Social Presence theory.](image)

In order to understand and analyse the themes generated, we need to view it in the perspective of the study’s main model, i.e. the social presence model of learning, in this case adapted to virtual learning via the social networking sites.

Analysing the data was done in such a thematic way so as to separate the feelings, essential for our study as they represented the perceptions of the study, both positive and negative in the context of the social presence theory for our understanding of the virtual learning on SNSs.

The above figure gives an overview of those themes produced while coding the data through the grounded theory. They are separated into basic segments. The first, or what we call the positives represented by a + sign in the upper top of the figure above are all those perceptions of the SNSs which can be attached to a higher level of social presence in SNSs context. Research abounds which places a great deal of significance on the level of social presence
and the environment for learning, virtually. Similarly, the lower portion of the figure are the themes produced from the interviews that can have a negative connotation of the SNSs, in other words can be called social presence minuses, given by the minus sign -.

For a more extensive analysis, let us see their [the themes] impact on the various other factors, which in turn are significant for social presence in a virtual setting.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Fun</th>
<th>Social</th>
<th>Safe</th>
<th>Liberated</th>
<th>Connecte d</th>
<th>rudeness</th>
<th>Unease d</th>
<th>Cold</th>
<th>careless</th>
<th>Synchron ous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>+</td>
<td>−/+</td>
<td>+</td>
<td>−/+</td>
<td>+</td>
<td>−</td>
<td>−/+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Privacy</td>
<td>−</td>
<td>+</td>
<td>+</td>
<td>−/+</td>
<td>−</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−/+</td>
<td>−/−</td>
</tr>
<tr>
<td>Communication</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−/−</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td>+/−</td>
</tr>
<tr>
<td>Interactivity</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+/−</td>
<td>−/−</td>
<td>−/−</td>
<td>+</td>
<td>+</td>
<td>+/−</td>
</tr>
</tbody>
</table>

Table 6: Grid representing the themes making a +ve or −ve impact on the factors essential for Social Presence

These various themes have either a positive or negative impact on the factors essential for social presence, which in turn have an impact on the process of learning on SNSs. Understandably, a lot of these factors are at work simultaneously and therefore getting that right level of social presence to trigger a learning behaviour on SNSs is tricky to predict. However, a further understanding of human behaviour, in a strictly virtual context, is needed for the behaviour isn’t the same in a virtual setting as it is in real.

Moreover, the neat segmentation of people, into introverts and extroverts, based on their social behaviour can be greatly misleading as the forces active online on SNSs might still be the same but their variability and flow is even harder to predict. From our interviews, where three of the participants, self-proclaimed introverts were more active than the rest in group activities online, a fact that is the complete opposite of behaviour in real.

It’s important to understand that the factors significant for social presence are wide and numerous and so are the themes or behaviour traits or moods of students to trigger and affect those factors, which then influence the level of social presence. However, it is still possible we to isolate the more major ones, in order to design the next generation of apps and features for SNSs that are more in tuned to virtual learning.

Supervision or per say a sense of structure can play an important part to in fostering a learning environment on SNSs. This again varies with students and numerous other factors. However, brick and mortar institutions and for that matter or even more totally virtual ones need to understand the open SNSs more extensively and try to integrate their internal portals and Blackboards in a way that aren’t open just to their students but can be truly called social, i.e. with an enhanced connectivity to people outside as well. Moreover, sometimes and in the case of students in their initial days learning or using SNSs for learning might find the situation intimidating for the sheer amount of material present and the lightening pace of developments on SNS. It is important that some sort of guidance or supervisor is being provided so as to acclimatize students to a virtual environment, the SNSs platform, they might have perceived previously as a pure fun tool. From our interviews experience, we found out that it took the students a while before they could finally grapple with the true potential of learning on SNSs.

Next we turn our attention to the discussion part, in light of the conceptual framework developed earlier from review of the extensive literature and previous research. The discussion will also place the study within the current research context and we would highlight the similarities and contrasts of our study with studies previously done.
5.2 Discussion

The internet and by extension the social networking sites, SNSs, indeed occupy a unique space in terms of learning often blurring the lines of formal and informal learning. Chen & Bryer (2012) discussed this uniqueness of the virtual world and inferred greater potential for learning as it straddles and bridge the two, the real and the virtual, a point where the potential for learning is many fold. Our findings to a greater extent support that exact notion for a number of reasons. We, however, must caution readers not to jump to generalizations as the context of the study itself is quite peculiar, a case in point that is a virtual university working in a developing world conditions with a different set of cultural, social, economic and even identity issues. Back to Chen & Bryer (2012) assertion that the overlap that the electronic learning so occupy connects the two forms of learning in an optimized way. While true from our findings, nevertheless things aren’t simple and to foster learning in that optimized fashion context becomes all the more important. When we are talking about electronic learning connecting the formal with the informal and unleashing this great burst of learning energy, it needs certain conditions under a set of factors. One, the real life connection with the brick and mortar learning place should arouse positive feelings when connected with in a virtual setting. If that is the case, this positivity from relating to the formal setting indeed sets of a chain of positive feelings significant for enhance learning in a virtual setting, especially on SNSs. However, if the opposite is true and the real learning place brings thoughts of misery and negativity, and then it has an adverse impact on learning in that informal virtual setting and triggers a negative behaviour which can often lead to time wastage and unproductivity. Moreover, another important feature is the sense of belonging and the overall relationship between the users in the real setting matters a great deal. It is hard to detach your personal feelings about people from a real life in a virtual setting and therefore even in a group work, the real life feelings, positive or negative, can impact the productivity in an informal virtual setting. The fact might have something to do with the cognitive and behavioural part, the inner aspect of the two dimensions essential for social presence to connect it with the other dimension, the external environment in this case the SNS platform and the users on it. Thus to unleash the learning potential at this nexus of the formal and informal learning curves, the enhanced degree of social presence is essential and for that to happen both a positive view and connection with both the formal place of learning and the people therein needs to come together.

Our findings to a greater extent confirm (Johnson, Johnson & Stanne, 2000; Slavin, 1995, Snowman, McCown & Biehler, 2009) the collaborative nature of learning online. Electronic learning on SNSs is not a lone wolf’s game. Participants confirmed how the enhanced connectivity was significant to their learning on SNSs. Social networking, it seems from our findings, is literally taken for its name: the ability to connect with people socially. Now the greater the connectivity, our data shows the more people feel motivated and charged up for learning. This feeling of joining a discussion with unknowns and adding value to it appeared to be the single most feeling of elation on line and one that encouraged and motivated further effort for electronic learning online. In an interesting way, the SNSs provided a platform for the otherwise shy people in real life. People who considered themselves introverts felt the most comfortable on these SNSs and actively engaged in learning activities and making significant contribution to the discussion and learning of others. Cain (2012) through extensive studying of introverts concludes that they aren’t cold and selfish but the real life social paradigms are simply out of their league and they find it hard to connect with people in real. With almost half of the global population being introverts of some kind, SNSs are the natural platform for these people shy socially non – reactive to channel their energies and make a contribution to something they love the most, intellectual activities (Cain, 2012). In a converse way, we found that the otherwise extroverts of real life do get a chance on SNSs to re-calibrate their extra energy into learning activities, something they seldom do in real life as they are more of doers than thinkers (Cain, 2012).
Learning on SNSs or electronic learning via SNSs simply does not conform to learning in real, the conventional learning models seldom apply on it. Learning there has a meaning to everyone; a fact came up again and again in our interview discussions (Siemens (2004; 2005). Participants enjoyed learning on SNSs primarily for the fact that experimenting with solutions there felt less risky in terms of the real life association of embarrassment and other social hindrance to all out learning (Downes (2007). Every user on SNS, it appears view learning from their own internal compass and the meaning and value of learning is never constant. Opinion rages like wildfires and the constant and interrupted events and developments just add to the pool of information and discussion. A constructivist approach thus seems the only sensible and real option for learning on SNSs for the brain has to have its own way of making adjustment and sense making in such an overwhelming sea of information and material. A constructivist approach thus is the most natural strategy for such an environment where the normal formal rules of conventional learning cease to exist.

The link between connectivity and learning on SNSs falls perfectly in line with the social learning concept of Bransford, Brown & Cockling (1999). Their contention that learning in a meaningful fashion cannot happen in isolation, something SNSs stand for has been to a greater extent true in our findings and data. Through our data, we are in a position to agree, in a partial manner, with Dewey (1963) assertion that learning in a virtual setting should be approach from a social angle. While it is true that learning on SNSs, in our case, predominantly happened within a social context, we definitely found out that the term social itself is being viewed through the constructivist’s prism and is a relative term. Within our discussion, social and its meaning changed with the participants. While it definitely means more than a private one to one learning experience, there seems to be a threshold after which the word social becomes misleading if we take it from a quantitative perspective. Moreover, in a virtual setting the term social has a qualitative dimension to it as well. A social conversation only becomes social, for simplicity sake if we isolate the numeric side of it, if and when it maintains a minimal level of social presence, the concept so essential to communication, interactivity and learning in a virtual setting. So while we tend to agree with the social approach to learning on SNSs, we need to do more to understand the dynamics at play, both the qualitative and the quantitative ones, to better design future apps for SNSs with respect to improving its learning capabilities.

On the subjective of the nature of learning, here again our discussions tentatively agree with Banks et al., (2007), contention that most of the learning happens in the informal realm. However, as we pointed out earlier that the SNSs sits in a relatively no man’s land when it comes to formal and informal learning (Chen & Bryer, 2012). Understanding these often blurred lines and balancing the dynamics of the two in a way that the best of both are combined in a fashion that can optimize learning on SNSs is a challenge in itself and one that needs further understanding and research. A distortion of the formal informal equilibrium on SNSs can have catastrophic implications for learning on SNSs. An invigorating group discussion on an important topic can go berserk the moment this balance is being touched. A closer issue with this same topic is the issue of teachers’ presence on SNSs or being part of the discussion. That again opens a whole set of new questions and primarily depends on the students’ level of social presence with the teacher. A teacher who’s presence trigger a high level of social presence definitely enhance the level of learning on SNSs and vice versa.

Content delivery came as an important factor for learning in a virtual setting on SNSs. Jethro, Grace & Thomas (2012) separation of the synchronous and asynchronous parts of content delivery definitely has a positive relationship with electronic learning via SNSs. Whereas participants in our discussion definitely preferred a more dynamic and animated style of content, the use of emoticons as studies have previously shown helps with the message delivery ways that the cognitive part can relate to and thus enhance the level of interaction and communication to a level where that minimal threshold of social presence is reached and thus trigger electronic learning, they however thought the style of content comes secondary to the message itself and also depends on the prevailing mood and the nature of the discussion.
Within a serious group work, a less synchronous and more asynchronous bland content is appreciated more and trigger a more helpful work environment than in an informal chat where the synchronous lively animated content delivery style enhance the level of social presence.

We can safely infer from our data that the one factor that stands out and is in close conformity with researches done previously is the level of social presence. It appears the social presence is the silver bullet for all sorts of e-learning on SNSs and our extensive discussions, in a direct as well as an indirect way came back to the same issue of social presence in various forms and shape. Social presence or its absence is the biggest hurdle to communication, interaction and electronic learning on SNSs and one that is very hard to define and thus remains the most challenging aspect of social learning. The difficulty is due to the fact that myriad factors need to come together in a right mix to hit a minimal level of social presence to trigger a learning behaviour in a social context in general and on SNSs in particular due to the still relatively newness of the internet medium, especially in the context of a developing place.

Students’ perceptions of the SNSs role in electronic learning, we learnt isn’t that straightforward. While strictly talking about our case in point, students’ perception about these SNSs role for electronic learning was a mix of several diverse factors. From as far a field as history, culture, socio-political conditions to computer literacy, education, personal behaviour and social norms, these forces shaped perceptions of SNSs and thereby keep its role of e-learning constantly gyrating between highs and lows. A place where, real learning in its conventional form has yet to take root, students’ perception about the relatively new and all global phenomenon of SNSs is as fickle as the country’s stock market but it definitely makes for an interesting and exhilarating case to study, nonetheless. A definite verdict, in the realm of perception with a constructivist approach would definitely have robbed the study of its qualitative richness anyway. We do, however, feel the journey has been a personal achievement and our findings viewed within a developing world context would definitely help push our understanding on electronic learning and the role of SNSs in the right direction and open new avenues for research on the same linings within similar conditions.
6 Conclusion

The unprecedented impact and reach of the Social Networking Sites (SNSs) has attracted attention and interest from those interested in understanding their potential for learning. As the world gets more and more connected and these SNSs attract more and more users, especially students, it is time to examine and make sense of their learning potential in a virtual setting.

Understanding learning, especially in the virtual sense of the word is adequately challenging for not least because we still haven’t untangled the web of learning in its more conventional real life. The absence of virtual learning models and theories make the task even more herculean. However, it is possible and to an extent helpful to extend the theories and models of learning, we have at our disposal thus far, in real are being extended to the virtual world, after all the virtual world is in a sense the extension of the real one.

Collaboration till recently was a phenomenon shunned in the context of learning. Learning thus was considered a solo flight of an activity demanding outmost concentration and self-reflection till we stumbled across the theory of social learning. In a eureka moment for learning, the theory of social learning changed our perceptions and understanding of learning and learning thus became an activity closely connected with a social environment with collaboration at its roots. The meaning of learning, as a constructivist would argue, changed with time as pioneer of the social learning theory experimented with the notion of learning in isolation. The foundation of our new understanding of learning was thus laid and since all work undertaken with respect to learning is deeply embedded in the theory of social learning.

While learning as a solo endeavour was simple, the social theory of learning brought learning out of the individual sphere and into the social one. Learning now had the individual and the social aspect, an internal and an external environment. The internal environment consists of the cognitive and the behaviour aspect and is unique to every one of us as individuals shaped by from the time we are born through our grooming up and education and lifelong experiences. The external bit is out connection with the outside, i.e. the society and for learning or meaningful learning to foster, both the internal and the external factors have to exist in complete harmony, equilibrium of the sort.

The equilibrium, however, doesn’t hang in the air and floats in another important discovery with immense implications for modern learning: the theory of social presence. Connectivity of the external and the internal forces essential for learning is hugely dependent on a minimal threshold level of existence of the social presence. That is the key to learning, in a conventional and a virtual world, especially on the SNSs.

All of the learning factors need to exist in a virtual setting, especially on the SNSs, in addition to some peculiar ones unique to the online world. However, there are some major factors that enhance the degree of social presence on SNSs that can in turn trigger a learning behaviour.

Moreover, SNSs existence online which sits in a peculiar position with respect to the formal and informal segmentation of learning. In this rugged no–man’s land of learning between the formal and the informal, the potential for enhanced learning and unleashing man’s potential is the greatest but the hardest to harness. SNSs true potential thus is to somehow manage and channel this unique position and combine the best of both worlds for enhanced learning.

Coming back to our topic of understanding students’ perception of SNSs role for learning has been a difficult journey, one riddled with interesting and fascinating discoveries about students’ perception of virtual learning and their understanding of it all.

The choice of our research approach, a constructivist approach, we knew came with its own challenges. However, in our effort to make sense of their understanding of SNSs role of virtual learning we uncovered a few things and confirmed a few more previously discovered.
Our findings show a pic with two sides. One is that of the universal human behaviour, irrespective of the locality one lives in, while the second is the traits and norms that one acquires peculiar to a specific geographic location. The virtual world, and SNSs with no borders and boundaries, we thought were exempt from the two sides of human perception. We were proven wrong. The students, who were our interviewees and research participants, exhibited both side of the human perception portrait in all its vivid colours. This is also the point where the study gets interesting and opens a gap for future research. While some of our findings, about students’ perception about the role of SNSs in terms of learning matched those done previously in a developed world context; some of our findings with factors peculiar to the location influenced by the cognitive and behaviour aspects of the students were amazingly unique.

Going back to the three important constituents of the social theory of learning – the internal and the external environment factors – divided into the cognitive, the behavioural and the external environment, we saw all of them to be different and calls for extensive studies. The only thing that remained constant, in our study and those done previously in a developed world context, was the SNSs themselves and the technology involved. Perceptions, from a purely constructivist approach, is as unique to a person as their DNA and thus with technology being the sole constant, the process of social learning takes a whole meaning, even in a virtual setting on SNSs.

Moreover, as evident from our study, students’ perceptions are a sum total of their offline and online experiences and it is possible to change these perceptions for the good if a serious effort is undertaken vis-à-vis electronic learning. Improving the interactivity, synchronicity and the privacy concerns can enhance the level of social presence on these SNSs and improve the students’ perception about their role for learning. Moreover, integration on the part of the conventional learning institutions of these SNSs with their internal portals and the opening of these portals to these SNS in an attempt to improve and enhance connectivity will undoubtedly improve the degree of social presence so central to the concept of electronic learning. Moreover, some sort of supervision would also reduce the anxiety level of the student when confronted with the huge caches of information and material available for learning in a e-learning situation. An improvement in the real life image of the learning institution itself can have a positive impact on the e-learning environment as students often brings their real life learning experience to their e-settings on SNSs and a positive experience in that regard would most certainly enhance the level of social presence with positive implications for e-learning on SNSs.

6.1 Concluding Remarks & Future Research

As mentioned earlier, there is a need for more extensive research on the topic of e-learning within the context of virtual learning, especially SNSs in accordance with the specific conditions of the developing world. It is imperative on accounts that all the three major components of the social theory of learning are unique to those locations. The research need if more significant as SNSs are equally popular amongst students in the developing world and in most cases is their only and reliable means of connecting with the outside world.

While it would be extremely hard for institutions in the developing world with meagre financial resources and clout to integrate the more popular SNSs into their portals, the SNSs on the other hand would pitch in their share with respect to e-learning if they focus and develop features specifically tailored to the needs and realities of the developing world students, on similar grounds as the rest of the MNCs(Multi national companies) make tailored made products for those places.

It would be a while before we can truly understand the internal and external environment in a virtual setting especially in the absence of specific e – learning models. However, in the meantime what we can do is design the next generation of apps and features of SNSs in accordance with the new realities of learning and in close collaboration with the
real/conventional learning institutes for a more horizontal integration. That alone won’t solve the problem of understanding e-learning but it will lead to improvements in the design of SNSs in a more learning friendly way but it still would be a good beginning.
Bibliography


Ryan, G. (1976). ‘The influence of teleconferencing medium and status on participants’
perception of the aestheticism, evaluation, privacy, potency, and activity of the medium’,
*Human communication Research, 2* 255-261.


Schroeder, A. Minocha, S. & Schneider, C. (2010). ‘The strengths, weaknesses, opportunities,
and threats of using social software in higher and further education teaching and learning’,
*Journal of Computer Assisted Learning. 26. 3. 159-174.*


Data Analysis’, in N. Fielding & R.M. Lee (editors) *Using Computers in Qualitative

Selwyn, N. (2009). ‘Screw blackboard… do it on Facebook!: An investigation of students’
educational use of Facebook’, Paper presentation to the Pole 1.0-
Facebook social research symposium November 15, at University of London.

*London: John Wiley & Sons, Ltd.*

Retrieved from* [http://www.elearnpace.org/Articles/connectivism.htm](http://www.elearnpace.org/Articles/connectivism.htm)

from [http://www.elearnpace.org/Articles/networks.htm](http://www.elearnpace.org/Articles/networks.htm)

Allyn & Bacon.*

Research. Retrieved July 6, 2013, from:* [http://www.educause.edu/Resources/ECARStudyofUndergraduateStudent/217333](http://www.educause.edu/Resources/ECARStudyofUndergraduateStudent/217333)

Snowman, J. McCown, R. & Biehler, F. (2009). ‘Psychology applied to teaching,’ *Boston, MA:
Houghton Mifflin Co. Retrieved from* [http://www.worldcat.org/title/psychology-applied-to-
teaching/oclc/228007807?page=citation](http://www.worldcat.org/title/psychology-applied-to-teaching/oclc/228007807?page=citation)

Press, 239-260.*

learning’, *British Journal of Educational Technology, 41. 3. 502-511. Doi:10.1111/j.1467-
8535.2009.00974.x.*


Appendix A

- Interview candidates, the students of the Virtual University, were solicited via the university’s Facebook page.
Letter to Regional Manager of Virtual University for conduction of interviews from students.

Regional Manager
Virtual University of Pakistan,
M.A. Jinnah Campus, Defense Road,
Off Raiwind Road, Lahore, Pakistan.

Subject: Permission to Conduct Interviews with Students of Virtual University of Pakistan (VU)

Dear Sir

I am pleased to inform you that, we are students of Master of Science in Information Systems (MIS) at Linnaeus University, Vaxjo, Sweden (www.lnu.se) for the session 2010-2012. At present, we are doing research on Virtual University of Pakistan as part of our final research thesis work.

Aim of our study is to explore the use of social media in virtual education. We are focusing on “What role does student perceptions’ plays in Social Networking Sites (SNSs) ability to instigate electronic learning?” By this study, we want to explore how virtual university of Pakistan students perceive/think about social networking sites to solve their academic problems.

To conduct this research successfully, we need your kind cooperation to allow us to contact with students of VU at subject cited campus, we will request students for interview to give their views regarding our research topic.

Kindly, refer us to Mr. Muhammad Ali Khan, Campus Manager, VU, 939, Block-C, Moulana Shoukat Ali Road, Faisal Town, Lahore, phone: 35163854,35169939, email: cm_lhr@vu.edu.pk to conduct our research interviews. You are requested to contact him for making necessary arrangements to conduct this research work.

Thanking in Anticipation for your cooperation in this noble cause.

Sincerely

Arif Sohail & Khurram Shakoor
Appendix B

- **Consent Form**

After going through the information provided about the study, I hereby consent to be part of the study, willingly. I also understand the nature of my role within the study and the future use of the data provided by me. My agreement, however, rests on the following:

1. The data provided would be used strictly in accordance with research protocols.
2. The data would only be used for the purpose of this study alone, strictly for educational purpose only.
3. I consent to data provided herein to be audio recorded.
4. My right to withdrawal, at any point, during the interview shall be reserved without any explanation required.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Date</td>
</tr>
</tbody>
</table>

- **Information Form**

We feel for an informed decision on your part about your participation in our study, we request you to carefully go through this background information detailing the nature and objective of the study.

**Study’s Objective**

Learning, in this age of internet and globalisation has attained further significance, especially with the widespread use of the social networking sites for electronic learning. Being students of informatics, just like you, we feel ample research gap between our understanding of these social networking sites vis-à-vis their e-learning potential. The issue is even more significant in a developing country case as the potential for use and abuse are extremely high. Furthermore, relatively few studies have focused on students’ perception of the medium’s potential for learning from a constructivist perspective. It is in this context that the objective of our study is to examine the students’ perceptions about the SNSs role in e-learning.

**The Interview**

As evidently clear by this point, the objective of this study cannot be completed without your active participation. In order to record your views and perceptions about SNSs, we would like to propose an interview, approximately an hour long. In terms of the interview location, timing and date, we would be more than happy to accommodate your preferences.

Data would be audio recorded during the interview and would be strictly used for an education research purpose and afterwards kept safely in accordance with research privacy guidelines.

We would be glad to answer any further questions you might at any time before, during or after the interview. Contact can be made with us via our following emails.

**Arif Sohail**

Email: arifsohail110@yahoo.com

**Khurram Shakoor**

Email: khurme1@hotmail.com
Appendix C

- Interview Questions

The sample given below is an example of the thematic nature of questions asked in the interviews and only represents part of the question intended to give the reader an idea of the thematic nature of questions employed within the interviews.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Questions</th>
</tr>
</thead>
</table>
| Collaboration  | • Is collaboration important for virtual learning?  
• How do you define collaboration on SNSs?  
• Is collaboration confined to friends online or is more context dependent than people dependent?  
• Is group learning the best way of e learning and problem solving? |
| Behaviour      | • Is there a thing called behaviour in a virtual context, and if so how important it is for communication?  
• What sort of behaviour helps with rapport making?  
• How learning varies with behaviour on SNSs? |
| Formal/Informal| • Can we neatly divide formal and informal learning in a virtual context?  
• What in your view is the most productive sphere, formal or informal, for electronic learning?  
• Have you ever experienced the two overlapping on SNSs especially when students and teachers interact at the same time? |
| Privacy        | • What has privacy got to learning on SNSs?  
• Increased privacy, does it corresponds to enhanced learning online?  
• What in your perception are the prominent privacy issues with respect to their e learning? |
| Constructivism | • Do you think SNSs and the internet offers the best platform for engaging in a constructivist approach to learning?  
• Do you believe in ‘learning as one makes sense of it’ dictum of constructivism? |
| Context        | • Does context matters in an online learning?  
• What are the most prominent features of an online context that helps with learning? |
| Interaction    | • Is it the quality or the quantity of interaction that helps e learning?  
• Is quality of interaction dependent on the person or the topic under discussion for e learning? |
Appendix D

- **Interview Participants**

1. Waqar Rana, BBA, Virtual University
2. Farhan Shahid, BSCS, Virtual University
3. Hamna Naseer, BBIT, Virtual University
4. Tanzeela Majeed, BBIT, Virtual University
5. Nabeela Hayat, BSCS, Virtual University
6. Usman Ali, BSIT, Virtual University
7. Adeel Iqbal, BCS, Virtual University
8. Shoaib Razzaq, BCS, Virtual University
9. Syed Sabih Haider, BS, Virtual University
10. Osama Khan, BS, Virtual University
Appendix E

• *An excerpt from an interview as example of Coding for data analysis*

"You get help from ¹fellow, class mates and even get your non-class ²mate friends into the group and share notes ³. You get to know about ⁴deadlines, which in a way helps you catch up ⁵with the things on the learning front even in real life.

¹Collaboration
²Interactivity, connectivity
³Sharing & Interaction
⁴Information
⁵Connects the formal with the informal
Appendix F

Work Contribution by Authors

Chapter 1: Problem identification, topic selection & research question formulation has been a combined effort. The Chapter reviewed by Arif Sohail and written by Khurram Shakoor.

Chapter 2: Background, E – Learning models and the Social Presence Theory has been worked upon by Arif Sohail; The Social Presence Dimensions, The Theory of Social Learning and the Social Learning Model have been done by Khurram Shakoor. Figure 1, the nuts and bolts of Social Learning, has been drawn through a combined effort. The final draft has been written by Arif Sohail and reviewed and edited by Khurram Shakoor.

Chapter 3: Methodology chapter written by Arif Sohail while the review and editing has been done by Khurram Shakoor.

Chapter 4: Finding chapter written by Khurram Shakoor whereas the review and editing has been carried out by Arif Sohail.

Chapter 5: The Data Analysis chapter, in its entirety has been co – authored owing to the significance of the chapter. The final draft, however, for coherence have been penned by Arif Sohail and reviewed and edited by Khurram Shakoor.

Chapter 6: The conclusion has been written by Khurram Shakoor.

The bibliography and appendices have been co – authored as well.