

Weblogs and Blogging:

Constructivist Pedagogy and Active Learning in Higher Education



Toril Salen

Master Thesis
Department of Humanistic Informatics

University of Bergen
Norway
February 2007

Acknowledgements:

In spite of an enormous amount of work to finalize this master thesis I have enjoyed the experience to the fullest, both intellectually and socially. I owe a lot of wonderful people a lot of gratitude as I know I would not have been able to achieve this task without them.

First and foremost I want to thank my wonderful supervisor Jill Walker for having scaffolded me through challenging and persistent zones of proximal development to finalize this thesis. Her sincere kindness and patience is admirable, and she has been an endless source of inspiration and motivation during the writing process and progress.

I want to thank Silje Hommedal for having proofread my thesis, and for supporting me with her smiles and optimism. Just knowing she was in the near vicinity was enough to refrain from hyperventilation when technical disasters erupted. I want to thank Synnøve Eide for her presence and company during the writing process, and for her unexpected and vastly appreciated support at the end of the journey, and to Karin for giving me hugs, smiles, and encouragement on a daily basis. I also want to thank Jan Erik and Mattias for delightful company and creative discourse while residing in this room.

I want to thank my friend Jeanne Billehaug for believing in me, and for convincing me to take a master degree at a time when I was ready for the world outside of the ivory tower, and when everyone else thought that I had studied long enough. Your encouragement has been vastly appreciated, and your confidence in me is far beyond my comprehension, and what I deserve.

I want to thank my beautiful children and my family for their patience and understanding. I have not been as present as I used to be, but I promise to make up for it.

Above all I want to thank the love of my life, Geir Myre, who has showered me with his love and attention throughout my entire university degree. Thank you for loving me, for your support, for always being there when I need you the most, and for wonderful meals at ridiculous hours of the day. I could not have done it without you – thank you!!

Toril Salen

Bergen, 15 February 2007

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1.0 Introduction

At the turn of the millennium we witnessed an interesting change in the way people use computers from a focus on what people can do *with* the computer to what the computer can do *for* its users. This shift resulted in a range of convenient computer software applications surfacing, some of which have stayed while others have come and gone with the pace of progress. The entry of information technology into students' private spheres has changed the way the younger generation receives, transforms, and retrieves information. They have grown up in a society where modern network technologies have been infused into their daily lives since the day they were born, and are as accustomed to modern technological devices as they are to riding their bikes. They use personal computers, computer games, cell phones, digital music players, and digital cameras as if they were extensions of their body, and while adults may confront the technology uncertainly they bounce into it with confidence and simplicity. They have downloaded 100 hundred songs to their i-Pod¹ before we have finished reading the instructions, and have entered the 20th level of Super Mario² before we have advanced to the fifth. These digital children are different from previous generations as they think and learn in vastly different ways than their ancestors did, and as they enter higher educational institutions it will be a challenge for scholars to meet the new demands this generation creates. They are what Marc Prensky calls digital natives, and Prensky urges educators to learn to communicate in the language of their students and allow the students to guide them through the process (Prensky, 2004: 1).

Higher educational institutions have been slow to employ computer software tools into their syllabus, and computers have until now been largely used for programming and writing assignments. Their use as an online social domain to allow students to interact via Cyberspace to build online social bridges between peers and instructors, and between the students and the real world either through the comment option or through authentic project-based activities as prompted by Ganley at Middlebury College (Ganley, 2004) have so far been modestly pursued. Academia has been known to postpone major changes either because of the costs involved or general contentedness with the current system. In addition, changes are typically known to create a lot of commotion and apprehension in both students and scholars. However, many scholars are gradually seeing the need to change their pedagogical approaches as behavioristic and reflexive learning is no longer in concert with the rapid technological

¹ Portable digital music player

² Single and multiplayer computer game

infusion in society. Educators are seeing the need for a more constructivist and reflective learning environment as the new generation of digital natives slowly but surely permeate educational institutions.

In this thesis I am going to show how the weblog platform has been employed by scholars practicing a constructivist learning pedagogy to trigger communication and interaction through blog posts, comments and hyperlinks. In allowing students to share learning experiences and ideas via a public and social domain they are eliciting student-centered learning and allowing their students to take control of their own learning. I believe that learning to work in concert with both peers and professionals will better prepare students for a future in the professional world where corporations expect and demand their employees to communicate and collaborate as efficiently and effortlessly with business associates in Timbuktu as they do with their immediate colleagues. Inviting a modern computer software technology into the classroom is also very positive in that this technology provides the students with an access to a social space they are likely to be familiar with through chatrooms and email.

My choice of research topic was simply based on interest and curiosity on my behalf due to my own experience with weblogs employed in a blended learning environment while attending a web design course at the University of Bergen. After having attended a typical university environment for several years completely submerged in huge quantities of turgid textbooks and lectures given in large auditoriums, this was truly a revealing experience which drew my attention to the importance of constructivism and active learning in academia. I no longer found meaning in attending school exams with a head literally overflowing with regurgitated and memorized content simply to pass the exam, and I doubt the recited content had any notable effect on any of my higher order thinking skills such as critical reflection and analytic reasoning. You just do what you are told to do reflexively, and receive praise and grades accordingly. I wondered if I had become a predictable robot that would do what I was asked to do just by pressing buttons that said listen, read, recite, remember, smile and perform. My own experience had given me hope that the university is at the juncture of change from authoritarian content-centered teaching to student-centered learning. In addition, knowing that bloggers are among the most enthusiastic communicators of the modern age, and that they take advantage of virtually every opportunity to communicate (Lenhart and Fox, 2006:14) it was especially appealing to examine whether this communicative enthusiasm could be transmitted from private online journals to reflective academic student blogs.

1.2 The Research Question

In the survey I am going to investigate if the use of weblogs and blogging can be employed successfully in blended learning environments at higher educational institutions. Through a comparative analysis of a collection of conducted research of seventeen case studies on weblogs and blogging I want to investigate if weblogs function as an effective computer-based tool to generate and construct reflective thinking amongst students in compliance with a dynamic socio-constructivist learning approach.

1.3 Theoretical Framework

The theoretical framework of the thesis is constructivism with a special focus on the socio-cultural activity theory constructed by Vygotsky at the beginning of the 20th century and extended by Engeström and his Scandinavian contemporaries in the 1980s as expansive learning. I have examined behavioristic learning approaches to accentuate their vast teaching and learning differences, and to explain why this approach is not compatible with active learning to develop higher order thinking skills in students. I proceed describing cognitivism since constructivism has profound similarities with cognitivism, and often difficult to distinguish from each other. The difference however, has been said to be in Piaget's and Vygotsky's approach to cognitive development where Piaget alleged collaboration with equal peers and Vygotsky with more capable peers. Social constructivist learning environments are commonly arranged around a project where students work in concert to reach their objectives. The instructor should be present, but allow the students to scaffold each other through the problem-solving process rather than instruct and direct them in the instructor's preferred direction. I propose that the activity of blogging to be in concert with the constructivist learning approach as research has revealed that learning is best achieved when students are actively engaged in the process of constructing new knowledge through acquiring, generating, analyzing, manipulating, and structuring novel information (Alavi, 1994:161).

1.4 Chapter Outline

In chapter one I introduce my thesis and why I believe weblogs could be an ideal online platform in constructivist and blended learning environments in higher education. In addition, I introduce my research question and the specific research approach.

In chapter two I discuss my survey and the details of my investigation, why I chose a theoretical comparative analysis as my method, as well as approaches I considered in the early stages of the research.

In chapter three I describe past and present learning approaches. I introduce the thinking of Socrates, Plato, and Aristotle as I believe their respective approaches have left visible traces in present learning theories. In the subchapter on modern learning theories I have chosen to include behaviorism, cognitivist, constructivism, and activity theory in this order to explain why behaviorism is being challenged by constructivism, and why constructivism is ideal in blended learning environments where the weblog is being employed to increase the academic discourse and reflective skills.

In chapter four I introduce the history of weblogs from its modest beginning with only a few computer programmers engaged up until the present day where we are witnessing an eruption of weblogs in all spheres of society. I also define the weblog and its particular characteristics, and discussed representative examples.

In chapter five I give a short description of the seventeen case studies I have included in my study, putting the main emphasis on their methods, initial aim, and final results. I will compare their outcomes in the summary of the chapter.

In chapter six I discuss more generally how weblogs have been used in higher education, and examine in detail how academic weblogs can succeed in higher education when blended with face-to-face interaction. I identify five main areas weblogs impact: reflection, articulation, collaboration, interaction, and academic confidence, which are all in compliance with my discoveries from the case studies in chapter five.

In chapter seven I have put particular emphasis on the problems scholars found to emerge in the course of the semester, and which was further reinforced by the students in the seventeen case studies through personal interviews and questionnaires at the end of the semester.

Finally, in my conclusion in chapter eight I summarize my findings and discuss if the use of weblogs was constructive as a social online platform to generate and construct reflective

thinking amongst students in compliance socio-constructivism in blended learning environments in higher education, and worth pursuing by other scholars in academia.

2.0 Methods

Due to the limited number of case studies and the dissimilarity in their methods, it rapidly became clear to me that a statistical or other quantitative analysis method would not suit my purpose. Instead I have chosen a comparative and interpretative approach, qualitatively comparing studies. A comparative study is an evaluation of the similarities and differences the investigator finds from her collected data, and Michael Q. Patton claims that the

theoretical comparisons are tools for looking at something somewhat objectively rather than naming or classifying without a thorough examination of the object at the property and dimensional levels” (Patton, 2002:489).

The research is strictly a comparative interpretative analysis of the methods, aims, and results between the seventeen weblog investigations that I have found appropriate to include in my survey. The case studies have been conducted by scholars employed at higher educational institutions in three different continents and in several countries and states, and I believe I am the first to conduct a theoretical comparative analysis of this type. Many scholars are trying to use weblogs in blended learning contexts, and many have written about their experiences, but I have not been able to find a concerted comparative analysis of the various investigations. Thus, I believe the thesis is innovative in its approach, and that it could be useful for educators who are thinking about inviting blogs into their respective classrooms and are hesitating as they are unfamiliar with the technology. I also think it could be useful for students who are new in the blogging sphere and curious about its qualities and in how to address the platform sensibly.

In the survey I have examined weblog investigations conducted by scholars at higher educational institutions in the U.S., Australia, Hong Kong, Norway, and Great Britain. I was hoping to show how a social software tool combined with face-to-face interaction could be beneficial for students in an active constructivist learning environment within different academic fields, at different universities, and in different countries and continents. The selected investigations have been carefully analysed and compared, and I believe I have retrieved significant information to support my initial proposition, and will justify my claim as the thesis unfolds. However, considering alternative survey options was necessary to authenticate my explicit and final choice.

2.1 The Data Collection

In order to conduct a comprehensive research about the use of weblogs and blogging in blended learning environments, I have collected several dozen articles related to the use of weblogs and blogging from the Internet. Most of the papers are related to education while others relate to the weblog phenomenon in general. I have used the search engine Google Scholar and library databases extensively to find scholarly articles and papers that are connected to the investigation. However, the bulk of information has been found via hyperlinks on academic blogs maintained by scholars from many different universities and countries. If you find an informative blog somewhere you can be sure its abundance of hyperlinks will take you across borders, oceans and continents, and the search for additional sources and information is on. The amount of hours I have spent completely absorbed in Cyberworld while clicking on the mouse to pursue links is simply insurmountable, occasionally discouraging but predominantly encouraging, which naturally helped in boosting the necessary motivation to finalize the survey. A considerable amount of the literature collected to examine learning theories in past and present centuries was also found via the Internet. However, large mounds of books to enlighten my knowledge about the topic have been borrowed from various university libraries.

The weblog platform is a comparatively new social venue on the Internet, and considerably so in the academic sphere. This was a dilemma as far as published books is concerned, and also in finding published scientific research papers. All the investigations that I have included in my survey have been published by professors at higher educational institutions, but the papers are all about their own experience in teaching with blogs. Thus, the research has been conducted without any control variables such as a control group of students attending the course with regular instruction, or any other type of control variables such as a group of students using traditional paper journals or email. In this sense, each paper could be called more anecdotal than scientific. However, the scholars' prior teaching experiences can be seen as an appropriate control variable in this research in view of the fact that all of them have taught at higher educational institutions several semesters prior to their weblog experiment, and thus have extensive experience from the traditional classroom where the focus is predominately centered around content and lectures. In addition, students have spent several years at an educational institution before they arrive at higher education, which means they would know the traditional instruction system very well. Quite a few students and

instructors are also familiar with the paper journal, and thus able to compare the similarities and differences with the venue explored.

The surveys I have included in the thesis are as far as I could find the only published articles about the use of weblogs in blended learning environments in higher education at the present time. However, the use of weblogs in higher education is steadily increasing, which means more papers are likely to be published continuously. I am also certain that there are published papers I have not been able to find through the Internet or from scholarly articles at the library, but in the end I felt I had enough cases in my sample to justify my proposition within the obligatory timeframe. Many scholars have employed weblogs as a means of communication within online higher education, and I considered including the use of weblogs in online courses and comparing their results with the results from the blended classroom courses. However, the initiative was not pursued as my interests were in the living classroom where weblogs could be combined with face-to-face interaction.

I also considered including some excellent papers written by instructors who have experience with weblogs in secondary education, but eventually found it sensible to remain within the perimeter of higher education to stay within the page and time limits of a master thesis. In addition, I seriously contemplated conducting an empirical research with students using weblogs in a blended learning context at the University of Bergen, and I would have realized it had Jill Walker used weblogs as part of her Web Design course during the spring of 2006. We had already discussed how I should approach the research by attending the class and mingle with the students. Furthermore, I had a meeting with Hilde Corneliussen concerning my ethical responsibility while dealing with individuals in a case study since I was planning to conduct personal interviews with the participating students subsequent to the course. However, when Walker decided not to employ weblogs in her course I decided to approach the survey in a different manner rather than using valuable time looking for another case study. I concluded with the idea that it would perhaps be useful to examine how weblogs were applied in blended learning environments at different academic institutions and in different continents and countries, which was accepted as a rational approach by the faculty censorship. In the next subchapter I will describe my research approach in further detail.

2.2 Survey details

With seventeen papers of case studies I needed structure to remain within the parameter of the intended research. I was curious to find out what kind of methods the scholars had used when incorporating weblogs into their education, and if their particular method would influence the

final outcome. By method I imply the way weblogs were used in their respective investigations, and whether their students had been given individual student blogs or expected to publish their blog posts to a collective course blog. In addition, I wondered if the students had been given enough information prior to the course to successfully deal with the technical details a new online venue is likely to infuse, and if the students had been given sufficient assistance, guidelines, and practise to benefit from the blogging and its discursive invitation.

Subsequently I examined what the scholars had initially yearned to change or to improve in their respective learning environments in knowing that they must have had a preliminary aim as implementing an online venue was likely to provoke additional work on their behalf. We are all familiar with the turmoil change creates, and how it is destined to prompt chaos before harmony is reinstalled through practise, support, and routine. The case studies varied significantly in some respect and shared similarities in others. Some scholars had incorporated weblogs into the classroom to find new ways to teach network literacy or to find the most appropriate weblog genre in education. Others wanted to trigger veiled creativity and improve writing skills through the practice of blogging. However, most of them had wanted to examine if the venue would elicit improved communication, interaction, and collaboration between the students, between the students and their instructors, and to build social bridges to peers and professionals in their field of study that extended far beyond the context of the classroom. Many had hoped that blogging would include the timid students in the academic discourse, and that writing blog posts and comments about course content, assignments, lectures, and work progress and process would improve their critical and reflective skills. I have found varied results from the research some of which was expected while some were unexpected.

In the next chapter I will describe past and present learning theories starting with ancient Greek learning approaches, proceeding with modern learning theories where I put emphasis on behaviorism, cognitivism and constructivism, and conclude the chapter with the socio-cultural activity theory inclusive the expansive learning theory promulgated by the Finnish scholar Yrjö Engeström.

3.0 Learning Theories

The activity of learning is something we encounter both inside and outside of academic institutions. Undoubtedly, we learn continuously from the day we are born until we cross the threshold into eternity. We learn how to talk, walk, eat, play, socialize and a lot more, all of which is attained at home long before we enter the academic domain of school and formal learning. According to Woolfolk, an educational psychologist and professor of education, learning occurs when

[E]xperience causes a relatively permanent change in an individual's knowledge or behavior. The change may be deliberate or unintentional, for better or for worse. To qualify as learning, this change must be brought about by experience – by the interaction of a person with his or her environment (Woolfolk, 2001:200).

We may be under the impression that learning was easily achieved in our days as toddlers, and that learning to talk and walk was effortless and attained without much trial and error since we are unable to recall the learning phase. On the contrary, watching a toddler learning how to walk will quickly change our opinion as the walking skill takes months of trial and error, and learning to talk takes several years to master perfectly. Therefore, it seems reasonable to assert that learning is not regarded as something that just happens to the human race as mechanically and effortlessly as pushing a button. The fact is, we need vast quantities of experience and interaction with our environment and culture to learn anything at all. In addition to the basic definition of learning cited above, each and every learning theorist has his or her own opinion and definition of when, how and why learning occurs, which I will try my best to explain in closer detail below.

I have chosen to take a historical approach to the various theories starting with the thinking of Socrates, Plato and Aristotle, and then I move on to the 20th century and the behavioristic approach exercised by Pavlov, Skinner, Thorndike, and Watson. I commence with the cognitive and constructivist learning approaches employed by Piaget and Vygotski, and conclude with activity theory which was introduced by Vygotsky and his Russian contemporaries in the 1920s, an approach to learning which was considerably modernized in the 1980s by Scandinavian scholars.

3.1 The Ancient Greek Philosophers

Historically, we have witnessed theories of learning change profoundly since the ancient Greeks roamed the earth from the 6th century BC onwards, although we find more than the

occasional remnant of the thinking and wisdom promoted by Socrates, Plato and Aristotle in most of our current learning theories. These philosophers believed that discussion, debate and argument were fundamental cornerstones in the philosophic debate since everything we say is and should be open to questioning and criticism. They did not seek answers to questions through a definition of words; neither did they accept an answer from a figure of authority as the pure, inviolate and final answer. Issues of interest were investigated and scrutinized to provoke alternative answers and ideas, which eventually left the debating assembly with a much deeper understanding of the concept explored. These philosophers aimed to find truthful and meaningful answers without resorting to religious fundamentalism, authoritative figures, or indeed tradition. Hence, they did not expect students to obey or agree with their knowledge and ideas, but enthusiastically passed on their information and encouraged their students to actively debate and discuss the body of knowledge as well as publicly shape and forward their own ideas and opinions. Thus the circle of knowledge was passed on and developed continuously.

We are living in a continuously changing world, and what was seen as scientifically valid yesterday is not always seen as scientifically valid today. Heraclitus believed that change is the law of life and the universe, and that change rules absolutely everything. He claimed everything to be in flux and that nothing in our world *is* permanent (Magee, 1998:14). We may fight change, but we simply cannot escape it no matter how hard we try.

3.1.1 Socrates

Socrates promulgated the dialogue, and is probably the most influential dialectic philosopher that has ever lived. A dialectic approach in dialogues is best described as a cross-examination of a person who has verbally claimed something to be true or not true. The approach “aims at refutation, and cannot scientifically or philosophically establish anything, although dialectical arguments must be valid” (Audi, 1999:233). The approach corresponds with the philosophy of Socrates who persistently bombarded people in Delphi with questions while at the same time expecting them to answer a question with a question until they mutually agreed or disagreed. Socrates was known as a masterly interrogator and taught both the literate and the illiterate to question everything they were taught, resulting in Socrates being encircled by a crowd of inquisitive followers on his daily walks through Delphi.

The Socratic method of intense interrogation of concepts to find a deeper understanding or worldly issues “calls for a sympathetic personal relationship between teacher and pupil, one in which the teacher truly understands the pupil’s difficulties and prompts him

step by step in the right direction” (Magee, 1998:23). The rhetorical exchanges as we know them today are through the words of his followers, primarily attained through the published writings of Socrates’ follower Plato. Socrates taught people to think autonomously and independent of authority and authoritarian figures, and his unrelenting dialectic approach to learning and knowledge is in my opinion the very instigator of the constructivist learning approach as we know it today.

3.1.2 Plato

Plato became a student of Socrates at a young age, and was deeply affected by the injustice orchestrated against the man he regarded as the wisest and most honorable of all human beings (Magee, 1998:24). Plato published an extensive amount of writings, and established his own school, the Academy in 385 BC (Plato and Quincy, 2003). Scholars recognize Plato’s early works as an extension of Socrates’ dialectic philosophy and his later works predominately as his own, and that he converted his philosophy to a teaching school rather than the questioning school instigated by Socrates. The later philosophy of Plato emphasizes the importance of mathematics and physics in order to understand the natural world, but we find his most famous work in his early work, the *Republic*, about the Myth of the Cave. With this metaphor he tries to explain how the human race is imprisoned in their own bodies, and with only other imprisoned people as companions they never understand their real selves since their experience is not of reality, but of an imagined reality (Magee, 2000:31). The metaphor emphasizes how important experience and knowledge are in enabling us to see our real selves implicitly suggesting that our learning is vastly restricted to our immediate perception of the world through the people we interact with and the culture in which we reside. Plato made a clear distinction between knowledge and learning, and claimed all our knowledge to be innate and to exist in the soul prior to birth. Hence, our knowledge is not merely learned from stimulants given to us through a lifetime of experience, but simply recalled and remembered when a specific situation triggers a hitherto unknown body of knowledge through the Socratic dialogue.

3.1.3 Aristotle

The most famous and distinguished student of Plato was undoubtedly Aristotle who founded a new approach to philosophy which emphasized the importance of observation and experience prior to abstract logical thinking and reasoning. Aristotle opposed his master’s philosophy of the real and the ideal world, and was only concerned with the world we live in and experience, and claimed that reasoning and comprehension can only be acquired through

learning by experience and argued that “if we stray beyond the ground covered by experience we wander into empty talk” (Magee, 1998:32). Aristotle was one of the first to explicitly explain the notion of contiguity which advocates learning by association and suggests that we learn something by associating it with previously attained knowledge. The principle of contiguity declares that “whenever two or more sensations occur together often enough, they will become associated” (Woolfolk, 2001:203). He considered repetition to be fundamental in the learning process, and that students should be systematically lead by an authoritarian figure of education. The Aristotelian paradigm differs vastly from the dialectic philosophy introduced and practice by Socrates, and one reads behaviorism between the Aristotelian lines, which learning approach I will attend to shortly.

Even though Aristotle stalwartly believed experience to be a fundamental method in all types of investigations to fully comprehend the world and initially approached all of his investigations empirically, he occasionally seemed to have drifted into abstract logical reasoning while attending the respective issue. The renowned English philosopher Francis Bacon opposed rationalistic and empirical scientific research methods, and alleged the traditional logic of Aristotle as “useless as a tool for discovery: it compels assent after the fact, but reveals nothing new” (cited in Magee, 1998:75)

The work conducted by the three most famous Greek philosophers, Socrates, Plato and Aristotle, is known to have transformed the pre-Socratic Greek philosophy into the western philosophy as we know today. As I shift my attention over to modern learning theories I find it appropriate to assert that all sciences were originally philosophy, but have over the past centuries progressively become their own school of science as we know them today.

3.2 Contemporary Learning Theories

Higher educational institutions have been vastly dominated by behavioristic learning approaches, and students expected to work independently on issues and problems by reading a content laden curriculum and attending content rich lectures. Many contemporary educators do not believe this is a meaningful learning approach since regurgitating content only allows students to memorize sentences and paragraphs, but does not allow them to think about the recited content critically and reflectively. The scholar Joseph D. Novak claims that “meaningful learning underlies the constructive integration of thinking, feeling, and acting leading to empowerment for commitment and responsibility (Novak, 1998:15), and meaningful learning is what I believe could be practiced in blended weblog and face-to-face

learning environments. Below I will examine behaviorism, cognitivism, constructivism, and activity theory carefully to draw attention to their explicit and implicit distinctiveness.

3.2.1 Behaviorism

Behaviorism surfaced as a school of thought at the turn of the twentieth century subsequently to the age of science which had recognized science as the paramount source for the emergence of knowledge, leading most scientists to advocate that “the only human data that were scientifically useful were empirical and measurable behaviour” (Jarvis et al., 2003:24), and the learning approach dominated academic institutions in the western world for several decades. Behaviorism and behavioristic learning approaches are closely associated with Pavlov’s classical conditioning and Skinner’s operant conditioning, Watson’s radical behaviorism, and Thorndike’s contribution while conducting and extensive research with cats, all of which I will examine successively.

The founder of the psychological school of behaviorism and the first person to use the term behaviorism was the American psychologist John B. Watson. His behaviorist approach was strongly influenced by the Russian psychologist Ivan Pavlov, although his position is regarded as profoundly more radical and controversial since he actually “denied the existence of the mind” (Jarvis et al., 2003:26), and suggested that psychology should be defined as the science of behavior. Watson sincerely believed that the law of frequency and the law of recency were the only laws of significance concerning our behavior, of which the former advocates that the more frequent a stimulus and a response are associated the stronger effect of the habit, while the latter proposes that the most recent response to a stimulus is the one probable to be associated with it (26). However, it is the work of the Russian psychologist and physiologist Ivan Pavlov and the American psychologist B. F. Skinner that has contributed most significantly to the behaviorist school of learning, which I will illustrate next.

3.2.1.1 Ivan P. Pavlov

Pavlov (1849-1936) discovered while experimenting with dogs that repeated pairing of a neutral stimulus (a bell) with a natural stimulus (food) causes the neutral stimulus (bell) to eventually elude a response unaided by the natural stimuli. He called the presentation of the food an unconditioned stimulus, and the salivation an unconditioned response, while the association of the food and bell simultaneously was called the conditioned stimulus, and the salivation prior to the advent of food the conditioned stimulus. The continual training extracted a conditioned stimulus resulting in a conditioned response, which in this case caused the dogs to eventually salivate from simply the sound of the bell while it was initially

necessary to physically show the dogs food before they would salivate (Jarvis et al., 2003:25). The hypothesis of classical conditioning is thus that pairing a neutral stimulus repeatedly with a natural response will eventually cause the neutral stimulus to elicit a response, which scientist later applied to human beings implying that people also learn automatically by pairing human needs and responses (Alessi and Trollip, 2001:18). In addition, the interpretation of his discoveries bears strong resemblance to Watson's behavioristic ideas of studying human beings and animals as equals insisting that "if ideas about humans could be applied to animals, principles developed by studying animals could be applied to humans" (Baum, 2005:11). However, Thorndike and Skinner opposed some of the principals of classical conditioning, and proposed an operant conditioning as the behavioristic counterbalance, which I will examine further in my next section of the behaviorist learning approach.

3.2.1.2 Edward L. Thorndike and B.F. Skinner

Contradictory to classical conditioning, Thorndike (1874-1949) and Skinner (1904-1990) suggested that most behaviors are either voluntary or produced, and that we actually operate on our society to produce a variety of outcomes, which actions they identified as operants and the learning process as operant conditioning (Woolfolk, 2001:205). Similar to constructivist thinking, Skinner believed in the action and the context, although a different action and context than the constructivist learning approach proposes as Skinner viewed the activity of the learner as a tool to process presented or available information directly into the head of the learner, while constructivists believe one needs to examine and understand the entire activity in context before learning is fully understood (Duffy and Cunningham, 1996:171).

Thorndike used cats in his behavioral investigation, and through a series of experiments discovered that cats trapped in boxes would gradually learn to associate the lever inside the box with how to open it, and consequently attain the food visible through the bars much quicker, which was generally discovered by accident. A series of repetitions of the experiment taught the cats to find their escape almost instantly, and led Thorndike to propose his famous law of effect which states that "responses to a situation which are followed by satisfaction will be strengthened, responses which are followed by discomfort will be weakened" (Jarvis et al., 2003:26).

Skinner developed the operant theory further, and claimed that a behavior is actually compatible to how a person acts in a particular situation. He formulated the law of conditioning and the law of extinction while conducting research with rats and pigeons, where

the former suggests that a behavior that is followed by a reinforcing stimulus, or the withdrawal of a negative reinforcement, is strengthened and likely to increase in frequency. Hence, the latter implies that behavior followed by negative reinforcement, or that is no longer reinforced decreases in behavior (Alessi and Trollip, 2001:18). Thus, a positive reinforcement such as praise or a negative reinforcement such as verbal or physical abuse would have notable consequences as to how a person acts in a particular situation and affects her behavior accordingly. If she has been rewarded for an action she is likely to repeat and strengthen that particular behavior, and students who receive a compliment from their teacher for work conducted are likely to work harder to attain more praise.

Nevertheless, one should be aware of the consequences compliments, privileges, and praise in the classroom could cause when praise is given incorrectly. Students should be praised on achievements concerning issues of learning, and not on winning the teacher's approval (Woolfolk, 2001:215), which praise is delightfully received although unlikely to ameliorate the depth of learning. The scholar and author Alfie Kohn argues that the behavioral reward system in education which is academically known as applied behaviorism is counterproductive in learning as its effect is simply a short-term compliance, and that teaching students to

‘do this and you’ll get that’, is essentially a technique for controlling people. In the classroom it is a way of doing things to children rather than working with them (Kohn, 1993:784).

Kohn believes that all reward systems are ineffective, arguing that when praise is discontinued the behavior discontinues as well, and further suggests that rewarding students actually makes them less interested, which completely opposes behavioral paradigms.

The behavioral reward system is undoubtedly a method of learning worthy of discussion and scrutiny at higher academic institutions as well. The behaviorist learning approach has its explicit share of drawbacks, but as most other human beings I believe I would truly thrive on attention received as praise from performing a job or an assignment successfully whether it appeared as a wage increase, a friendly gesture from a teacher or peer, or as a respectable and indeed improved grade. The instant feedback in blogging is also very rewarding both in regards of contentment of having publishing a coherent post, and in the feedback one receives from peers and instructors. Nevertheless, despite its arbitrary strengths in learning, there is evidence today that to think of learning as simply positive and negative reinforcements through repetitive associations is a predominately archaic approach (Woolfolk, 2001:240). Hence, in the 1960s we witnessed the development of the cognitive

approach to learning which emphasizes the importance of active mental processes inevitably present in the human race, and whose characteristics I will look at closer in the following section.

3.2.2 Cognitivism

Even though cognitive perspectives were recognized as far back in history as ancient Greece and actively practised by Socrates and a few other prominent philosophers through rhetoric and dialectic communication, the perspective did not surface as a potential approach to learning until the progressive ideas of the American philosopher, psychologist, and educational reformer, John Dewey, were incorporated into education in the 1960s. Dewey is known as one of the most influential educators in the 20th century and proposed that learning should be a dynamic and active process based on the expanding inquisitiveness of children and their world (Ashman and Gillies, 2003: 1). Our contemporary society is indisputably seeing an increasingly faster process of change, and the concept of learning is required to change accordingly to foster a better and deeper comprehension of new knowledge. The pervasively practiced rote learning is unpretentiously challenged, and knowledge is increasingly attained through critical reflection. Historically, the most renowned cognitive theorists are Piaget and Vygotski, although Vygotsky was essentially unknown in the west until the 1962 when his book *Thought and Language* was published in English³. In contrast to behaviorists, cognitive theorists do not propose general laws of learning, but rather individual and developmental differences in cognition in a vast array of learning situations. Consequently, there is no single theory of cognitive learning, and it is best described as a commonly agreed upon philosophical orientation (Woolfolk, 2001:240).

3.2.2.1 Jean Piaget

The ideas of Swiss psychologist Jean Piaget have so far been the most influential cognitive approach in the western world, and his research has extensively focused on stages of development from birth to adolescence. Piaget argued that “people are born with a tendency to organize their thinking processes into psychological structures, and that these structures are our *schemes* for understanding and interacting with the world” (cited in Woolfolk, 2001:28). Additionally, he believed people inherit a tendency to adapt to their respective cultures, and that the process of assimilation and accommodation are involved in the adapting process. He claimed that assimilation occurs when people use their existing schemes to make sense of their world, and indicates herein that people build new knowledge on their existing

³ Cambridge, MA: MIT Press, 1962

knowledge. The accommodation phase occurs when a person has to change an existing scheme to respond to a new situation. As Woolfolk argues “we adjust our thinking to fit the new information, instead of adjusting the information to fit our thinking” (Woolfolk, 2001:29). Consequently, students assimilate and accommodate continuously, and it is imperative that assignments and learning material are presented carefully to encourage growth instead of despair. Students thrive on challenges, although insurmountable challenges are detrimental rather than beneficial, and likely to create disequilibrium, which according to Piaget “occurs when a person realizes that his or her current ways of thinking are not working to solve a problem or understand a situation” (Woolfolk, 2001:30). Piaget understood learning as a constructive process in which people construct their own understanding of things, which means students learn better when they actively collaborate with teachers and peers to challenge and manipulate novel information. Disequilibrium amongst students should be understood as an opportunity to scrutinize and manipulate a problem to enable the construction of new schemes and a deeper comprehension of new knowledge.

Piaget’s theory of cognitive development was based upon in-depth studies of a very small sample of children including his own daughter, which has caused extensive criticism since small samples and case studies cannot be generalized legitimately (Jarvis et al., 2003:32), and psychologists have heavily criticized his theory of cognitive development wherein he claims that all children undergo four separate stages of thinking. Other prominent cognitive development theorists have concluded that stages are far less discrete than Piaget predicted, and both Lawrence Kohlberg and James Fowler constructed their own less discrete and profoundly less age related stage theories (Jarvis et al., 2003:34). In addition, there is the impressive work conducted by the Russian psychologist Lev Vygotski who investigated how a child’s social environment and culture influence mental processes, which I will explain in further detail next.

3.2.2.2 Lev S. Vygotski

The important work of Lev Vygotski remained literally unknown in the western world for several decades, which may possibly have been caused by the communist governance of the Soviet Union, or the fact that his work was banned in Russia for years due to his references to Western psychologists. Consequently, his work had little influence in the West until his works were translated into English in the 1960s and 70s. His ideas about language, culture, and cognitive development have provided alternatives to many of Piaget’s theories as well as vastly influencing contemporary education (Santrock, 1999:215).

Vygotsky brought the importance of culture into the discussion about human thinking and cognition, and argued that human psychological development takes place in a historical cultural setting and cannot be understood apart from this setting (Vygotski, 1978:46). While the western world devoted the emphasis of their investigations on the individual as separate from its environment and on the static stages of each individual, Vygotsky examined the individual and the dynamics that are actually involved in the cognition, learning and thinking processes (Jarvis et al., 2003:38). He claimed that the child first develops on a social level and later on an individual level, and referred to the level between people as interpsychological, and the individual one as the intrapsychological, and argued that “the transformation of an interpersonal process into an intrapersonal one is the result of a long series of developmental events” (Vygotski, 1978:65). Piaget’s disequilibrium approach thus indicated that children’s cognitive development was better challenged in collaboration with equal peers while Vygotsky alleged cooperation with more capable peers through the hypothesis of zone of proximal development which contends that

[I]t is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotski, 1978:86).

Furthermore, Vygotsky included cultural tools in his cognitive theory, and claimed them to be of vital importance in the cognitive development. With tools he meant both the physical objects and the symbolic tools present in their respective culture, and argued that “all higher-order mental processes, such as reasoning and problem solving, are mediated by psychological tools, such as language, signs, and symbols (Woolfolk, 2001:45). The weblog is a contemporary cultural tool that is affecting the way we communicate and interact within the context of our culture, and incorporating the tool in academia is likely to influence students’ cognitive development as a large part of their academic discourse is being conducted publicly via comments and hyperlinks on the web. Vygotski conducted extensive research concerning the relationship between children’s motives, inner speech, meaning of words, and external speech, and claimed that

[T]o understand another’s speech, it is not sufficient to understand his words – we must understand his thought. But even that is not enough – we must also know its motivation (Vygotsky and Kozulin, 1986:253).

The support system provided by teachers, parents, siblings, or more capable peers in the cognitive development is referred to as scaffolding, and is used extensively while pursuing tasks within the zone of proximal development. Similarly, academic bloggers are

continuously finding blogs that are better and more interesting than their own through the blogosphere, and thus the blogosphere assists in scaffolding the students' cognitive development. Indisputably, we have all witnessed the efficacy of peer tutoring while studying at an academic institution. Within the context of the classroom we find a large assembly of capable and knowledgeable students that all know something that someone else does not know whether it is technical issues or manual skills, and by scaffolding each other through the various assignments we become aware of our own expertise, and in the process we become both confident and content learners while gradually conquering our objective goals. The actual term scaffolding was not introduced by Vygotsky, but by Jerome Bruner in an article published in 1976 which addresses the role of adult tutoring in problem solving (Wood et al., 1976).

Just as the preceding behaviorist learning theory was challenged by cognitive principles of learning, the constructivist learning approach began to challenge cognitivist learning principles at the end of the 20th century. The constructivist approach is generally known to have originated from cognitivism. In the following section of this chapter I will examine constructivism in further detail.

3.2.3 Constructivism

The cognitive learning theory has put an increasing emphasis on active learning, and proposes that better learning is not going to emerge from simply finding better ways for teachers to instruct classes, but rather from giving learners better environments in which to construct their knowledge. John Dewey proposed student-directed reforms and experiential learning in the early 1900s and promoted a 'learning by doing' approach to education insisting that children learn more and gain general competence in all areas of human activity when encouraged to use both their practical and theoretical imagination (Magee, 1998:191). In addition, he was one of the first to publicly oppose the behavioristic educational framework of recitation and memorization. His ideas were constructed around the same time as the American industrial revolution began to flourish having observed the dire need for educational reconstruction to meet the rapidly changing needs of society (Duffy and Cunningham, 1996:173). Similarly to the philosophy lived and conventionally practised by Socrates in ancient Greece, Dewey focused on a learning approach based on inquiry to promote reflective thinking in students while conducting their assignments.

In *Philosophical Investigations* (1958), Wittgenstein noted that knowledge is in the eye of the beholder, which makes sense since we construct our knowledge as we continuously

succeed in comprehending new pieces of information by connecting it with previously attained knowledge, and echoes Jonassen, who propounds that “what someone knows is grounded in perception of the physical and social experiences which are comprehended by the mind” (Jonassen, 1991: 6). In addition, Margaret Wheatley emphasizes the importance of active involvement in the learning environment, and contends that

[L]earning (innovation) arises from ongoing circles of exchange where information is not just accumulated or stored but created. Knowledge is generated anew from connections that weren't there before. When this information self-organizes, learning (innovation) occurs, the progeny of information-rich, ambiguous environments (Wheatley, 2006:113).

It is difficult, if not impossible to strictly separate the cognitive and constructive learning theories since constructivism is deeply imbedded in cognitive psychology and the learning theories promulgated by Piaget and Vygotsky, and therefore share vast similarities. The American psychologist, Jerome Bruner, is another architect of active learning, and has contributed largely to the constructivist school of learning. Bruner put emphasis on discovery and inquiry learning in which the learner seeks to understand the respective issues under the process of discovery, and further emphasized that “issues or questions that guide the discovery process must be personally and societally relevant” (cited in Jonassen, 1996:174). On the whole, the school of constructivism is viewed as an approach that “emphasizes the active role of the learner in building understanding and making sense of information” (Woolfolk, 2001:481), and was developed as an alternative approach to the school of cognitivism in the 1990s. The most recent educational reform efforts have largely favored change towards the social constructivist perspectives adopted from Vygotskian thinking, and students are continually encouraged to

assume a more active role in their learning, to explain their ideas to one another, to discuss disagreements, and to cooperate in the solution of complex problems, while teachers participate in the design of these contexts and the facilitation of this kind of activity (Palincsar, 1998:355).

In a society where individualism has prevailed for decades and where its egocentric roots are as long and persistent as the history of mankind it has thus been a huge effort on behalf of both scholars and students to change from the behaviorist to the constructivist learning approach. When the teacher is no longer the sole transmitter of information, she is confronted with new and complex information processing tasks as well as tasks related to motivate and encourage socialization in the shape of discourse and cooperation amongst the students. In addition, the teacher is required to join the discourse as an equal peer as well as carefully

scaffold the students through challenging assignments in their zones of proximal development as a more capable peer. On the whole, she is supposed to guide and facilitate learning, but under no circumstances believe that she is the sole arbiter of truth (Palincsar, 1998:363).

Many radical behaviorists do not believe in either the cognitive or the constructive theory of learning, and have condemned both approaches as unscientific, notoriously claiming that they “deal with ideas that cannot be observed or measured” (Alessi and Trollip, 2001:17). Furthermore, there are continual arguments between cognitivists and constructivists where cognitivists argue that constructivism is philosophy and not science, and constructivists argue that academic institutions are doomed to tumble if they are not redesigned along constructivist principals. The fact of the matter is that the cognitive approach has been criticized for its similarities with behaviorism and their continual focus on the individual’s inner processes, and a confirmed fact that they have been atrociously unsuccessful at converting their principles of communication and collaboration into practice, asphyxiating all the emerging hopes of change scholars might have encompassed initially (Alessi and Trollip, 2001:37). In the mist of learning theories, and their unrelenting wish to accentuate a theory that is unique and incomparable to former approaches we have witnessed the subtle growth of a new and appealing approach to learning called activity theory, whose characteristics I will discuss in further detail next.

3.2.4 Activity Theory

In the shadow of cognitivism and constructivism, the cultural-historical activity theory has evolved three generations of research (Engeström, 2001:133) and has strong roots in the philosophical works of Karl Marx who was the first philosopher to explicitly accentuate the concept of activity (Engeström et al., 1999: 3), in John Dewey’s philosophical school of pragmatism (Magee, 2000:293), and above all in the Russian cultural-historical school of psychology grounded by the Russian psychologists Vygotsky (1978), Leontiev (1978), and Luria (1978). In fact, the work conducted by these psychologists initiated its very existence in the beginning of the 20th century. The political and ideological turbulence in Russia at the time explains why the theory remained literally unknown in Europe until the mid 1980s when leading Scandinavian researchers took interest in it. Evidently, it was a paper published by Yrjō Engeström in 1987 that introduced activity theory to the West, and over the years Engeström and his western contemporaries have carefully examined the theory and its profuse complexity. The work conducted by these researchers has lead to an expansive learning approach which is presently used as a framework to explain the complexity of activity theory.

Their investigation has lead researchers to reformulate a western theory that is notably different from the Russian approach, which has been criticized as one-sided and of representing people as executors of plans and orders from the outside, and not as creative human beings (Engeström et al., 1999:65). In contrast, the western formulation is presented as

a powerful socio-cultural and socio-historical lens through which we can analyze most forms of human activity. It focuses on the interaction of human activity and consciousness (the human mind as whole) within its relevant environmental context (Jonassen and Rohrer-Murphy, 1999:62).

Contemporary researchers recognize the original application of the theory in language acquisition and instructional development, and have favorably extended the application to include new cultural tools such as for example computer technologies in the context of academic institutions. Even if activity theory textually implies a formal theory of learning equivalent to constructivist and behaviorist paradigms, Nardi suggests that we should regard it as a clarifying and descriptive tool rather than a strictly predictive theory as it “provides ample room in the intellectual sandbox for adventure and discovery” (Nardi, 1996: 5), which is in accordance with Engeström who argues that “the study of an activity system becomes a collective, multivoiced construction of its past, present, and future zones of proximal development” (Engeström et al., 1999:10). In this section I have presented the socio-cultural activity theory from its Russian origin through to Dewey’s school of pragmatism and finally to its expansive and reformulated version advocated by Finnish scholars in the 1980s. In the subsequent section I plan to clarify the details of activity theory more explicitly.

3.2.4.1 The activity system

Similar to constructivist thinking, theorists of activity theory claim that an activity cannot be understood or analyzed outside the context of the respective activity, and Leontiev argued that an “activity is not a reaction and not a totality of reactions but a system that has structure, its own internal transitions and transformations, its own development” (Leontiev, 1981:75). Furthermore, the idea of mediation by socio-cultural tools and signs is unique in that it breaks down the Cartesian walls which completely isolate the mind from its culture and society (Engeström et al., 1999:29). However, to fully comprehend an activity or analyze its components we need to investigate the activity system in which the particular activity occurs as well as the motivations and goals of the people engaged in a specific activity. Engeström states that

[A]n activity system is by definition a multivoiced formation. An expansive cycle is a reorchestration of those voices, of the different viewpoints and approaches of the various participants. Historicity in this perspective means identifying the past cycles of

the activity system. The reorchestration of the multiple voices is dramatically facilitated when the different voices are seen against their historical background as layers in a pool of complementary competencies within the activity system (Engeström et al., 1999:35).

Engeström contends that an activity contains three reciprocal relationships between the subject, the object and the community. As shown in figure 1 below, the relationship between the subject and the object is mediated by tools, the subject and the community by rules, and the object and the community by the division of labor.

The Structure of an Activity

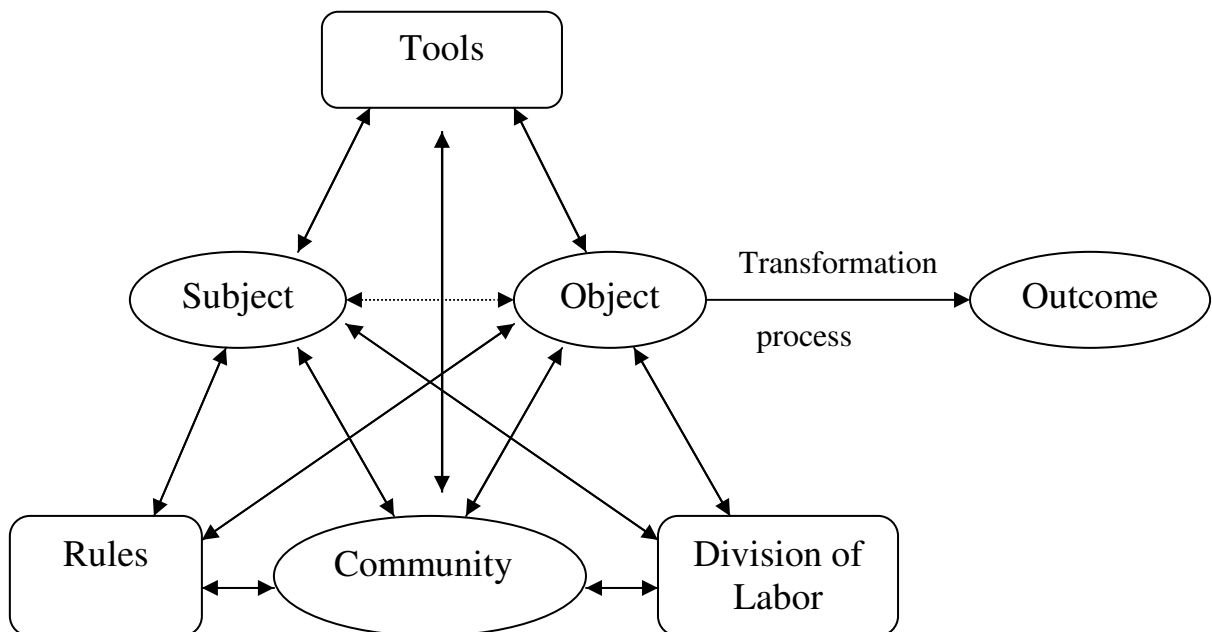


Figure 1 Engeström's Activity System Model

The subject of an activity is either one individual or a group of individuals, and to carry out an activity means that the subject has to affect the object to reach her goal. Leontiev suggested that “tools mediate activity connecting man not only with the world of objects but also with other people” (Leontiev, 1981:59). Every activity we conduct is specific, and the range of

activities is distinguished from one another by the object of each activity. The object leads each activity in its own direction, and is transformed in the course of the activity, which means it is not an immutable structure (Nardi, 1996:37).

The mediating tools that are used to transform the activity are culture specific tools, and can be any kind of internal and external tools and signs such as computers and social software application, pens and books, or language, gestures, values, norms, and any other convention that have been adopted and historically developed within a particular community of practice. A community in the realm of activity theory is defined as a

collection of people that engage in activities that encompass a common interest and ongoing learning through practice, not only in their leisure time, but also as part of their work as employees of organisations or in classes at educational institutions” (Hasan, 2004).

A community of academics at a higher educational institution has a range of common interests, and is likely to engage in similar activities to conduct their work whether it concerns their research or their teaching. If they are teaching a course in web design they need a variety of internal and external tools, and first and foremost a computer for each student to enable each an access to the Web, and a range of tools to conduct the act of designing ranging from mark-up languages to style sheet languages. One of the educators may have extensive skills in the actual web design and aesthetics, another may be a professional web programmer and expected to teach students mark-up languages such as HTML⁴, XML⁵, style sheet language such as CSS⁶ or reflective web programming as the PHP⁷ language, while yet another employed community member may have extensive skills in software programs and asked to teach the students Web 2.0⁸, which is a variety of social networking sites, and he may ask the students to design a personal weblog and to blog regularly about their critical reflections and problems concerning their obligatory assignments whether it concerns their evolving papers, design issues or programming issues. The community of scholars is also expected to teach the students important ethical rules and regulations that is elementary knowledge while communicating and interacting on the World Wide Web.

In the web design course there is also a community of students where the majority of students generally work hard to reach a common goal (outcome), and within the group we are likely to find a distinctive division of labor, all of which assist actively in the process of

⁴ Hypertext Markup Language for creating web pages

⁵ Extensible Markup Language recommended WWW all-purpose markup language

⁶ Cascading Style Sheets to describe the presentation of markup languages

⁷ Hypertext Preprocessor employed to produce dynamic web pages

⁸ The second generation of web-based services – weblogs, Wikis, etc.

transformation from a given assignment to a finished product whether it is an obligatory term paper or the construction of a professional webpage. The group members mediate a variety of socio-cultural tool and signs in the process of transformation which may range from computers and software tools to rules, conventions, discussions, or course assessment methods. While conducting their obligatory work they are expected to follow a set of rules, and those rules may concern the particular mark-up language, design language, programming language, obligatory amount of words on written assignments, or indeed network literacy such as awareness of the publicity of weblogs and how to conform ethically correct while engaged in social online environments.

The collection of tools within the group has its own history, and is shaped by the context of the activity while the team of non-student actors outside of the group's magic circle have another set of distinctive divisions of labor and rules that may concern issues such as financial budgets or hiring competent and sufficient staff, which should bring us the conclusion that "real life situations always involve an intertwined and connected web of activities which can be distinguished according to their objects (Hasan, 2004).

In this section I have clarified details of the activity system as presented to us through the works of Engeström and his activity systems model in figure 1, which figuratively explains how an activity contains more than just the mediating structures of subject, artifacts, and object in also including rules, community, and division of labor, showing that all mediating terms are historically shaped and reciprocally related, and thereby strengthening Vygotsky's socio-cultural activity theory profoundly. I will now take a closer look at the actions and operations of an activity and schematically present Leontiev's hierarchical activity structure in figure 2.

3.2.4.2 Activity Levels

Each of the activities we perform consists of a goal-directed hierarchy of actions, all of which are utilized to achieve the object. When we participate in an activity such as the activity of blogging we perform conscious actions to reach an intrinsic goal although it is necessary to keep in mind that not all actions are as predictable as we may think. Engeström contends that "actions involve failures, disruptions, and unexpected innovations (Engeström et al., 1999:32), and it is important to emphasize that actions are not meaningful unless they are part of a specific activity. Typically an activity is a long-term event with purpose and motives while an action is short-term and planned, and has its explicit goals (Hasan, 2004). The action of reading instructions and illustrations concerning a new software program would thus not

make much sense if we were unable to actually practice the conceptions on a computer. Similarly, the action of articulating reflective academic blog posts would not make sense if we were unable to publish the content to receive constructive feedback from instructors and peers, which short-term action is likely to change and improve the long-term activity of academic reflection. The actions are chains of repetitive operations such as for example learning how to use a computer, learning how the variety of software works, how to make programs or how to search the Internet to find specific information. Engeström argues that

[A]n activity system constantly generates actions through which the object of the activity is enacted and reconstructed in specific forms and contents – but being a horizon, the object is never fully reached or conquered (Engeström et al., 1999:381).

The activity is a long-term structure, and its objects undergo a staged process before it is transformed into an actual outcome, which insinuates that activities are chains of actions which in turn consist of operations (Kuutti, 1996) as presented in figure 2. Additionally, each action is realizable through a series of operations, and the action and operations which have realized the action are neither identical or reducible to each other since an operation can be part of several actions and the same action is realizable through a range of actions (Bardram, 1997). All of which lead us to Leontiev’s following three-level scheme of activity in figure 2 below,

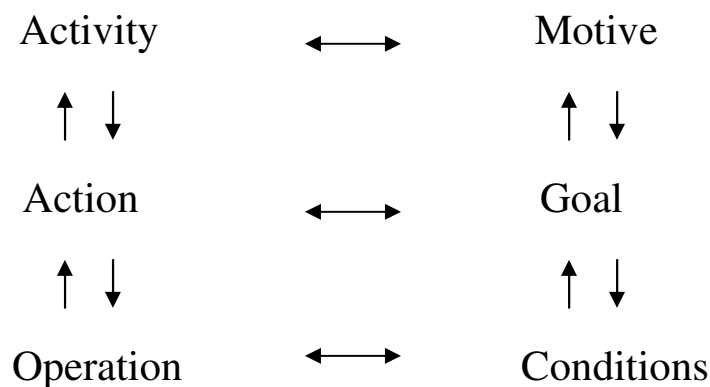


Figure 2 Leontiev’s (1981) hierarchical levels of activities, actions and operations

As explained previously, one activity may be realized through a variety of actions, of which I mentioned actions performed by teachers, students, or staff. Additionally, one action may also belong to different activities denoting that each activity evolves contrastingly since the subject in the context of each activity is likely to have personal motives. Furthermore, operations are

actions as long as they require conscious performance, but become operations as soon as the conscious effort conducted to perform the action has ceased to exist. The dynamics between actions and operations is a fundamental feature in the human development as people are unable to improve their skills or familiarize with the particular activity otherwise (Kuutti, 1996:31). For instance, while learning how to utilize a weblog one has a trial period where the conscious actions of the activity are tested continuously to optimize the skill of blogging in regards to both technological and practical usability skills. As soon as the conscious actions become habitual they transform into operations, and the conscious planning stage has ceased to exist. However, the border between an action and an activity is blurred as well, and movement is possible in both directions. Davydov, Zinchenko, and Talyzina argue that “an activity can lose its motive and become an action, and an action can become an operation when the goal changes” (cited by Kuutti, 1996:32), which means that development is present at all levels of the activity.

In this sub-chapter I have examined the various levels of an activity, and explained with help from Leontiev’s hierarchical model in figure two the difference between actions and operations and how both are dependent on the subject’s motives and goals. Furthermore, I described how activities and actions are intertwined and can change to one or the other depending on their respective motives and goals. These are all important in academic blogging and learning as the actions of the blogger and the activity of blogging intertwine and change persistently depending on the blogger’s current motives and goals. Now I will introduce the cycle of expansive learning as seen through the eyes of Engeström in figure 3, and carefully explain the notion of conscious intention, the various levels of contradictions and how they develop and why they appear continuously.

3.2.4.3 Expansive Learning

Activity theory does not believe that knowledge is merely attained from a chain of knowledge transmissions from a master to his apprentices or that it can be attained by the use of reason without any kind of sensory input. The theory regards consciousness and activity as a unity which contradicts the behaviorists who proclaim consciousness to be an entity completely disembodied from the activity that prompted it. Kaptelinin claims that “the most fundamental assumption of activity theory is the unity of consciousness and activity” (in Nardi, 1996:54). The activity always occurs prior to learning, and consciousness and learning are mutually supportive of each other. In fact, Vygotsky found through extensive research that

[I]mprovement of one function of consciousness or one aspect of its activity can affect the development of another only to the extent that there are elements common to both functions or activities (Vygotski, 1978:83).

Vygotsky believed consciousness to be embedded in the individual's larger activity system, and that the conscious intentions always appear before our actions, and human intentions can only exist in the context of the intended activity. Hence, since intentions are always planned prior to the action we find both intentions and plans to be incomplete and tentative.

The concept of activity theory also implies that intentions are created through contradictions with other people in our respective environments, and may concern what we need to know, or what we already know, to reach a desired goal in a specific context (Jonassen and Rohrer-Murphy, 1999:65). When a particular need arises within an activity system the actors find an appropriate external or internal artifact⁹ to meet the specific demand. The artifact is likely to cause inconveniences within the system until the artifact eventually becomes conventional. Contradictions within and between the cycles of the activity system are disruptive but necessary to develop the activity, and they are continuous as new tools are added to the activity. People and organizations are persistently learning something that is not stable, or understood and identified ahead of time, which means present activities are under continuous reconstruction (Kuutti, 1996:150). Thus, it is important to accentuate that contradictions are not to be understood as problems or conflicts, but as “historically accumulated structural tension within and between the activity systems” (Engeström, 2001:137). Adding a new element to an activity system is likely to create contradictions in the existing activity system. The expansive theory is ideal in explaining the tension academic weblogs are likely to create as the activity of blogging usually causes contradictions in the students' traditional learning systems. The present rules within the learning system contradict the new element of blogging, or blogging may cause friction and tension in and among the existing division of labor. It is no longer sufficient to meet deadlines or attend school exams to pass a course as students are expected to use a new tool on a daily or weekly basis to reflect upon their work process and progress by articulating reflective blog posts, and to engage in dynamic and ongoing dialogues in blog comments and hyperlinks. All of which are going to create a cacophony of contradictions until a new work model has been generalized and the students have identified and consolidated with the new activity of blogging.

Contradictions cause vexation in the system, but regardless of the inconveniences, innovative changes are produced within the system to change the activity to reinstall the

⁹ Physical tools or sign systems such as human language

preferable harmony. Tranquillity in the system is thus a temporary sensation since the activity system is open, and new elements and contradictions develop continuously. Students incorporate the blogging activity into their cognitive maps, however, new contradictions arise persistently as new blogging assignments and tools emerge. In our daily lives, we notice increasing evidence of professional institutions changing their routines and procedures unremittingly to keep up with the current pace of collective changes placed upon them by the networked environment in which we currently reside. Included below in figure 3 is Engeström's cycle of expansive learning, which should be helpful in understanding the cycle of expansive learning, which I have explained in detail above,

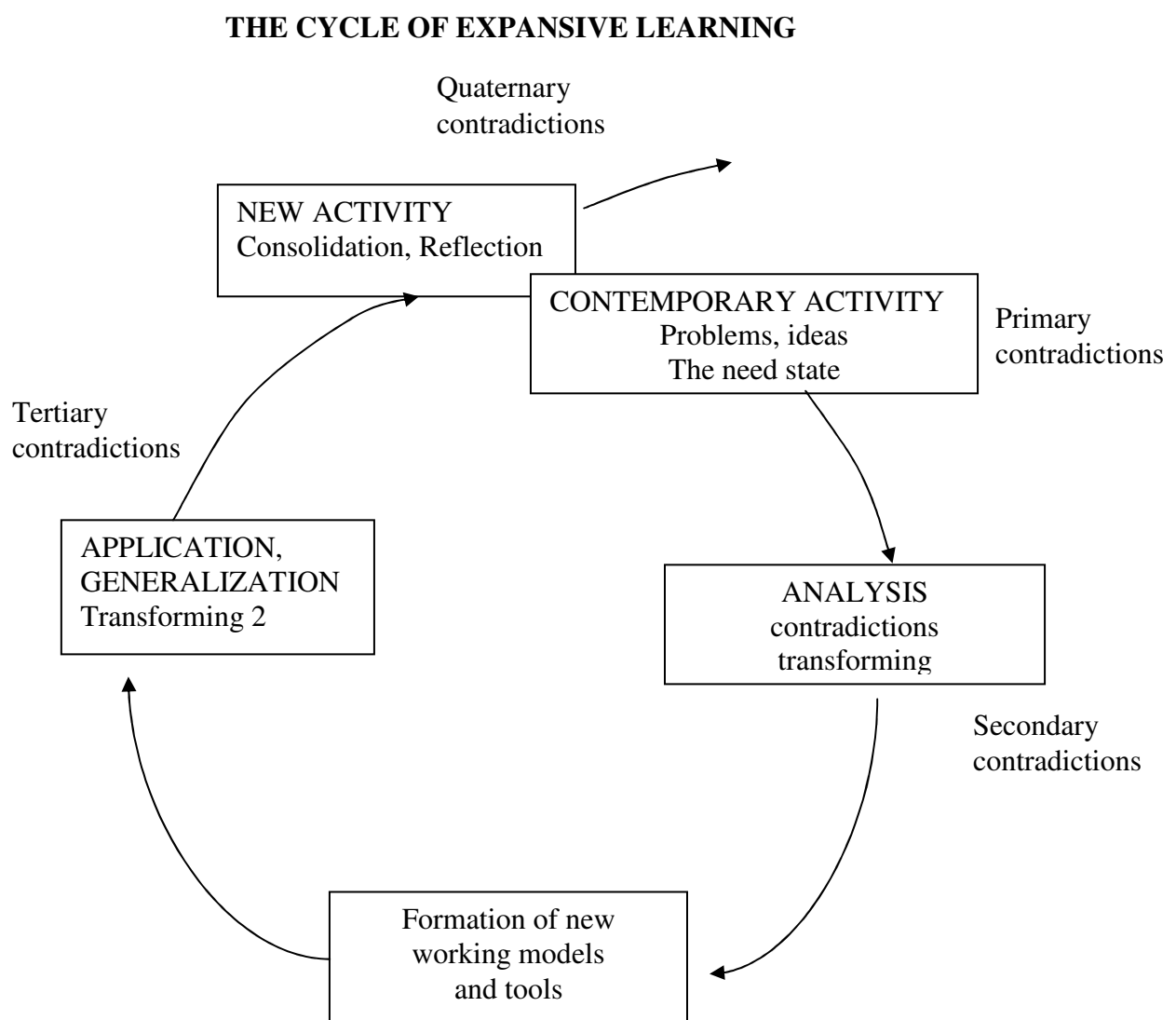


Figure 3 Engeström's (1999) cycle of expansive learning

The four cycles of expansive learning include the need state when problems and ideas arise within the system, the contradictions and transforming of the existing activity, the formation of new tools and models and how to apply and generalize these new models in the activity system, and finally, a novel activity is going to initiate further reflection and contradictions. The activity system is continuous as long as its constituents continue to challenge the contradictions which trigger change and enable innovation to occur.

3.3 Summary

In this chapter I have examined past and present learning theories beginning with the thinking of the three most renowned ancient Greek philosophers, more specifically Socrates, Plato, and Aristotle, who had different approaches to learning which still exist in our current society having been absorbed by various modern learning theories. Subsequently, I examined behavioristic, cognitive, and constructivistic learning approaches concluding with activity theory and expansive learning, which Engeström contends is the very key to understand shifts in activity systems (Kuutti, 1996:272). These learning theories have been actively practiced at academic institutions in the 20th century with behaviorism as the most dominating theory by far, and whose philosophy still largely exists at contemporary educational institutions. Nevertheless, to explain why weblogs and blogging are ideal in blended learning environments I have put particular emphasis on constructivism and the socio-cultural activity theory derived from constructivism. I have also included three figures where figure one illustrates Engeström's activity system, figure two Leontiev's hierarchical levels of activities, actions, and operations, and figure three the cycles of expansive learning as promulgated by Engeström in 1999. In the following chapter I will introduce weblogs, and commence with their common characteristics, a contemporary definition, and the variety of weblogs that currently exist on the World Wide Web.

4.0 History and Anatomy of Weblogs

The weblog phenomenon saw its first daylight in the last part of the 1990s, and its unique format was originally introduced by professional software developers and programmers out of personal convenience. They needed a practically formatted online platform from where they could share hyperlinks to interesting web sites and convey the appropriate information concerning the links. Weblogs bear a strong resemblance to former writing venues such as personal diaries and letters, but are unique in that they constitute a web-based social writing sphere commonly read and commented by regular visitors or anyone who surfs by via a hyperlink from another weblog while travelling through the blogosphere. The term blogosphere was coined as early as in 1999 by Brad L. Graham as a joke (Graham, 1999), and was later re-coined by William Quick in 2002 (Quick, 2002) with a more comprehensive definition. However, it has since been refined and defined as

a densely interconnected conversation, with bloggers linking to other bloggers, referring to them in their entries, and posting comments on each other's blogs (Herring et al., 2005: 1).

Hence, it is the blogosphere that is the social attribute of weblogs since the weblog itself would be unable to trigger conversations unless there was a blogosphere to connect with. I will now introduce the history of the weblog phenomenon, starting with the eruption of what we today refer to as the blogosphere, proceeding with some of the renowned weblog pioneers, and concluding with the contemporary state of the blogosphere.

4.1 The Eruption of the Blogosphere

In 1999 the blogosphere erupted with Pitas¹⁰ introduction of the first build-your-own-weblog software tools (Blood, 2002: 8), which made weblogs easy to create and maintain, and publishing web content fully automated. All of a sudden anyone with writing skills and computer interests could publish content effortlessly, and the weblog phenomenon simply escalated. The author of the 1999 article “Weblogs: A History and Perspective”, which is one of the most cited sources in writing about weblogs, claims that this is when “the bandwagon jumping began” (Blood, 2002: 7). Preceding this phase, weblogs had been link driven sites principally dominated by computer programmers, and a few persistent computer geeks with sufficient HTML¹¹ knowledge to publish web content. The most renowned pioneers in the

¹⁰ <http://pitas.com/>

¹¹ HyperText Markup Language

field are Jorn Barger¹², who coined the word weblog as early as in 1997 (Bausch et al., 2002), Peter Merholz¹³, who coined the word blog in 1999 (Merholz, 2002), Meg Hourihan¹⁴ and Evan Williams¹⁵, who founded Blogger¹⁶ in August 1999, and last but not the least Dave Winer who is almost legendary in the blogosphere. His blog *Scripting News*¹⁷ has been maintained since 1997 and is still one of the most extensively read filterblogs. He has left his footprints in every little corner of the online software technology, and also founded UserLand Software Company¹⁸ which was one of the first companies to produce weblog software, and is best known for their Manila weblog packages. Winer also incorporated Manila weblogs into the Harvard Law School in 2003 which was the first blogging initiative at a major educational institution (Potier, 2003). With the weblogs ability to share information and ideas he was hoping to create an intellectual community amongst students, faculty and staff. However, despite the hundreds of blogs created and maintained, I have been unable to find weblogs and blogging employed at Harvard in a blended learning environment. Possibly, Winer may have envisioned weblogs utilized on a larger institutional scale failing to see their promise in the denser classroom context.

Shortly after Pitas introduced their tools, other software companies followed offering similar applications, and the continuity of maturing tools and feature packages has until now been persistent. Prior to Blogger weblogs had included a mix of links and private notes and commentary while the focus now changed to the blogger's personal reflections about life and issues of interest with links to other weblogs intertwined. Hence, the conversation on and between weblogs as we know it today was promoted, which is also a main reason for its novel popularity in academia. It is commonly agreed that Pyra Labs' introduction of Blogger in August 1999 changed the way most blog authors used their weblogs (Blood, 2002:10).

In 2001 the software company Six Apart introduced Moveable type¹⁹ and UserLand introduced Radio UserLand²⁰, both of which offered an extensive selection of pre-designed templates and special publishing and aggregator features to customize everyone's weblog. Cameron Barrett published a list assembled by Jesse James Garrett²¹ of contemporary existing

¹² <http://www.robotwisdom.com/>

¹³ <http://www.peterme.com/>

¹⁴ <http://www.megnut.com/>

¹⁵ <http://evhead.com/>

¹⁶ <http://www.blogger.com/>

¹⁷ <http://www.scripting.com/>

¹⁸ <http://www.userland.com/>

¹⁹ <http://www.moveabletype.org/>

²⁰ <http://radio.userland.com/>

²¹ One of the weblog pioneers

weblogs on his weblog CamWorld (Barrett, 2006) in 1999, and contained as few as 23 sites known as weblogs at the time (Blood, 2002: 7). Since their humble beginning weblogs have now taken foothold amongst youth and adults all over the world, and have quickly become the new social phenomenon of the Internet with as many as 66.6 million existing weblogs tracked by the search engine Technorati²² on February 14, 2007. According to David Sifry, who is the founder of Technorati, the Blogosphere doubles in size every 6 months, a new weblog is created every second of every day, and it is 60 times bigger than it was 3 years ago (Sifry, 2006). Authoring a weblog enables us to interact with people and information in a manner which seems almost absurd in contrast to the pre-weblog days when information was controlled and distributed by just a few affluent and powerful media conglomerates. The weblogs has gone from being totally unknown in 1998 to a presence in practically all walks of fame today, including the media where it is mentioned frequently and in education where it is moving across the threshold to academia where its properties are enticing both students and educators.

4.2 Characteristics of Weblogs

In this section I am going to examine the phenomenon of weblogs, and describe their distinctive and indistinctive characteristics. I will also present some representative weblog definitions. I will have my focus on filterblogs, and why I believe they are ideal as a social online tool in higher education.

Since the popularity and use of weblogs escalated at the turn of the Millennium, many academics and weblog enthusiasts have composed adept weblog definitions. Rebecca Blood has defined weblogs by its format, “a frequently updated webpage with dated entries, new ones placed on top (Blood, 2002:ix), and Bausch et al. have defined them as

pages consisting of several posts or distinct chunks of information per page, usually arranged in reverse chronology from the most recent post at the top of the page to the oldest post at the bottom (Bausch et al., 2002: 7).

However, Jill Walker who has been an enthusiastic blogger since 2000 composed an extensive weblog definition in 2005 for the *Routledge Encyclopedia of Narrative Theory* which offers a broad comprehension of the weblog phenomenon. She has been exceptionally successful at enveloping the most elementary weblog characteristics, and contends that

[A] weblog, also known as a blog, is a frequently updated website consisting of dated entries arranged in reverse chronological order so that the reader sees the most recent

²² <http://www.technorati.com/>

post first. The style is typically personal and informal. Each entry in a weblog tends to link to further information. Weblog authors also link to other weblogs that have dealt with similar topics, allowing readers to follow conversations between weblogs by following links between entries on related topics. Weblogs also generally include a blogroll, which is a list of links to other weblogs the author recommend, and many weblogs allow readers to enter their own comments to individual posts (Walker, 2005:45).

The weblog platform is distinctive in many ways, and the reverse chronological order of the entries gives the blog reader an insight into the latest news instantly and effortlessly. It is convenient for students who are looking for ideas and opinions in other blog posts while articulating their own as it often unveils previously attained information and knowledge. In addition, the brainstorming of ideas amongst the students often brings new creativity into their work process. In the following subchapters I will try to examine the distinctiveness of weblogs carefully, starting with their effortless publishing features.

4.2.1 Weblogs Have Made Us All Publishers

Authoring a weblog is an easy and convenient way to submit personal opinions to the Internet, and with the absence of editorial restrictions the boundary to submit web content is either nonexistent or considerably reduced. Weblogs have provided people who have computers with Internet access with a communicative pulpit from which they are able to publicly voice their opinions and ideas about domestic and worldly issues while interacting with other blog authors. Commonly this denotes that a housewife or educator in Japan or China may have as much voice as a housewife or educator in the U.S. or Europe. Relationships in the blogosphere are built around education, professions, hobbies, politics, and other interests in a seamless intertwined web of hyperlinks. Many weblog hosting companies offer a range of online software tools which make weblogs easy to create and maintain, and publishing web content effortless since specific HTML knowledge is unnecessary when publishing content from a weblog platform. In addition, many weblog software companies offer their tools free of charge, which removes additional computer and Internet costs as a hindrance to participate in the social dimension known as the blogosphere. Next I will examine the filterblog genre as it is most interesting type of weblog in education.

4.3 The Filterblog

Weblogs that are written by web enthusiasts, students, academics, researchers and journalists usually rely extensively on links to external articles, web sites and weblogs, and these weblogs are referred to as filterblogs. In the master thesis I refer to weblogs strictly as

filterblogs since the weblogs used academically simply nourish and prosper on communication, collaboration, and interaction facilitated via hyperlinks and comments. Rebecca Blood, who is one of the weblog pioneers, labelled the extensively hyperlinked weblogs as filterblogs, and argues that they encompass many distinct advantages, and are characterized by

an intelligent human being filtering through the mass of information packaged daily for our consumption and picks out the interesting, the important, the overlooked, and the unexpected, and may provide additional information to that which corporate media provides, expose the fallacy of an argument, perhaps reveal an inaccurate detail (Blood, 2002:12).

Academically, filterblogs are ideal as the hyperlinks enable students to find additional information via hyperlinks on other blogs which make the search for additional sources and information much easier as the effort is shared. A blogger may find interesting links from my blog or vice versa, and the exchange of links is continuous as they travel around the blogosphere. The original filterblogs defined by Blood is still in use in amongst the computer programmers and professionals, but the filterblog in use today is predominately centered around the content and not vice versa. Most filterblogs also include a blogroll with links to weblogs that are read regularly. However, exactly how often depends on the size of the blogroll and the time the weblog author have to her disposal since reading an extensive amount of blog posts obviously take a substantial amount of time. The author of a filterblog is always hoping to find interesting web sites, and papers to share with her readers, or with her cluster of readers.

Below is a screenshot of a typical academic filterblog which belongs to Lois Scheidt (Scheidt, 2006), who is a blogging scholar at the Indiana University School of Informatics. I believe it is an excellent example of an extensively hyperlinked and informative academic filterblog as it often contains appealing blog posts and conveys mounds of information that is of interest to other scholars and students ranging from a 128 pages blog bibliography, forthcoming seminars and conferences, papers she has or is presently writing about weblogs and the blogging phenomenon, blogs she reads regularly via the RSS FeedReader, an extensive blogroll of faculty and teaching blogs, academic blogs, group academic blogs, and to wrap it all up she was also awarded the best designed academic blog in at the EduBlog Award in 2005, and co-authored the best EduBlog Award paper in 2004 titled “Bridging the Gap: A Genre Analysis of Weblogs” (Herring et al., 2004).

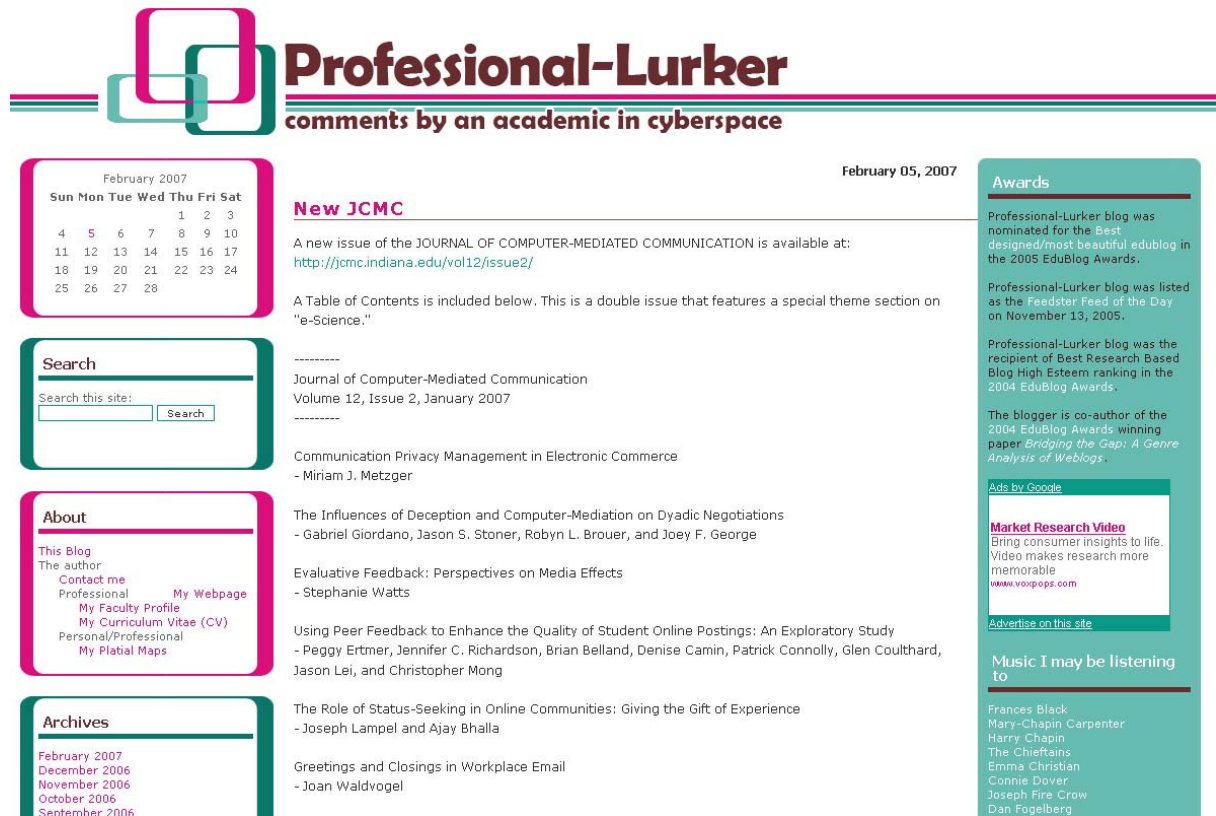


Figure 4 Screenshot of the academic weblog *Professional Lurker*

While filterblogs are used extensively in the academic sphere to share information and hyperlinks to interesting sources they are by no means the most common blogs in the blogosphere. Currently, the most commonly used weblogs are personal journals with few or no links to web content, and resemble the online journal which surfaced in the mid 1990s with Justin Hall²³ likely to be the most renowned online diarist. Below I will elucidate various weblog genres briefly in order to stress why the filterblog is the appropriate weblog genre in academia.

4.4 Weblog Anatomy

The various weblog software companies offer a range of different designs and interfaces in their pre-designed weblog templates. However, the generic weblog format tends to follow a common design with only minor contrasting features making most weblogs fairly similar with a central blog post, intertwined hyperlinks, a blogroll with links to other interesting weblogs and websites, links to the archive, a personal profile, and a few other fixed features which

²³ Documented his entire life online for 11 years

may vary slightly from one software company to the next. In the section below I will study the various details more carefully.

4.4.1 The Blog Post

The blog post is almost always centered in the middle of the weblog layout, which is an obvious location since it is the most important element of the weblog. It is the blog's face outwards, and has been referred to as the primary building block of a weblog given that it is the first thing you see when you visit the location (Bausch et al., 2002:92).

The post normally contains a title which makes the post distinct from previous posts, and easier to find while searching for a saved post in the archive. In addition, the title is the bait that is likely to lure curious bloggers to the content of the post. Each post typically includes one or several hyperlinks to other websites and weblogs, or to online articles that may be valuable to scholars and students while conducting research and completing assignments. The links ingeniously intertwine the content with the information and knowledge the blogger is trying to convey to her readers, and are typically used to enhance the topic of the post, and not to explain the hyperlink, typically exercised by the original link driven weblogs. Links are generally highlighted with a different color, and occasionally underlined, all of which make the link procedure easy and uncomplicated, and linked resources easily found and retrieved. Rebecca Blood claims that weblogs run on links, and that it does not matter if the blogger is occupied by filtering the Web or by filtering her personal life as people will eventually arrive there by following a link from another weblog, and while residing there other links to other sites are likely to be found (Blood, 2002:xi).

Normally the blog post has the publishing day and date above the title which inform people of the publishing details. It is helpful for the reader to know whether she is reading an old or new post as information change continuously. Furthermore, a blog post may or may not include pictures, which are normally added either as an additional gadget to highlight the content of the post, or intertwined in the text between lines and sections to accentuate some points and statements in the content. In the footer of the blog post we normally find the name of the publisher, a detailed time stamp of the initial publishing time automatically posted by the respective software tools, a link to the comment page or pop-up window, and usually a link to the blog post's labelled archive. Other common weblog design features are the header and the sidebar which I will look at next, and I include a picture of a typical Blogger layout to elucidate its interface details and familiarity.

4.4.2 The Weblog Header and Sidebar

The average weblog interface typically contains a header template with the name of the blog, and one or two columns on either side with a personal profile of the blog author, a hyperlinked blogroll, hyperlinks to the most recent posts, a hyperlinked and labelled archive, and hyperlinks to other interesting web sites. Academics often include links to their published books and articles, links to papers written by their peers or experts in their respective fields, as well as links to slides presented at seminars and conferences. Below you will find a screenshot of a typical filterblog with the title header and one sidebar on the left side of the weblog. The content is a mixture of academic and personal reflections with interlaced hyperlinks in the posts to highlight the content. Unfortunately, most of the links do not show as the screen picture is too small.

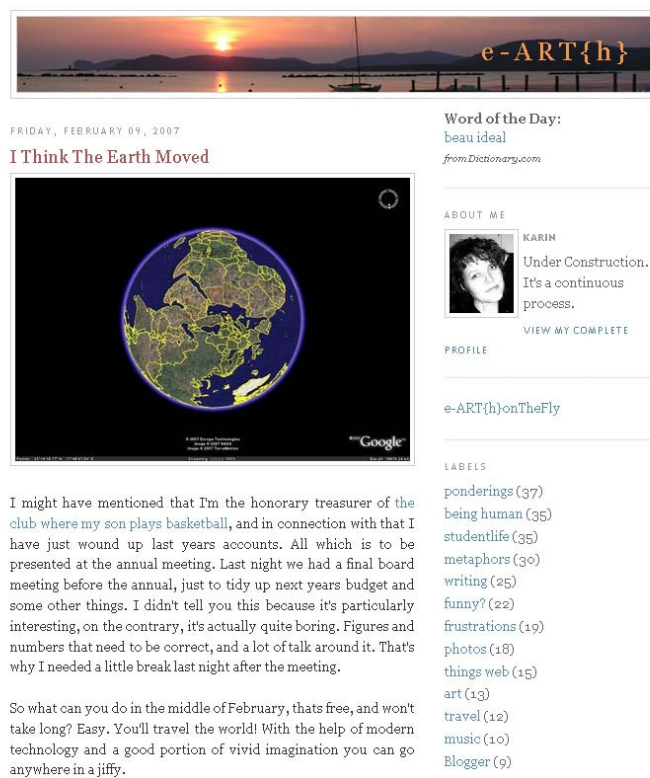


Figure 5 Screenshot of the filterblog e-ART(h)

There are many different weblog interfaces, and although most weblogs resemble each other it is common to add some personal features to make their blog design uniquely theirs. However, it is the content that is likely to attract readers and interaction, and not a fancy

appearance. In fact, people who read weblogs regularly appreciate the less decorative and gadget ridden weblog designs as they are considerably easier to read and navigate. I will now examine the weblog archive in further detail.

4.4.3 The Archive

A useful feature of the weblog platform is its searchable archive. Unless otherwise specified, all the old posts are automatically stored in an archive index on the weblog, and several methods can be used to extract specific posts and information. In the beginning of the weblog era some of the archival templates offered by software developers were confusing with the Blogger archiving system as one of the least appealing, leading experts in the weblog field to call the archiving index erratic and the system notoriously unpredictable and confusing (Bausch et al., 2002:119). However, the feature has been improved significantly today, making archiving an entirely effortless and uncomplicated enterprise.

All weblog management tools archive the post automatically, and the generic archive method in use amongst the various weblog developers is categorization of the numerous posts into one or several categories, while simultaneously maintaining a monthly and yearly archive. The various archive categories are provided with a hyperlink that directs you straight to the archived page resulting in a considerably simplified search venture. Most blog owners have experienced its advantages while searching for a particular post written months or years earlier, and blogging educators use it frequently to emphasize a present issue which has been discussed in previous posts. The archive is also extraordinarily helpful when the blog is used academically to reflect on issues concerning assignments, lectures, and course content since our reflections, ideas, opinions, and interactive discourse remain constant and present.

Syndication of weblogs via aggregators have become increasingly popular since web aggregators were introduced in the mid 1990s and since Dave Winer and User Land developed their own and simplified RSS 2.0 web feed format in 2002, which has been employed by bloggers all over the world.

4.4.4 Syndication and Aggregators

The weblog software often offers syndication tools such as Atom²⁴ and RSS²⁵ by default to their readers, which are web feeds that facilitate continuous searches and delivery of content, or summaries of content, and is typically beneficial for both the transmitter and the receiver of information (Doctorow, 2002:22). The transmitter of information enables exposure of his blog

²⁴ XML language used for web feeds

²⁵ Real Simple Syndication web feed format

content to numerous weblog platforms simultaneously, and the receiver takes great advantage of receiving the latest information as it is likely to add a much larger depth to issues that are being discussed across the various weblog platforms. The advantage with syndication is that weblog entries can be fed to a large amount of weblog sites simultaneously. Syndication of the weblog thus means that a section of the weblog is available for others to replicate and distribute, which means that “while your words originate at your weblog, it’s possible to let others repackage your words and offer them in unique ways on different sites” (Bausch et al., 2002:261). In order to receive syndicated content the weblog owner needs to install an aggregator, which is a software tool that allows the reader to collect, view, and archive all syndicated subscriptions in a browser page. The aggregator subscribes to a feed such as RSS or Atom, and retrieves the latest blog posts from the syndicated blogs automatically.

A vital convention used on nearly all weblogs is the comment feature, and rightfully so since it is the very locus of the weblog, enabling an interactive discourse between bloggers both locally and globally, ingeniously bridging knowledge and skills while sharing information, knowledge and hyperlinks. I will examine the comment option in further detail next.

4.4.5 Comments

Comments are indisputably one of the most inventive features of the weblog making it interactively and socially unique compared to other social online platforms which are either static websites, web discussion boards, chat rooms, mailing lists, or strictly personal like the email venue. The software tools available from the various weblogging systems offer the comment option customarily, and a recent survey conducted by PEW Internet found that 87% of the bloggers in their study allowed comments on their blogs (Lenhart and Fox, 2006: 5). In addition to the connective writing genre present in blog posts through hyperlinks, comments offer connectivity after the final publication enabling readers to interact and share views concerning the content of the blog post often for several days after the initial publication. The educator Will Richardson, who is the author of *Weblogg-ed*, regards the post as just a published draft, and is his way to test his writing and ideas against his audience (Richardson, 2006:31). Occasionally, blog posts create vivid debates amongst bloggers, and hundreds of comments may be submitted to one single post²⁶, although it is rare as the average blogger usually receives less than 10 comments for each post. Academically, the comment option is thus essential as it connects compatible student bloggers virtually, and often stimulates the

²⁶ <http://vampus.blogspot.com/>

interaction and collaboration between students, instructors and peers that is necessary to boost their academic enthusiasm and motivation

4.5 Summary

In this chapter I have examined the history of weblogs from their humble beginning in the mid 1990s until the current state of weblogs as of January 2007. I have explained how the weblog pioneers in the late 1990s successfully invented an online software application with such a simple and effortless user interface that it spread like hot-cross-buns and permeated people, corporations, organizations, and education globally in less than 10 years. With their undemanding tools they connect people, knowledge, information, and ideas through an intertwined nest of hyperlinks and comments in a manner of seconds. In addition, their connective constitution is practically unparalleled to previous online platforms which were largely engaged in delivering information ignoring the communicative, interactive, and reflective needs amongst the receivers. Furthermore, I have defined weblogs and examined the main characteristics of the filterblog weblog genre as it is the most typical weblog genre in higher education. I have also studied the weblog anatomy by describing weblog characteristics from the header and the blog post to more elaborate details such as the archive, syndication, aggregators and last but certainly not the least, the comments and their significance to the weblog phenomenon. With the eruption of the blogosphere and free and uncomplicated software tools, weblogs and blogging thus moved across the threshold to a range of professions including the academia. Many intuitive scholars have invited the online medium into their classroom where it is actively utilized by their students. However, we are at a juncture of change from a non-interactive teacher-centered classroom to an interactive learner-centered classroom, and both teachers and students have been reluctant as the change is a demanding and time consuming venture.

Now I would like to introduce the case studies of my survey, which scholars in different parts of the world have conducted concerning the use of weblogs in education while simultaneously maintaining the conventional face-to-face instruction and interaction. I present the papers chronologically according to the year the study was conducted.

5.0 Research Results

This chapter takes a more detailed look at each individual case study I have examined. By providing a survey of the research done so far on the use of blogs in on-campus higher education, I hope to identify common patterns and outcomes in the documented cases we currently have access to.

The investigations regarding the use of weblogs in higher education have been conducted by inquisitive scholars who have seen the dire need of a social online platform in conjunction with face-to-face interaction where students can meet, socialize, interact, and collaborate virtually in an environment that is familiar to students of this culture and era. Furthermore, scholars have seen the need of an online venue where students can reflect and write about issues concerning academic content, lectures, and assignments informally to both a familiar and unfamiliar audience. The experiments have been completed with a vast range of outcomes depending on what the instructors initially set out to find, although they all share certain similarities as well, both positive and negative depending on the success of the course. Many scholars believe that this new venue of virtual communication in conjunction with face-to-face communication will enhance motivation and creativity amongst students concerning course content and assignments considerably, and I will describe their main discoveries briefly below.

5.1 The Queensland University of Technology

As early as in 1999 the Brisbane Graduate School of Business at the Queensland University of Technology introduced a group weblog into a new and innovate MBA course that offered the students enhanced services such as study guides and online learning and teaching to explore the weblog's potential as a learning space in the higher education sector (Williams and Jacobs, 2004). A contributing reason for implementing a weblog application was the low participation level in former discussion forums. Students were given free reins as to how they wanted to use the weblog and also whether they wanted to participate in the weblog forum or not. The participating students were expected to submit five 'meaningful' contributions in the course of the semester to earn an additional five marks.

An online questionnaire was distributed at the end of the semester, and out of 102 students in two classes, 51 students responded. In the quantitative and qualitative data collected, the recipients responded predominately in favor of continuing the use of blogs as an

effective aid in both learning and teaching, and as many as 77% found it to increase their level of intellectual exchange. Nevertheless, they also indicate a significant need of an improved introductory of the weblog tool in order to employ blogs and blogging more effectively. Furthermore, the data suggests that it may have been a mistake to include contributions to the blog as an optional assessment item when realizing in hindsight that many of the weaker students submitted posts just to collect additional marks instead of contributing anything academically innovative, which agitated many students and made their experience with the weblog tool considerably less beneficial than it otherwise might have been (11). Williams and Jacobs conclude their paper suggesting that blogs provide students with an increased autonomy and ability to improve the collaboration between peers, and that blogs thus have the potential to be a truly transformative technology (Williams and Jacobs, 2004:12).

5.2 North Dakota State University, USA

In the fall of 2002 and the spring of 2003 the teachers Brooks, Cybil, and Priebe decided to examine if a motivated and enthusiastic weblog writer could become a better writer of other writing genres, and installed individual weblogs to investigate the relationship between remediated writing genres and motivation in a two semester period with as many as 165 students in two semesters. Familiarity with three different writing genres and the weblog were highly relevant to both investigations. The instructors taught undergraduate and graduate students in a variety of English language and literature classes ranging from poetry, creative writing to composition theory (Brooks et al., 2003: 4). In concluding their research they found that the genre of journal writing, which typically contains short and personal posts with only a minor amount of links present in the text, or none at all (Blood, 2002: 7), remediates a writing genre with positive connotations. However, the genre creates interference from instructors who generally prefer that students write either notebooks or filterblogs (see chapter 4). The notebook genre contains both personal and societal issues, and was found more likely to succeed as a genre within a collaborative weblog than with individual weblogs, which lead Brooks et al. to conclude that “an informative, animated class weblog that focuses on notebook entries has the potential to motivate reluctant or hesitant students to contribute” (10). The scholars found that the filterblog as a genre has the intellectual potential that instructors’ desire, but its complexity may stigmatize its prospective and prohibit extensive popularity amongst students as an academic writing genre. In addition to the questionnaire they also discovered that students are commonly more engaged in their work and motivated to write when they work in a ‘wired classroom’ with contemporary communication technology.

The do not think blogging is a panacea for writing instruction, but believe it is a writing activity worth pursuing in college courses.

5.3 The University of Virginia, USA

In the spring of 2003 Glen and Gina Bull, and Sara Kajder incorporated individual weblogs as a journaling tool for preservice teachers in an educational technology course at the University of Virginia. The weblog platform provided the teachers with a social collaborative platform from which they were directed to the appropriate digital reading archives and could share their ideas concerning media and literacy. The students maintained their blogs as a response journal whenever a blog post triggered ideas and reactions, while comments and feedbacks were shared through e-mail (Bull et al., 2003:33).

All students posted multiple entries to their blog, and as the continuity of writing excelled students were cleverly able to connect their current events with their own ideas, which they found to be of vast significance as writers. The writing environment was purposely reduced in publicity as many of the students worried about the public exposure present in the weblog platform, and as a consequence deliberately withheld many of their ideas and opinions. The weblog experiment was conducted in conjunction with face-to-face interaction where the students were continuously able to build community as well as verify that they selected the community to view their process and evolving work (34). Bull et al. concludes their article propounding that “blogs can provide a conversation space for student readers, writers, and thinkers that transcends what we have known to this point” (Bull et al., 2003:34). However, inviting blogs into the classroom context also pose many challenging questions such as what it means to communicate through blogs, are there any applicable and correct rules, and how one might apply the medium in ways that are astutely different from the students’ current engagement with printed text. The weblog needs inquisitive and explorative authors to establish a successful venue of communication and collaboration, and Bull et al. believe that further exploration is necessary to successfully find the most functional solutions (35).

5.4 Middlebury College, USA

In the fall of 2003 Barbara Ganley at the Middlebury College in Vermont incorporated a group weblog into a twelve-week English Literature course with twelve attending first-year students after having observed an unsettling trend amongst her students in that their work became increasingly more predictable while the world around them simultaneously becoming

gradually more unpredictable. She set out to merge these parallel worlds hoping that the weblog platform would build a bridge between the classroom and the real world through authentic project-based activities (Ganley, 2004).

The weblog was used as a course management tool distributing all the necessary information including the syllabus and important links to supplementary online resources, discussions concerning assignments and course content, and all the progressing and completed student work. She found the weblog initiative immensely successful, and that the platform provided the students with the visual evidence that their work mattered in the larger collective learning environment, and that each piece of written work contributed to the collective knowledge store honored each voice within the learning community equally. During the course of the semester, her students blossomed intellectually when given an opportunity to express and share their ideas and opinions while articulating reflective blog posts and comments. They learned how linking to each other's work would trigger creativity and critical thinking skills, and responses from interested actors within similar fields of education beyond the classroom context brought new perspectives and knowledge into their research and assignments, which delightfully created a dynamic atmosphere of confident students willing to assume a noticeably larger responsibility of their own words. Simultaneously, Ganley contends that weblogs do not create the magic of learning or replace the face-to-face interaction in the classroom, but believes that the balance between the physical and virtual context can intensify and enhance interaction, collaboration, and experimentation amongst the students.

5.5 East Carolina University, USA

Trey Martindale incorporated weblogs into an educational leadership graduate course in 2003 at the East Carolina University, and wanted weblogs to be key tools in improving the quality of student work regarding professional conference style presentations and academic article writing (Martindale and Wiley, 2004: 4). Students were required to present a 5-minute research presentation and critique weekly, and used their blogs actively to share ideas and relevant links in blog posts and comments with their peers. Martindale found that weblogs offered a vast advantage compared to discussion forums as blogs have a far greater sense of permanence. While blogs store all its content in a permanent and searchable archive, discussion forums generally cease to exist as soon as the course is completed, and the content typically inaccessible (4). Furthermore, Martindale found that one of the main keys to activate effective blogging is that the blogger knows her audience, and contends that “my students

were motivated and willing to write regularly and with clarity, knowing that fellow students and the instructor were reading the blogs” (Martindale and Wiley, 2004: 4). Typically, a weblog audience is either actual or perceived, and content and writing style must be organized subsequently.

5.6 The University of Texas at Austin, USA

Janice Fernheimer and Thomas Nelson explored the use of weblogs in their respective classrooms in the fall of 2003 hoping to eliminate traditional progressive teaching approaches, and investigate whether or not weblogs were capable of creating an agonistic, deliberative, and collaborative community where students are allowed and indeed encouraged to express their opinions and ideas freely (Fernheimer and Nelson, 2005: 8).

Both instructors implemented single, multi-authored course weblogs where students were encouraged to post regular reflections on class discussions and activities while simultaneously drawing connections between current events and previous discussions and activities. In addition, they were encouraged to communicate with their instructors to discuss their experiences with the course. Both Fernheimer and Nelson’s experiment had variable degrees of success regarding improved reading skills, greater peer-to-peer interaction, and in increasing the level of sophisticated face-to-face conversations. Fernheimer’s sophomore students were efficient and punctual in responding and also skilfully included their peers’ responses, although it may have been caused by Fernheimer’s clear instructions to respond to their own response and to the response of others. Nelson’s freshman students responded excessively more sporadic and superficial, and seemed unable to embrace the blog as an extension of the traditional face-to-face interaction in the classroom. The scepticism may have been caused by their previous experiences in learning where teachers largely tell them what to do and how to think, which may have overwhelmed their academic confidence and collaborative willingness (9). All of which lead Fernheimer and Nelson to conclude that in order for students to feel comfortable with the blog and for the blog to affect the writing classroom effectively, the instructors need to cautiously and authoritatively enforce and maintain clearly articulated and structured rules. Furthermore, they contend that if weblogs are incorporated correctly they may successfully bridge the expressionist and post-process divide and foster an agonistic discourse in current classrooms. Thus, they believe instructors can employ blogs to increase interaction, collaboration, and engagement between both students and instructors (11). In conclusion, a submitted student reflection at the end of the semester vastly supported their assumption when it revealed an improved interest in responses

written by peers, deeper understanding of the academic work and the awareness that their voice was recognized in the larger collective of voices.

5.7 The University of Southern Indiana, USA

In 2003 Gary Stiler and Thomas Philleo incorporated weblogs as an online journaling tool in two undergraduate preservice teacher courses at the University of Southern Indiana to make a concerted effort of improving the level of reflective practices amongst preschool teachers (Stiler and Philleo, 2003: 1). Two kinds of assessment surveys were employed to assess the study at the end of the semester where the EDUC 302 – Multicultural Education – students were asked to focus on their use of Blogger, which was the weblog host chosen by the instructors, and students in EDUC 214 – Technology in Education – were asked to respond more comprehensively to the questions in the survey. In the EDUC 302 course 48 students responded to the survey while 15 responded in the EDUC 214 class (3).

Stiler and Philleo incorporated weblogs to afford students with an informal and non-evaluative online writing journal. They expected their EDUC 302 participants to include reflections concerning course readings, activities, discussions, and presentations by both students and instructors in blog posts, and informed that their entries would be evaluated on their efforts to engage in conscientious reflections. The EDUC 214 participants were mainly approached with questions concerning technology in education. The investigators found that both the depth and breadth of student reflections in the EDUC 302 weblogs were considerably improved from the previous semester, and that they undoubtedly had prospered from the use of weblogs, while the technology students in the EDUC 214 course revealed convoluted details about the use and efficacy of the Blogger platform as an educational tool (3). Furthermore, both courses responded positively to the simplicity of Blogger in both the process of set up and in use, even though the multicultural students did encounter several problems concerning individual problem-solving activities between students and between the instructor and individual students as well as technical difficulties concerning set up and additional Blogger applications. Students in both courses also expressed concerns regarding the publicity of Blogger. When given the opportunity to choose other forms of reflective journaling formats two students in each course chose not to use Blogger simply due to apprehension regarding their anonymity and confidentiality. The instructors emphasize the importance of allowing students adequate time to read, reflect and write blog post as the sense making process is complex. They also believe that the instructors' mediation and assistance is critical during this process.

5.8 The East Asia Center, Japan

In the winter of 2003 Aaron P. Campbell became the interim academic coordinator for the East Asia Center (EAC) in Kyoto, and while occupying this position he conducted a meticulous research on Computer Supported Cooperative Learning (CSCL) with six American students using individual weblogs in a course that combined face-to-face communication with online interaction (Campbell, 2003:14). Campbell had hoped that weblogs in conjunction with face-to-face communication would trigger the students' natural curiosity and intrinsic power of motivation, develop their analytical and creative skills, and increase their autonomy, self-awareness, knowledge and social skills (17).

Students were required to publish blog posts and reply to the other blogs regularly, and to construct simple changes to the structure and design of their respective blogs. All postings were aggregated (see chapter 4), and the blogs contained hyperlinks to the other blogs. In addition, the instructor engaged in discussions on all weblogs. While summarizing the feedback from the course predominately through personal interviews with open-ended questions, Campbell found that some students had prospered motivationally from feedbacks finding them to have triggered deeper discussions, while two students found them contriving and boring. Students found participating in other learner's blogs "enjoyable, meaningful, and appealing at its best; difficult, annoying, and alienating at its most challenging times" (Campbell, 2003:52). In spite of prior anguish to the peer evaluation it turned out favorably in the end when it was unanimously agreed that it had been both beneficial and insightful (53). The blended structure of the course also brought the students closer to each other. Even though some students in strong favor of a face-to-face communication found the online interaction to have created separateness and prohibited the collaboration, others found the blended structure vastly favorable to the quality of the group communication. Principally, the students found weblogs to have given them a feeling of ownership and self awareness, and that it had developed their writing skills. However, maintaining a weblog was found dreadfully time consuming and having to read the blog posts published by others caused a considerable amount of stress and anxiety in two participants. The public nature of the weblogs caused a profound authenticity to their learning, but also a considerable amount of anguish. Nevertheless, publicity principally elicited a good feeling amongst the other students, and found it to be "challenging, motivating, and exhilarating" (Campbell, 2003:54).

5.9 City University, Hong Kong

Helen Du and Christian Wagner incorporated blogs in an information systems undergraduate course at the City University of Hong Kong in the academic year of 2003-2004 with 31 participating students to investigate how weblogs can affect individual learning in a university environment. The students were required to maintain their weblogs weekly describing their attained learning and reflection, articles read, and their opinions about the weblogs maintained by their peers, to insinuate student participation in course content and their continuous revising and revisiting of their personal blog while reading and commenting on each other's work (Du and Wagner, 2005: 4). In summarizing the final outcome of the course, they found that the use of individual weblogs captured both breadth and depth of topic coverage and effectively prepared students for both final exams and overall course performance compared to traditional course work. Additionally, weblogs seemed to have highest predictive power amongst students with high and low performance while the medium performing students had profoundly less, and the investigators were unable to determine whether weblogs motivate comprehensive learning, or if it is simply an effective tool for measuring comprehensive learning (8). Du and Wagner suggest that further empirical research is elementary to identify the best ways to use weblogs in educational contexts, and claim that it is crucial for both students and instructors to embrace the weblog as a new form of learning rather than perpetuating the teacher or subject centered learning (8).

5.10 The University of Bergen, Norway

In the spring semesters of 2003 and 2004 Jill Walker incorporated weblogs into her Web Design and Aesthetics Course at the University of Bergen to provide her students with a public space where they could share their work and ideas with their co-students and the larger blogosphere. Walker thought that introducing her students to a public space would advantageously prepare them for the communicative and collaborative means that are necessary to contend with in a rapidly emerging networked world, and also that the writing conducted in these public spaces may have unexpected and indeed startling consequences (Walker, 2005).

Walker found that the majority of her students needed regular coaching and coaxing before they understood the weblog platform and able to conduct their various assignments. Only a few students blogged while residing outside of the classroom context, but submissively conducted their assignments while Walker kindly and patiently pushed them

towards their approaching deadlines, and their writing improved significantly when realizing that their posts were being read by their peers and other unknown Cyber citizens. In addition, they began to communicate academically while scaffolding each other through the assignments by sharing links to interesting and informative web sites or their formerly attained technical skills. In Walker's second semester her students were required to write a blog review of any other blog they found appealing in Cyberspace, which unravelled quite an unanticipated commotion. She describes it best herself when referring to the experience as "opening up a can of ethically problematic worms" (Walker, 2005: 6). Although most students had positive experiences while reviewing their selected blogs and vastly enjoying the positive feedbacks from the respective blog owners, one girl had chosen a blog where the blog owner was utterly astonished and actually felt offended by being "analyzed and under surveillance" (7). The experience highlights the inevitable fact that a blogger needs to be cautious while establishing a voice in a collective and public space since Cyberspace citizens are in fact real people with real feelings. While wrapping up the investigation Walker concludes that even though blogging is an ideal communicative platform for many students it is not ideal for everyone, and contends that continued research needs to be conducted to find suitable distributed networked environments that all students are able to find acceptable (8).

5.11 The University of Queensland, Australia

A group of instructors from the Information Environment Program in the School of Information Technology and Electrical Engineering at the University of Queensland introduced weblogs as an online design journal in two design-based IT degrees in 2004 with a noteworthy success. Their pioneering effort instantiated a continued use of weblogs in the following year, although with a few minor changes as the original formula had experienced a few flaws regarding its scale, sophistication and effort, which was not surprising since they maintained as many as 400 blogs centrally and as many as 80 student weblogs in each studio course (MacColl et al., 2005: 2). Additionally, the instructors had to limit the publicity of the weblogs due to university restrictions regarding world visibility amongst undergraduate students resulting in only university visible blogs. Principally, they introduced weblogs to their classroom curriculum instead of the previously employed design journals to encourage reflection while immersed in the work process as opposed to a written reflection submitted shortly before the final submission deadline (MacColl et al., 2005: 1). All participating students were required to reflect weekly on their planned tasks, their actual achievements, and eventually their plans for the following week, and the platform resourcefully offered some of

their students an alternative voice to the traditional vocal participation in their ongoing studio process.

A noticeably progress was achieved when reflection about plans and successfully attained work were given as a compulsory activity by the studio instructors. The weblog initiative became particularly popular amongst later year students, who embraced the concept of documenting plans and reflected on process and contribution. They also sophisticatedly customized their blogs and enquired auxiliary access to more advanced functionality such as aggregation, categorization and functionality (see chapter 4). The scholars put a huge effort into summative and formative assessment of each of the student blogs, and the time consuming venture as well as other campus and academic expectations incapacitated their ambition to design and maintain personal blogs, which is an activity they aspire to employ in the future. The lack of world visibility was also a problem for instructors as they wanted their students to use their blogs as a resource to see themselves with respect in the wider professional field, and were considering to employ aggregation in future courses (7).

5.12 Penn State University, USA

In 2004 Ying Xie and Priya Sharma embraced the weblog phenomenon and introduced it to an academic setting at the Penn State University in Pennsylvania, and conducted a phenomenological investigation at a graduate instructional systems design course with the lived experience of nine doctoral students who utilized weblogs as a reflective tool during the course of the semester. The phenomenological approach was chosen, because it is aimed at an exhaustive understanding of a lived experience within a specific phenomenon. The research data was collected at the end of the course through personal interviews with the nine participants engaged (Xie and Priya, 2005).

The students maintained individual weblogs for one academic semester, and the aim of the investigation was to develop a composite description of the meaning and essences of the participants' experience and identify diverse influences on perceptions and how using weblogs may contribute to their reflective thinking and learning. In concluding and summarizing the course the investigators found most of the students positively inclined toward their experience with the weblogs, claiming that being provided them with a space to organize their reflection and commentary helped them to learn and think, as well as it offered them an extended communicative learning space where they could socialize and interact outside of the classroom context. Additionally, they really enjoyed exploring a new type of technology that is coherent with their instructional design degree as well as they were able to

siphon its use and potential for personal use in instructional design in the future. Similar to other weblog investigation, we also find negative and hesitant responses to the weblog technology, and typically because it is a new and unfamiliar technology to many students.

They expressed a strong reluctance to the grading of blog coursework since they had unwillingly engaged in the weblog activities simply because it was a compulsory and graded requirement. These students found the lack of structure and guidelines exasperating, and often felt both frustrated and lost (844). In addition, Xie and Sharma's students also found the public nature of the weblogs intimidating, and as a result refrained from blogging "anything personal, anything 'too controversial' or too negative" (845) and voiced a genuine concern regarding the authenticity and liability of the feedbacks, which led them to conclude that further research is necessary to find the balance between fostering a community while simultaneously avoiding situations that students find intimidating and threatening

5.13 Oxford University, UK

From the autumn of 2004 until the spring of 2005, Paul Trafford at the Oxford University ran the Remote Authoring of Mobile Blogs for Learning Environments project, or popularly called the RAMBLE Project²⁷, which was concerned with blogging on PDAs²⁸ or any other handheld devices linked to the learning environments at Oxford hoping that blogs would benefit and relate to the traditional learning environments (Trafford, 2005: 2). Trafford set out to investigate the reflective authoring activity in blogs in an academic context through

- the offline authoring of blog posts on a PDA and successively upload to a blog server
- the creation of a blog component that will allow blog content to be integrated into the their *Bodington Open Source Project*²⁹ VLE (Trafford, 2005: 4).

The blogging activity was made mobile and all the students given a mobile blog, commonly known as 'moblog', which is a mobile weblog consists of content posted to the Internet from a mobile device, such as a cellular phone or PDA. One group of students was asked to blog about their lecture experiences, tutorials and practises, while the other group was asked to blog about their learning experiences while practising their future profession as medical doctors (4). It is interesting to discover that both the investigator and his students found the publicity of weblogs problematic, and consequently prohibited other non-RAMBLE individuals' access to their moblog experiment. However, in spite of restriction on publicity

²⁷ <http://ramble.oucs.ox.ac.uk/about.html>

²⁸ Personal Digital Assistance

²⁹ <http://bodington.org/>

the students seemed to thrive and flourish during the blogging experiment expressing creative ideas and opinions freely in posts and comments with few signs of apprehensive reticence, applauding inspiring lecturers while condemning those with content laden lectures and no time for critical discussions. He also found some reflections to change in nature after some time, and that they included wider implications (5). Unfortunately, blogs were remarkably elementary and the students did not employ the comment option constructively. Furthermore, Trafford found that some students did not enjoy blogging and suggests that alternatives need to be afforded in spite of a profoundly positive feedback about using PDAs from all but one student. Even though the blog hosting was satisfactory the moblogging tools were indisputably unsatisfactory, Trafford concludes however that the moblogging project was useful and successful (6).

5.14 The University of Technology Sydney, Australia

In 2005 a group of instructors in the Faculty of Engineering at the University of Technology in Sydney invited weblogs into their curriculum to investigate and report whether or not the weblog tools and innovative blogging strategies are helpful in teaching large groups complex software system development. Additionally, they wanted to examine how a reflective process of blogging may facilitate improved learning and teaching strategies through observations of blogs that relate to the content of projects, student perception and usability of software tools and technology, group projects and presentations, interviews, product presentations, discussions concerning student evaluation, and feedback from the stakeholders of the project (Chaczko et al., 2005).

Their investigation has motivated and prompted the investigators to use the techniques and tools of blogging to improve the cognitive and emotive aspects of teaching and learning. Additionally, they found blogging to be an excellent tool for student feedback and the Software System Development (SSD) subject evaluation. I am unable to find a single word in the article that emphasizes student satisfaction or dissatisfaction as evaluating the outcome of student's experiences with blogging and their reflective processes is a secondary aim.

5.15 Charles Darwin University, Australia

During the summer of 2005 Lesley Instone utilized a multi-participant *WordPress*³⁰ weblog as a component of a professional development program for natural resource managers in Australia hoping to improve the commitment contributed to their dispersed Indigenous

³⁰ Weblog publishing system

communities. The report summarizes a trial period of the course, and engaged 11 participants and three instructors in a two month period spanning from May to June (Instone, 2005:305). The participants were encouraged to keep a reflective journal and to participate actively in online discussions before attending a one week face-to-face workshop. The blog was also designed to be an integral part of the web-based reading constituent. A course evaluation was held at the end of the trial period, and three weeks later six of the nine remaining resource managers participated in phone interviews.

All the participants had no prior experience with the weblog software, which caused them to approach the technology with both anticipation and anxiety, although in the end that had been an unnecessary apprehension as the software technology turned out to be an uncomplicated challenge (307). Even though most of the participants found the weblog to have potential and suggested it should remain as part of the course curriculum, the overall experiment was predominantly unsuccessful regarding the expected benefits the instructors had anticipated prior to the trial period. The participants suggested that improved structure, a clearer purpose, and privacy may enable to improve the weblog engagement considerably. The participants leaped into rich and reflective texts, but proposed that a double amount of time to the read the required literature is necessary to digest the excessive amount of information and write reflective high quality posts as well as participating actively in the online communication. Furthermore, the students were vastly at unease with the publicity of the weblog claiming that the publicity prevented them from publishing personal material to “a potentially public forum” (308), which Instone found paradoxical since a blog is a social forum yet it prevented the online communication concerning topics related to personal progress to develop.

5.16 The Queensland University of Technology, Australia

In 2005 Gavin Sade introduced weblogs to a final year Communication Design class comprising more than 80 students at the Queensland University of Technology in Australia, and conducted a thorough investigation of his results at the end of the semester, which revealed a range of fascinating insights concerning the weblog phenomenon. The students were asked to establish and maintain a co-authored weblog throughout the semester, and class prerequisites were established hoping to maintain a certain professional level (Sade, 2005: 5).

Sade invited weblogs into the curriculum to provide his student with a collaborative writing environment which would introduce them to the form of networked writing and publishing that the weblog platform supplies. The assessment requirements expected students

to participate and contribute regularly with blog posts and comments as well as assess and post two weblog reviews written by their peers. The comments had initially been perceived as a method for the staff to provide a channel for feedback, but it turned out that they were more relevant for interaction between students as the voluminous size of the cohort made an academically critical interaction principally unfeasible. Sade suggests that interaction via the comment feature is more appropriate in a smaller group of students, or “where the teaching staff is taking on roles such as mentoring, supervision, or working with peers” (7).

The connectivity between the weblogs created a mini blogosphere which erupted into small social networks where students interacted efficiently, and the continuity of posting blog entries to the web also reduced the anxiety concerning public writing remarkably. In addition, having to rely on web-based sources initiated an increasing amount of references to secondary and tertiary resources. Most unfortunately this particular reliance also led to an uncritical recycling of each other’s ideas as well as a distinctly more casual language and the referencing much less rigorous. The weblog was also more often than not used as a site to post and share academic material related to other classes and assessment items, to ask questions concerning their education, the curriculum, covered and uncovered material, and to discuss and analyse their university experiences, which was an unintentional outcome of the experiment, although very positive in regards of active participation on behalf of the students (9). In conclusion, Sade asserts that weblogs and other continuously emerging online software applications are likely to prompt significant challenges, but that they also present compelling new avenues on behalf of both students and instructors (Sade, 2005:13).

5.17 North Georgia College and State University, USA

In 2006 Chuck Robertson and Wythe Whiting at the North Georgia College and State University wrote an informative article concerning their experience as instructors with student weblogs to build an academic community in Cyberspace and to provide students an opportunity to form a relationship with their instructors also after ‘*office hours*’ since the weblogs made them available 24 hours a day, seven days a week (Robertson and Whiting, 2006: 1).

They encouraged their students to use their blogs in multiple ways to form an online weblog environment they believed would be able to improve their academic lives considerably and highlight the increased faculty-student contact, which they contend is one of the most important undergraduate level features to obtain a good education. In the weblog forum, students were encouraged to ask questions and seek additional information in a shared

environment where the other students and instructors could respond quickly. All of which may trigger numerous other questions and additional information that may have been completely unknown or cognitively veiled prior to the online conversation. They also used their blogs to announce forthcoming test dates, assignments, speakers of interest, and to share interesting and academically relevant articles with their students (2).

They found blogs to be vital in building relationships between the students, and the social dialogue that is triggered through posts and comments in weblogs showed evidence of deep reflection and creativity. The interactivity in weblogs also offers students a space to share their ideas, opinions, and hyperlinks to relevant articles or files with the other students. In conclusion, Robertson and Whiting found that writing and producing posts and comments continuously improved their students' writing skills impeccably, and knowing that their voice was available to anyone with an Internet connection vastly improved their reflective and critical thinking skills. The article contains positive feedback from their students, but does not indicate that some students may have rejected the technology. Since the typical experience instructors have when incorporating weblogs into the curriculum is split in both positive and negative groups, I assume they also faced similar problems even if it was textually ignored in the article.

5.18 Summary

The seventeen summarized investigations included in the thesis show a variety of methods employed by investigators when implementing weblogs in their teaching and learning pedagogy, and extensive reasons for having invited the particular social online platform across the institutional threshold and into their classrooms. Five of the case studies used multi-authored course weblogs (Fernheimer and Nelson, 2005; Williams and Jacobs, 2004; Ganley, 2004; Instone, 2005; Sade, 2005) and the other fourteen investigations employed individual weblogs, of which Trafford at Oxford University employed individual moblogs.

The reasons for inviting the weblog into a combined face-to-face environment also varied noticeably. Two of the case studies wanted to observe the weblog's potential as learning space in higher education (Williams and Jacobs, 2004; Du and Wagner, 2005), another to investigate if there was a relationship between remediated writing genres and motivation (Brooks et al., 2003), two of the studies wanted to provide the students with a social collaborative platform to trigger ideas and reactions (Bull et al., 2003; Fernheimer and Nelson, 2005), one to build social bridges between the classroom and the real world (Ganley, 2004), one wanted to examine if the practice of blogging would develop analytical and

creative skills and if it increased autonomy and self-awareness as well as social skills (Campbell, 2003), another wanted to improve the quality of student work (Martindale and Wiley, 2004) while one wanted to build an academic community in Cyberspace to improve the contact between faculty and students (Robertson and Whiting, 2006). Two studies wanted to teach students network literacy (Walker, 2005; Sade, 2005), and as many as six of the case studies were hoping to improve students' reflective skills (Instone, 2005; Stiler and Philleo, 2003; MacColl et al., 2005; Xie and Priya, 2005; Trafford, 2005; Chaczko et al., 2005). The seventeen case studies show diverse and mutual reasons to have invited the weblog platform into the classroom context, but my survey show that as many as six of the case studies wanted to improve reflective skills among students, and that four scholars wanted to improve social skills between students and the real world.

The results also varied distinctly where some were more successful than others, and that most of them discovered in hindsight that there is a clear relationship between success and failure depending on the extent of information, specific rules and directions, and improved structure given prior to their use. As many as twelve case studies found that the activity of blogging had generated reflective thinking amongst the students in the course of the semester. One case study found feedback to be advantageous (Chaczko et al., 2005), one found the students considerably more engaged in their work and motivated to write in a 'wired classroom' (Brooks et al., 2003), one to have provided a conversation space (Bull et al., 2003), one found the main key to effective blogging was that they know their audience (Martindale and Wiley, 2005), while one found the connectivity between weblogs to create a mini blogosphere between the students (Sade, 2005).

There was also noticeable problems in most of the case studies, and two investigations found that including a blog as an optional assessment item with grades was a mistake (Xie and Priya, 2005; Williams and Jacobs, 2004) while evaluation on efforts to engage in conscientious reflection an advantage (Stiler and Philleo, 2003), and obligatory posting, commenting, coaxing, and course work necessary from the very beginning of the course to engage students in the activity of blogging (Stiler and Philleo, 2003; Fernheimer and Nelson, 2005; Instone, 2005; Walker, 2005). One of the case studies revealed sophomore students to be more engaged in the blogging activity than freshman students (MacColl et al., 2005; Fernheimer and Nelson, 2005). While two studies found that their students reflective and critical thinking skills improved vastly in knowing that their voice was available to anyone with an Internet connection (Ganley, 2004; Robertson and Whiting, 2006), and one to have problems with the lack of world visibility due to institutional restriction (MacColl et al.,

2005). As many as six found the publicity problematic while eight surveys do not emphasize it as problematic.

Having summarized the details of the case studies in my survey I will now examine why the weblog platform could be an effective computer-based tool in a socio-cultural constructivist to generate and construct reflective thinking, articulation, collaboration, interaction, and confidence amongst students in compliance with a dynamic socio-constructivist learning approach.

6.0 Weblogs in Higher Education

The use of weblogs in higher education surfaced as early as 1999 in Australia, but the online venue remained fairly anonymous in most countries and educational institutions until the turn of the millennium. Scholars have typically regarded the venue as just another technological fad likely to fade away as rapidly as it surfaced, and thus largely ignored the platform as a digital tool with characteristics that could connect students socially and improve, effectuate, and informalize their learning process if instructors are able to utilize it decorously.

Scholars in the higher educational sector in Australia and the U.S. seem to have embraced the blogging technology on a much larger scale and with less scepticism than European scholars. Possibly, weblogs may develop and spread easier on continents where the population commonly speaks the same language than on continents with many different languages, or that the people in these continents may be more innovative and audacious since their colonist opportunism may still prevail. The author Viviane Serfaty indicates in her book *The Mirror and the Veil* that the self-representation Americans perform when writing diaries

appears to have elective affinities with some traits of American Culture, both in terms of sheer numbers and because the social practice of diary-writing harks back to deeply entrenched undercurrents in American culture (Serfaty, 2004:43).

She draws the reader's attention to Ralph Waldo Emerson, an American author and philosopher and one of the intellectuals behind Transcendentalism, who wrote a personal notebook throughout his entire life documenting trivia of his life as it transcended day by day. She believes him to be a typical example of the social attitudes towards the diaristic practises that was prevalent in America in the nineteenth century (Serfaty, 2004:44).

In the following subchapter I am going to take a closer look at why some scholars believe that weblogs and blogging should be incorporated in blended learning environments at higher education institutions. I start introducing their aim, and why reflection, interaction, collaboration, articulation and confidence are paramount components in the learning context, and how weblogs and blogging are contemporary tools that are able to boost these specific learning qualities.

6.1 The Investigators Aim

Weblogs are progressively being recognized and utilized by many scholars as a dexterous online environment and knowledge sharing medium for students. In the case studies I have examined in this thesis, scholars had anticipated that the activity of blogging had the potential

to develop the students' writing and articulation skills, to move beyond learning at surface levels and promote deeper learning by encouraging academic reflection in blog posts, in the dialogue while constructing an autonomous and authentic voice, and in the collaboration and cooperation via blog posts and comments between students, scholars, and peers. Scholars in Australia have observed that a deep learning approach is consistent with a search for knowledge and understanding (Luca and McLoughlin, 2005), which is in accordance with my research approach which suggests that blogs may be effective as a computer-based tool to generate and construct reflective thinking amongst students in compliance with a dynamic socio-constructivist learning theory. In the next subchapter I will take a closer look at reflection and why reflection is important in a constructivist learning environment.

6.2 Reflection

The human race is fortunate to have been equipped with a conscious mind, but they need communication with other human beings in order to make sense of their lives and the world in which they live. People do not learn merely from observing an action conducted by someone else, or simply from a deposit of knowledge from one person to the other. Individuals need to engage in the activity and in a communicative dialogue to learn and create meaning of all new information whether it concerns every day life issues or the articulation of complex academic papers. It is not until we bring our ideas to our consciousness that we are able to evaluate them and decide how we want to use them (Boud et al., 1985:19).

6.2.1 Individual and academic reflection

Individual reflection is an important educational strategy to assist in developing the intellectual insight of students, and to promote the critical thinking skills that are necessary in order to fully comprehend novel information (Ganley, 2004; Fernheimer and Nelson, 2005; Stiler and Philleo, 2003; Brooks et al., 2003; Instone, 2005). Unfortunately, many educators ignore the importance of reflection assuming it will take place automatically as if it is an innate trait, although the exact opposite is more likely to happen. The Brazilian educator and influential philosopher of education, Paulo Freire, expressed the notion of thinking and reflection as “I cannot think *for others* or *without others*, nor can others think *for me*” (Freire, 2000:108). Most students need to be taught how to reflect on issues and problems to develop higher order thinking as the true comprehension of new knowledge does not occur automatically in the average student during lectures or while reading the required syllabus. Undeniably, some exceptional students may comprehend the core essence of something by

associating new ideas with old knowledge structures without any external assistance from instructors and peers, but the general tendency at academic institutions is that

[M]ost students are almost totally unaware of how they attribute meaning to the things they encounter in lectures, laboratories, libraries, seminars, work placements, and elsewhere (Candy et al., 1985:101).

Often, when we learn things theoretically we are unaware of our own incompetence regarding comprehension of the topic presented, and suffer largely from this lack of comprehension when asked or required to use the respective knowledge in a different context. Meaning making and problem solving often seem unproblematic while reading the chapter introducing it, but we soon discover that the words have no meaning or concreteness if we are too intellectually detached from the information. We may learn to speak coherently from reading and listening to words and utterances, but unless we reflect on the meaning presented to us we remain unable to develop the higher-order thinking skills that are essential to fully comprehend the meaning of newly attained knowledge. Freire argued that

[F]or apart from inquiry, apart from the praxis, individuals cannot be truly human. Knowledge emerges only through invention and re-invention, through the restless, impatient continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other (Freire, 2000:72).

A rigid environment of structure and control where reflection is rejected rather than encouraged often paralyzes the motivation these students might have otherwise exhibited to transform unfortunate learning practices. In the case studies scholars found that students blossomed intellectually when given a chance to share their learning experiences and ideas while articulating reflective blog posts (Ganley, 2004; Robertson and Whiting, 2006) while others found that the depth and breadth of student reflection in blog posts had vastly improved from previous semesters with other technology based options (Stiler and Philleo, 2003) and from paper journals that are typically written shortly before deadlines (MacColl et al., 2005). Informational assimilation has been *successfully* practised and acknowledged for several decades at higher academic institutions, and although many students have graduated with impressive grades we may have failed to recognize all those students who did not, or those who dropped out of the institution while struggling to meet challenging instructional demands without formal and informal scaffolding from peers and instructors.

The ability to reflect both individually and academically are paramount skills to master in order to foster deep learning and higher-order thinking, leading me to suggest that the ideas, opinions and critical awareness that is fostered while authoring blog posts and

comments while simultaneously exploring virtual and real learning paths are ideal to foster precisely these skills.

6.2.2 Instilling the Curious and Critical Mind

Instilling the curious student mind is a highly targeted aim amongst the scholars in the investigations since it has proven to be an elementary skill in the learning process and progress (Ganley, 2004; Stiler and Philleo, 2003; Campbell, 2003). An active and student centered learning approach in which “the weblog author is ‘connected’ to processes, discourses and communities” (Wrede, 2003) is likely to promote a creativity amongst students which often remains undetected in a teacher centered classroom. Richardson proposes that

[T]he idea that we can now use social networks to tap into the work of others to support our own learning is an important concept to understand. It’s another example of how the collective contributions created by the Read/Write Web are changing the way we work and learn (Richardson, 2006:100).

In many traditional content-centered classrooms there has been little incentive to exercise this trait, and students typically act according to the teacher’s wishes and commands, and their intuitive creativity remains imprisoned behind content, syllabus, rules and regulations. The instructors’ desire to convey content rich lectures or institutional demands of content rich curriculum have led to little or no time for critical inquiry and dialogue between the instructor and her students. The time provided for questions and comments at the end of lectures is usually shared between garrulous and confident students and the lecturer while the tentative students remain silent and consequently often unable to scrutinize new knowledge appropriately. Teachers have also experienced that the complete attention some students receive in class encourage these students to continue speaking at length as they find the attention useful to unravel their train of thoughts concerning the topic being discussed, although a very frustrating activity to the other students who are involuntarily excluded from the entire conversation (Knights, 1985).

Many contemporary educators at higher educational institutions have recognized the importance of student participation in the learning process either through their own experience or directives from the national department of education. These changes have given many students free reins to reflect, inquire, scrutinize and criticize novel knowledge to trigger their interest in the academic content deposited to them in large and rapid proportions. It is only through the dialogue that authentic thinking and reflection truly prosper. If we are only to listen and never to interact we end up getting bombarded with agitating facts and information relentlessly, and there are certain human limits as to how much input we can

digest or store before our persevering minds capsizes. The author of *Learning, Creating and Using Knowledge* claims that

[T]he central purpose of education is to empower learners to take charge of their own meaning making. Meaning making involves thinking, feeling and acting, and all three of these aspects must be integrated for significant new learning, and especially in new knowledge creation (Novak, 1998: 9).

Keeping a weblog provides students with an objective writing and reflection tool that is able to help students deal with their academic experiences more constructively. In blog posts students are able to reflect textually about newly acquired information and knowledge, which in fact helps students to learn about the learning process itself. The textual contributions, which are also perceived in personal academic portfolios, often serve as a *silent teacher* enabling students to see areas of their growth or lack of growth as well as the actual growth process (Walker, 1985:58). The persistent communication and discourse between the blogger and her audience is inspirational nourishment to the reflective student, and helps put large quantities of complex knowledge in perspective both personally and academically. Walker contends that

[A]n important contribution of writing is that it provides an objectivity in relation to the initial learning experience. It can clarify the initial experience by removing it from the clouds of subjective feeling that can obscure it. It is a way of distancing oneself from the experience, which has the effect of clarifying it and fostering the ability to work with it, so that the learner can draw out potential learning (Walker, 1985:63).

Writing blog posts concerning course content forces the author to think critically and reflectively about their research, the curriculum, their assignments, discussion and attended lectures. In addition to the process of writing and reflecting, the weblog also invites and promotes communication and collaboration with peers and teachers as well as with those who have been invited into the conversation or has invited themselves out of interest of the particular academic topic. However, students need to learn how to articulate their train of thoughts comprehensively, which I will look at in the following sub-chapter.

6.3 Articulation

The critical relationship between language, thought, and dialogue was highlighted by Michael Oakeshott in his book *Rationalism in Politics and Other Essays* as early as in 1962 when he hypothesized that “humans have evolved a dialogic competence that is both private and public” (Oakeshott, 1962). As we know, a dialogue between individuals can take place in a social environment or indeed within ourselves as reflective thinking when we reflect on

problems and issues collectively and independently to locate the best possible methods to unravel problems whether they are of major or minor complexity. A social environment may indicate an environment with people physically present, such as a classroom, or it may indicate a computer-mediated social network, such as the weblog. The support and guidance students receive from their instructor or more capable peers in a computer-mediated network of weblogs based primarily on the construction and articulation of text may improve their ability to reflect and articulate their academic assignments profoundly.

6.3.1 Improve writing skills

Academic blogs are normally not a place to rant and rave about personal issues. The blog posts normally contain reflections of the issues and topics that are related to evolving assignments and these reflections may include a range of personal ideas and opinions as to how the assignment should be intelligibly approached and resolved academically. Peter Elbow believes that

ten minutes of free writing each day will help students learn to separate the producing process from the revising process to develop the habit of writing even when you don't feel like writing, and to improve your writing (Elbow, 1998:14-15).

Writing blog posts regularly may thus help students develop their own individual voice in the larger community of voices. Students who perceive that the knowledge, ideas and incentives they contribute in a networked literary forum make a difference to the work process and academic outcome are likely to write often and increase their academic motivation noticeably. In turn they often develop a powerful voice that may not have surfaced in a face-to-face classroom focused exclusively on a rhetoric communication. One of the blogging pioneers notes that when the blogger is

[A]ccustomed to expressing his thoughts on his website, he will be able to more fully articulate his opinions to himself and others. He will become impatient with waiting to see what others think before he decides, and will begin to act in accordance with his inner voice instead (Blood, 2002).

Even though the weblog bears strong resemblance with personal paper journals in that the students have to write continuously about their academic process and progress, they are vastly different in that they are public and live their entire lives on the World Wide Web. Articulated reflections in paper journals are vastly private and typically viewed only by the blog author and her instructor(s), and possibly an internal and external sensor at the end of the semester, while the blog post remains on the web as a publicly available entity and can be read by anyone, anywhere, and at any time as long as there is an Internet connection. The feedback

students receive from their peers may be as motivating as the feedback they receive from their teachers, and comments trigger participation in that everyone is included in the conversation while reflecting and writing through the work process. In addition, out of interest and curiosity they are likely to read the blog posts articulated by many of their peers continuously, which is likely to improve their creativity and participative incentives. Sebastian Fiedler argues that

[T]he weblog captures the history of a learning project in action and records the personally meaningful material that can foster and facilitate reflective practices such as conversations with one-self and others. Externalizing these activities through writing and visual representation, and publishing them in a Web-based format, opens up the individual and rather isolated projects to a wider community, thus creating additional opportunities for discussion, critique, negotiation, and shared knowledge construction (Fiedler, 2003:14).

Fiedler convolutes the transparency of the weblog as a writing genre and as a collective conversational platform beautifully. Our reflective thinking and our spontaneous ideas do not merely linger in our minds or in personal journals as private and confidential assets. No matter how personally impulsive, absurd, creative, significant or indeed logic the articulation of the blog post, the ideas are recorded in an archive that is publicly available, and the personal and the confidential thought is ingeniously externalized through the collective availability of blog posts, hyperlinks and comments that have been interactively spawned and construed.

6.3.2 Capture ideas before they escape

Weblogs are often used by scholars as a key tool to improve the quality of writing when students are conducting their emerging academic assignments. Scholars in one of the case studies found that the weblog offered their students a sense of permanence that classroom discussions do not since face-to-face conversations are usually not recorded and archived and therefore unable to recall and restore when the conversation has ceased to exist (Martindale and Wiley, 2004: 4). In blog posts the authors are able to capture ideas that continuously surface from simply being alive and thinking while the blogger reads and reflects on issues concerning their extensive coursework. Thus, a transient idea may quite possibly make a significant difference while creating and constructing the final assignment or term paper. One of the sophomore students in Fernheimer's class depicts the notion of ideas cleverly when she presents her final reflection concerning the effects that blogging had in class arguing that

[T]he blog is significantly more informal than short essay assignments, allowing me to express my ideas in a raw form, then refine them later and make them suitable for a formal paper (Abodeely in Fernheimer and Nelson, 2005:12).

Similar discoveries were pertained by Ganley's students revealing that they were able to see the emergence of their ideas both individually and collectively within the larger and collected work of the class while creating a continuously expanding hypertext document (Ganley, 2004). In a weblog environment students are encouraged to assist each other in the learning process, and while connecting their personal ideas to the ideas of others we see collective emergence at work, both dynamically and intelligently.

6.3.3 Increase Qualitative and Quantitative Student Output

Asking students to write journals is not an uncommon practice amongst scholars in higher education in their continual efforts to promote academic reflection and critical thinking skills. However, the extensive and time consuming feedback loop that is required between the student and the instructor as well as the transformational changes that new technology create have led scholars to look for contrasting communicative means of reflection. In addition, reflections concerning coursework submitted in obligatory portfolios are often written shortly before deadlines, causing students to submit surface reflections simply because it is part of the compulsory assignment rather than a structured and critical reflection of course content, and their attained level of new knowledge and skills.

The scholars in my survey had expected that the weblog platform would be an ideal reflective online journal with qualities that vastly minimize the timely feedback loops we find in written journals. However, it should be emphasized that reading and commenting on an extensive number of blogs can be as time and work consuming as written journals if attended to regularly and without assistance (MacColl et al., 2005). In contrast to written journals, weblogs reside on the web with the other student weblogs, denoting that academic reflection is no longer an issue between the student and the instructor, but between the students, the instructor, other scholars and professionals, and indeed the entire blogosphere, which has resulted in a noticeable more structured and qualitative academic reflection as well as improved network literacy in several of the case studies (Brooks et al., 2003; Walker, 2005). Writing to a real audience promotes an awareness of their own writing, leading students to scrutinize their entries and improve the quality of their assignments (Walker, 2005; Martindale and Wiley, 2004; Fernheimer and Nelson, 2005; Ganley, 2004; Campbell, 2003). Many scholars who have introduced weblogs into their classroom have found that

[B]logs provide a different tool and the potential to reinvent how we work with journals in classrooms, challenging teachers and students to think about writing in authentic ways. Blogs demand multimedia postings, precise economical writing,

regular and timely responses, and a new and exciting kind of student involvement (Bull et al., 2003:35).

Through blog assignments students are forced to write consistently, and their literacy skills are likely to improve as the semester evolves. Academic writing has a set of rules and regulations which students are obliged to conform to, and the writing form often suffocates students' creativity and joy of writing, which I would argue, most of them inhabit when they arrive at academic institutions. It takes time to learn and acclimatize to academic writing, and if no other writing platform is available to them in the learning process their writing skills may cease to exist when they need it the most at time restricted assignments and final exams. With weblogs scholars are hoping to create a less structured and controlled learning environment in which they aim to re-establish their students' joy of writing and their creative and critical writing skills (Ganley, 2004). In addition, the weblog has tools that are able to prepare students for a whole new dimension of literacy practices and competencies that prevail in our digitally networked society both academically at higher educational institutions and professionally at all Internet connected corporations. The collaboration in constructivist learning environments is vital for the success of the learning approach, and is what I will examine next.

6.4 Collaboration

The social interaction that is encouraged in computer-based learning approaches enables students to communicate and collaborate on levels previously unimaginable to scholars and students in the academic world. Collaborative learning is regarded as the constructivist paradigm of learning and teaching where students are encouraged to actively construct their own knowledge structures through sharing and interacting (Wu et al., 2004: 2). Robert Slavin at Johns Hopkins University, has conducted extensive research on collaborative learning, and the results document a positive effect on both motivation and social skills (Slavin, 1996), both of which are very important to enable active learning. We live in an age that expect people to work together collaboratively with the help of mediating technological tools that are currently pervading every aspect of our lives. Computer-supported collaborative learning encourages increased student responsibility and participation, and is defined as "the educational use of computer technology to facilitate group learning" (Ashman and Gillies, 2003:80). Working together in groups domestically while simultaneously collaborating with peers, students, and scholars globally is an inspiring and motivational incentive to work harder towards a set goal.

6.4.1 Experts and Apprentices

When the act of blogging has been instilled in the daily academic activities to build social and global bridges between students, instructors, peers, and scholars, students are given a unique opportunity to become both experts and apprentices in their field of study. It provides them with the liberty to participate in a dynamic and informal social network which extends far beyond the traditional boundaries of the classroom. In participating actively in these networks new communicative and informational venues may thus enable us to build confidence and expertise in our respective academic fields. It is important that instructors provide students with the necessary opportunities to interact with each other, and that they facilitate a collaborative learning approach in the problem solving process and progress. In a learner-centered classroom where discussion, dialogue and collaboration prevail we also recognize that the role of the teacher needs changing. The teacher is no longer the single supplier of course content, and neither is she the traditional

authoritarian, controlling teacher who directs the action, often totally unaware of and blissfully oblivious to the impact of those policies, practices, and behaviors on student learning and motivation (Weimer, 2002: 3).

On the contrary, the teacher must create a classroom where the power is shared between students and teachers, one in which teachers give away control and power to motivate and inspire the students' curiosity and competence. The teachers and the students are both experts and apprentices simultaneously as the teacher assumes the role of the Socratic mentor-expert (Ganley, 2004).

6.4.2 A Social Platform to Share Information

Weblog authors are aware of their publicity and the inevitable fact that they are writing for an audience, or at least a potential audience. Via hyperlinks every post is embedded into a web of information, ideas, opinions, and social connections of weblog authors that is global and inexhaustible. Although the predominant audience is typically based within the context of the classroom or the academic institution, the audience often extends beyond the local context to other continents and communities, and particularly if the instructor has encouraged the communication. The teacher and author Will Richardson, believes that

one of the biggest potentials of weblogs is the ability to create spaces where students can collaborate with others online [...], and that the Read/Write Web opens up all sorts of new possibilities for students to learn from each other or from authors or scientists or other professionals who can now work side by side in digital space even though they may be far away from one another physically (Richardson, 2006:24).

Richardson discovered this personally when he invited the author of *The Secret Life of Bees*³¹, Sue Monk Kidd, to collaborate digitally via a weblog with his junior and senior students. Throughout the semester, Kidd was able to follow the communication between the students closely as well as she was able to respond to numerous questions from curious and engaged students. The blatant success inspired Richardson and his students to collaborate with other prominent authors and a range of students both nationally and internationally. It is stimulating to know that your peers, instructor(s), and other professional and unprofessional individuals read your blog posts regularly (Martindale and Wiley, 2004). Reticent students are often intimidated and restrained by the verbose and the extroverted, resulting in an unwilling practice of veiling creative and visionary ideas, opinions, and knowledge from other students while communicating and collaborating face-to-face in the classroom environment. Many scholars have found that students are more motivated to write regularly and more willing to share their knowledge and ideas with their peers in a weblog community (Martindale and Wiley, 2004; Luca and McLoughlin, 2005; Campbell, 2003), and that reticent students also find a genuine voice noticed and included by the other students.

6.4.3 Building Communicative Bridges

Communication in higher education has predominately been an authoritarian and constricted communicative exchange between the instructor and the students, and the communication between the classroom and the real world has typically been modest or absent. When scholars incorporate weblogs into the classroom they also invite new and explorative ways of networked communication both within and outside of the academic sphere. Thus, they provide their students with a digital platform that is able to build global communicative and collaborative bridges between students, peers, scholars, academic institutions, and professional corporations in a manner that was inconceivable prior to the digital age. It has been argued that

[A] new anthropological space, the knowledge space, is being formed today, which could easily take precedence over the spaces of earth, territory, and commerce that preceded it (Lévy, 1997: 5).

The daily life of bloggers who continuously click on nodes and follow links from one country to the other and from one continent to the next to communicate with professors, peers, authors, journalists, teachers, and other professionals and intellectuals, learn vastly different from previous generations. Although our parents and some grandparents had access to

³¹ <http://weblogs.hcrhs.k12.nj.us/bees/>

computers and a modest access to the Internet, they certainly never had an opportunity to access and use the digital online tools and platforms that are accessible and affordable to people today. Children that are growing today

have the tools to go further in their learning than ever before – far beyond their teachers’ ability and knowledge, and far beyond what even adults could have done in the past. (Prensky, 2004: 9).

Weblogs are a connective writing genre that marvels at the very essence of including, sharing and communicating, and the communicative bridges we are able to build and maintain through the genre are as seamless as the Web itself. Weblogs have affordances that have enabled us to make some creative leaps into adventurous new digital venues that are likely to eventually change the way we communicate and learn altogether as the social bridges continues to expand.

6.4.5 Motivational

Motivation is imperative in the learning process in order to reach the learning potential that is necessary to conduct obligatory assignments both reflectively and critically. The word motivation has its root in the Latin language, and may be defined as “the degree to which individuals commit effort to achieve goals that they perceive as being meaningful and worth while” (Johnson and Johnson, 2003:137), and indicates that motivation is the driving force people need to reach their desired goals, and is predominately triggered by emotions and social interdependence.

When students are encouraged to participate actively in the work process they are able to promote the construction of meaning both theoretically and practically, and the opportunity may trigger evolutionary motivational incentives. Students avoid being thrown on an assembly line at one end of the institution and bombarded with academic content and authoritarian demands of how to fulfil their current position as students, only to get picked up at the other end totally bewildered and confused as to what they have actually learnt on their bumpy and occasionally disheartening ride through the institution of intellect to collect their desired and prestigious college degree. Obviously, this teaching paradigm is not conducive to meaningful and constructive learning seen from a constructivist point of view (Weigel, 2002:60), and its top-down approach to learning has vastly suppressed the potential student communication and collaboration.

A natural effect of an authoritarian and content laden learning environment is an environment where a large proportion of the students often become passive and reflexive learners. When instructors prohibit students to collaborate, create, and perform actively during

the problem-solving progress many able students suffer noticeably from informational overload and fatigue while attending lectures, regurgitating content, or working on assignments alone and unaided. It is beneficial for teachers to include students in the problem-solving process as each and every student is able to contribute with something as the problems-solving process unravels and evolves.

6.5 Interaction

The dialogue between the students and between the students and their instructors is an elementary tool in constructivist learning environments, and constructivist proponents believe that group work is an ideal method to “share alternative viewpoints and challenge as well as help develop alternative points of views” (Duffy and Cunningham, 1996:187). Furthermore, instructors who have integrated technology into the classroom have observed that

[T]echnology is a catalyst for change in classroom processes because it provides a distinct departure, a change in context that suggests alternative ways of operating. It can drive a shift from a traditional instructional approach toward a more eclectic set of learning activities that include knowledge-building situations for students (Sandholtz et al., 1997:48).

Weblog authors thrive on the interaction they establish and nurture with other weblog authors, and academic bloggers are no different from personal, political or corporate blogs as far as interaction is concerned. The continuity of writing and sharing academic reflections, ideas and opinions is an ideal method to trigger the natural curiosity amongst students, and the interactivity may rejuvenate inquisitive and motivated learners that are suffering with motivational issues due to a strictly reflexive learning environment. The dialogue, whether it is rhetorically or textually presented, is an imperative tool in constructive learning environments.

6.5.1 Provide greater interaction with peers

The concept of peer learning is increasingly being used in various forms at higher educational institutions as its value as learning aid is being recognized amongst scholars. Peer learning values cooperation over competition, and is ideal in the way it includes the various experiences and backgrounds the students inhabit, which may range from age and gender to domestic and professional backgrounds. Peer learning is thought to contribute to an individual’s socialization as well as his or hers social and cognitive development, and Johnson and Johnson have supporting evidence that

- in their interaction with peers, individuals directly learn attitudes, values, skills, and information unobtainable from adults, and that

- interaction with peers provides support, opportunities, and models for prosocial behavior (Johnson and Johnson, 1999:209)

Scholars who incorporate peer learning in their courses are hoping to foster skills such as collaboration and teamwork as well as the ability to reflect and explore new ideas without the teacher interfering. A group of students that work collectively to reach an explicit goal is likely to explore and conform significantly better if the team collaborates and communicates coherently to reach mutual goals. When students are expected to perform on behalf of the group they are likely to work harder although the opposite may occur if the chemistry between the students within the group is wrong, which may occur frequently if the teacher does not pay close attention to the group and its composition.

The peer learning initiative in higher education emphasizes the importance of learning through social interaction with a number of actors from a variety of backgrounds, although within the same culture. Peer groups solve problems collectively by collecting knowledge from each of its members as well as they “give rise synergistically to insights and solutions that would not come about without them” (Brown et al., 1989:40). While working alone on various projects there is no one else around to trigger our imagination or scaffold us through complex problems when our motivation to do better has disintegrated from the very exhaustion of thinking. In the multitude of evolving opinions, ideas, and knowledge that exist in a group there is usually someone who performs brilliantly when others have exhausted their ideas or problem solving initiatives. Weblogs provide opportunities for students to interact and share their learning experiences collectively with their peers while learning and building new knowledge structures. A student in Fernheimer’s sophomore class brilliantly reflects on her experience with the weblog application, arguing that

[I]t is wonderful to be in a class that realizes that learning is a group effort, and that we as student can learn from and teach each other as well as be taught by a professor. The use of blog technology in the classroom has instilled in me a kind of positive peer pressure in that I have a strong desire to contribute good ideas to the blog “discussion” and take a greater interest in what my classmates have to say in their responses (Abodeely, J. in Fernheimer and Nelson, 2005:12-13).

Having personally experienced the dynamics that pervades in a functional group it is easy to comprehend its advantages. We all have specific personalities, and display our roles accordingly. There are people who take on the role as leader without a wink of the eye displaying impressive delegating and responsibility skills that are of significant importance when managing the entire project. Others inhabit outstanding creativity skills, some have impressive analytical and systematic skills, yet others thrive on running errands or finding

necessary information in books and articles, and on the Internet. A group made up of academically and socially able peers is likely to perform and function well both internally and externally while malfunctioning groups are disastrous to both the motivation to perform and the ambition to achieve. In contrast, weblogging classroom normally avoid the prearranged group pedagogy allowing students to practice a flexible interaction.

6.5.2 Brainstorming

Brainstorming of ideas and opinions is in my view one of the most ingenious characteristics of the weblog platform regarding student interaction, collaboration, and indeed creativity. An explicit request to perform a deep dive into archived knowledge nicely stashed away in hidden chambers of our brains more often than not reveals creative solutions to complex tasks. While contemplating how to approach assignments, problems and challenges they think loudly while writing blog posts about the topic, and the cacophony of brainstormed alternatives are read, reflected, critically dissected, archived, and commented while new posts are written and new ideas emerge. Steven Johnson approaches the subject continuously in his book *Emergence* and argues that

[Y]ou influence your neighbors, and your neighbors influence you. All emergent systems are built out of this kind of feedback, the two-way connections that foster higher-level learning (Johnson, 2001:120).

The brainstorming of ideas extends beyond the context of the classroom as relationships are established via the blogosphere at other academic institutions with students and scholars who share their interests or who study or teach similar topics. Richardson visualizes a social web consisting of a network of nodes of people that are connected by their ideas and interests, and that as friendships and trust are constructed we become “willing to share our ideas and resources with the network for its betterment, because we get back just as much if not more” (Richardson, 2006:90). In addition, the diversity of voices that participate in a discussion provides the students with a far greater depth of comprehension of the topics as they are able to view it from diverse angles.

6.5.3 Hyperlinks

Another profound characteristic of the weblog is its extensive use of hyperlinks to related or interesting papers, newspaper articles, or indeed other academic weblogs. The collaboration that evolves in a successful community of weblogs interacting to reach mutual goals is radiant, dynamic and astonishingly creative, and may be perceived as a “micro world of conversation and monologue joined in a seemingly endless net of hyperlinks” (Nilsson, 2003:

2). The authors in a weblog community have their own ideas and opinions of how to solve evolving issues and problems, and while reading and responding to posts and comments from their peers via hyperlinks, a new flow of ideas emerge and new connections between ideas and people evolve continuously. The hyperlinks that are being exchanged in a network of weblogs through sharing corresponding ideas and goals have been pertained as a “social currency for both the recognition of your peers and for acknowledgment of a topic” (Efimova and Hendrick, 2005). Many educators make extensive use of the hyperlink option available on blogs, and share links to interesting and educational content continuously where some of the information are optional links while others are compulsory, although reading them usually provide students with additional spice to insipid ideas and creativity.

The articulated reflections that have initiated the communication and interaction in blog posts, comments and hyperlinks are likely to promote confidence in students as they take ownership and control of their academic development and learning, which is what I would like to introduce in my next section.

6.6 Confidence

Most students at higher educational institutions thrive on the opportunity of being included and collectively connected with the course content, but often find themselves bombarded with instructions, rules and regulations concerning course curriculum and assignments while attending their respective classes and expected to perform satisfactory at written and oral school exams. Typically, the curriculum has been structured on content, and reflection concerning the information transmitted has been absent. Freire recognized the teacher-student relationship to be of a strictly narrative character, and that the entire educational approach to be suffering from a narration sickness, and claims that

The teacher talks about reality as if it were motionless, static, compartmentalized, and predictable. Or else he expounds on a topic completely alien to the existential experience of the students. His task is to “fill” the students with the contents of his narration – contents which are detached from reality, disconnected from the totality that engendered them and could give them significance. Words are emptied of their concreteness and become a hollow, alienated, and alienating verbosity (Freire, 2000:71).

Even though instructional routines at educational institutions have changed considerably since Freire first published his ideas in *Pedagogy of the Oppressed* there are still resentment amongst teachers and students to change, and that in spite of significantly improved learning outcomes.

6.6.1 An Autonomous and Authentic Voice

A weblog allows the author to maintain an autonomous voice while simultaneously participating in vivid conversations concerning assignments through their authorship and commenting on each other's blogs. The weblog community amongst students has the potential to function as a miniature blogosphere where the blogging students can share their thoughts and ideas to generate active learning and reflection (Brooks et al., 2003; Ganley, 2004; Stiler and Philleo, 2003; Campbell, 2003). Scholars who have personally experienced the rhetoric absence amongst some students believe it is predominantly caused by the reticence and apprehension they experience when exposed to large congregations (Ganley, 2004). These students perceive the classroom as an intimidating space, and to speak coherently in front of their teacher and peers may be an inconceivable venture. Several scholars from the case studies have found that weblogs and the activity of blogging successfully include more autonomous and authentic students voices (Ganley, 2004; Fernheimer and Nelson, 2005; Martindale and Wiley, 2004; Luca and McLoughlin, 2005; Robertson and Whiting, 2006). In a classroom context where collective reflection and brainstorming of ideas and opinions are favored as well as initiated through the activity and continuity of blogging, does inhabit an explicit potential to develop autonomous students with authentic voices.

6.6.2 Share control

Old routines and practices have complicated the initiatives and incentives teachers have prompted to change the practiced traditional classroom pedagogy. Barbara Ganley who is a persistent and contemporary advocate of academic blogs emphasizes that

[F]or the weblog to work as a facilitator of efficacious learning, it is essential that everyone has an authentic voice and an authentic role on it, that everyone has a hand in creating the medium as well as the message in an environment in which the reader becomes the writer, the student the teacher, the teacher the learner as we traverse boundaries of classroom and real world, our communities forming, shifting and reforming (Ganley, 2004).

When students are given the freedom to express meanings and opinions in a digitally social domain it is equally as important that teachers refrain from using their professional authority to control the entire work process by continuously telling students what to do, how to do it, as well as when and where. Students need to bond with their weblog to successfully readjust from previously attained knowledge structures and repetitive practices that are likely to have been noticeably different. Allowing students to become individually accountable of their own learning is likely to trigger both the motivation and the authenticity that students need to gain confidence of the self and of their own opinions and ideas (Trafford, 2005; Du and Wagner,

2005; Ganley, 2004). If educators want to develop independent and autonomous learners they also must allow students enough time to develop their intellectual maturity and awareness of their own competence.

6.7 Summary

The weblog characteristics I have chosen to include as important elements in the process and progress of attaining deep learning and higher order thinking skills are vastly interconnected and intertwined. In *Emergence* Johnson explains how a system with relatively simple elements collectively constructs a more intelligent and adaptive higher-order behavior, and emphasizes that this system is not based upon one invulnerable leader, but rather on a bottom-up model where emergence starts at the bottom and evolves gradually (Johnson, 2001:120). Hence, I find reflection, articulation, interaction, collaboration, and confidence to intertwine similarly, and their interdisciplinary zeal to complement each other cleverly and logically. The activity of authoring and maintaining a weblog to attain deeper learning and higher order thinking skills emerge through the act of reflecting on issues related to the academic assignments, and while textually reflecting in blog posts and comments, our articulation skills are triggered helping students to write blog posts that are academically representative to their peers and scholars through meticulously articulating their reflections from countless chaotic although often brilliant train of thoughts. Our tutors during the thinking and writing process are the weblog actors with whom we communicate, interact and collaborate, and who trigger our curiosity and creativity far beyond our individual competence.

The growth students achieve while establishing an authentic and autonomous voice through their respective weblogs are often astounding to both the respective blogger and their teacher, but in order to succeed they must allow the weblog tool to assist them through the work process, and confidence is built as convoluted assignments are approached and performed with respectable results. Furthermore, I believe the weblog characteristics included are compatible with constructivism and in particular the socio-cultural constructivism introduced by Vygotsky and his contemporaries who emphasized the importance of social interaction and cultural tools. He also believed that learning is best attained through interaction and collaboration, and that scaffolding by adults or more capable peers is necessary to move beyond the learner's actual level of development reached through independent problem solving to her potential level of development achieved through problem solving guided by adults or more capable peers. The interaction that is triggered in posts and comments in weblogs assists students through their ongoing zones of proximal development

as peers, teachers, and blog acquaintances scaffold them through the various problem solving processes.

7.0 Noteworthy Problems

Educators who have incorporated the weblog platform into their classrooms have all had equivalent as well as contradicting hopes and ambitions for combining a social online venue with traditional face-to-face interaction in their classrooms. There are instructors who invite the platform mainly to teach students network literacy and writing skills, but the generic tendency is that most of them are hoping to improve the current communication between students by soliciting an interactive dialogue and collaboration that extend outside academia and the classroom context. However, in spite of a distinctive palpable success, a range of noteworthy problems and hesitations concerning the weblog tool is evident in most of the articles I have examined. In the following chapter I will examine the respective problems in closer detail to highlight the importance of pursuing difficulties successively to remove the inevitable teething problems³².

7.1 Technical Uncertainty

Weblogs are frequently employed in arts and humanities classrooms where students tend to be less familiar with computer technology than students who are pursuing a degree in social sciences. The technical uncertainty among many of these students generates a range of problems as well as it often prohibits them from familiarizing with the tool as they are constantly afraid of messing up the weblog design, or of losing important work prior to deadlines and publishing. The difficulties that arise while familiarizing themselves with the complexity of the technology often intimidate students and consequently immobilize the weblogs' potential and appeal (Brooks et al., 2003; Instone, 2005; Xie and Priya, 2005). Improved directions at the beginning of the course is thus of great relevance to both students and the overall success of the course. In contrast, the survey showed that students attending technology focused courses to specifically learn about computer technology are more at ease with the use of weblogs, and happy to use technology in their journal writing (Stiler and Philleo, 2003). In addition, students attending technology in education courses typically encompass a reasonable level of prerequisite computer skills resulting is far less apprehensive when new technologies are presented. Students should thus be afforded adequate time to familiarize with the selected weblog venue and its extensive technical gadgets. Another

³² Problems experienced at the early stages of an activity

uncertainty caused by inadequate technological knowledge is the grading which has put superfluous pressure on technically insecure students, and is what I am going to examine next.

7.1.1 Grading requirements

The promise of additional grades for participating in a course where weblogs are utilized seem to have been an unfortunate mistake as many students merely sign up for the course to gain the additional grades, and consequently putting very little effort into the blogging activity. The MBA course at the Queensland University of Technology found this practise invariably exercised amongst the weaker students, which consequently detracted the overall experience for some of the other students (Williams and Jacobs, 2004:11). Students seem to be far less motivated to write for the fun of writing and communicating with peers when grades have been the primary bait for participating (Xie and Priya, 2005). Students that are merely submitting assignments or responding to looming deadlines are not using the weblog enthusiastically to interact and communicate with their peers.

In general, students who are actively participating and collaborating via their weblogs feel that students who have signed up for the course should feel a certain proportion of commitment as the lack of contribution in the community is likely to affect the dynamics of the group (Campbell, 2003). In addition, an online absence means a weblog without a voice, and thus the most vital component of the weblog is missing. Dave Winer contends that a weblog could be missing most of its components and have most of its rules violated and still be regarded as a weblog, but without a voice it is not a weblog (Winer, 2003). Nevertheless, I should elucidate that there is a profound difference between obligatory blogging and grading of the course as most students are likely to blog superficially before deadlines when grades are the motivating incentive, while obligatory academic blogging means that students have to continuously kindle their cognitive skills to articulate a perpetual flow of reflective blog posts. Typically, instructors need to enforce a considerable amount of structure and guidance to prompt regular and reflective blogging which I will describe in the following section.

7.1.2 Structure and Guidance

Many educators have found that students who are unfamiliar with the weblog platform seldom adapt to weblogs and blogging as easily as they had anticipated, and that most students need a substantial amount of coaxing and practise before they understand how to use the new venue (Fernheimer and Nelson, 2005; Walker, 2005; MacColl et al., 2005). Evidently, most students do what they are asked to do, and rarely venture off on a blogging frenzy unless it is an obligatory assignment. However, the attitude often transforms as the semester progresses and

students become familiar with both the technology and the activity of blogging. In fact, scholars found that blogs can impact the writing classroom effectively if educators enable to structure and articulate their integration and function meticulously. However, scholars contend that blog behaviour needs to be modelled, and must thus ensure that the weblog has specific rules, and that these rules are clearly articulated and enforced (Fernheimer and Nelson, 2005; Xie and Priya, 2005; Instone, 2005), all of which was reinforced by the students when evaluating their course at the end of the semester. In addition, students in two courses suggested that publishing blog posts should be compulsory as soon as the course begins simply to engage them in the activity of blogging immediately rather than wait for student to willingly publish the first post which may take several weeks into the semester (Williams and Jacobs, 2004; Instone, 2005).

When blogging is an optional course element, students generally tend to see it as an annoying time-consuming venture in an already time pressured environment. At the University of Queensland, the investigators observed a noticeable progress when reflection about plans and work progress were made obligatory (MacColl et al., 2005). However, great caution must also be practised as too much obligatory work and too many rules and regulations may paradoxically suffocate the joy of writing, and rather than developing voices able to articulate reflections, opinions and ideas, teachers may find the entire course a complete fallacy since they are actually practising the teacher-centered pedagogy they had initially sought to circumvent (Ganley, 2004). Incorporating new technology simultaneously with new learning approaches is likely to cause frustration amongst the majority of students as they are generally happy with familiarity no matter how lethargic it may be in the context of higher order thinking and learning. Below I will look at some of the frustrations that are likely to surface amongst students in a blended learning environment.

7.2 Unfamiliar Context

The use of weblogs in the educational context is a new approach to learning, and thus represents an unfamiliar context to the students who have generally received information and knowledge in large and rapid proportions via lectures and textbooks. Unfamiliar contexts and experiences are typically received skeptically and the weblog platform blends in with its numerous precursors. Hence, many stressful situations emerge as students struggle to familiarize themselves with the venue and its social and public applications. Evidently, some students find weblogs more alienating than uniting which is a paradox for scholars who had thought weblogs would serve as a catalyst in stimulating responsive, critical and reflective

students. Students acquainted with the traditional learning environments where content is simply distributed and processed may find weblogs and blogging to be disruptive and unnecessary as they are satisfied with their established learning conventions, and would need a genuine reason to keep a blog. Instructors find it very disconcerting when the students use their weblogs primarily to recycle each other's ideas uncritically, or as a site to ask questions concerning their education, the syllabus, and approaching exams (Sade, 2005; Stiler and Philleo, 2003). Another issue amongst students was brought into daylight by the proponents of face-to-face interaction, and is what I will explain below.

7.2.1 Proponents of Face-to-Face Interaction

Weblogs and blogging in a blended learning environment pose significant problems and apprehension for students with a strong preference for face-to-face communication and interaction, and this is one of the reasons some students continue to despise the genre. Campbell found that two of his students felt that the use of computers created a distance between the learners, and that the blended learning environment was confusing since they met physically, but were expected to conduct most of their discourse via the weblog (Campbell, 2003:59). Some students find it as difficult to express their thoughts and ideas through writing as introvert students find expressing their ideas and opinions verbally while interacting face-to-face in the classroom. It seems to be of a minor problem within the investigations I have included, but is still a predicament in need of attention to create a blended classroom that is beneficial for every type of student. However, lack of time is a corollary reason for responding pessimistically to weblogs and blogging, prompting me to look into the matter more meticulously in the following section.

7.3 Lack of Time

Maintaining an academic weblog is typically considered as a time consuming venture as students feel obliged to produce high quality posts with critical reflections concerning curricula, lectures, and assignments. Articulating quality blog posts in learning environments where time is typically very scarce, may thus create excessive pressure and consequently produce pessimism and lack of motivation instead of enthusiasm and creativity as anticipated. Campbell's students found the lack of time very time consuming and caused considerable stress and anxiety in all the students (Campbell, 2003), and Instone's students indicated that they needed double amount of time in order to digest the excessive amount of information and to write quality posts (Instone, 2005). It is of significant importance that students are given

adequate time to familiarize themselves with the weblog platform in regards of time to read the obligatory reading, time to read blog posts articulated by their peers, time to think and reflect to make sense of the novel information, and time to articulate critically reflective blog posts. Stiler and Philleo emphasize the complexity of the sense-making process in their case study, and argue that students need to be allowed enough time to read, think, and write to be able to respond reflectively (Stiler and Philleo, 2003). In addition, they need ample time to respond to comments, and to comments on blog posts published by their peers. Obviously, critical reflections concerning academic content, process and progress is not snapped out of the air and reorganized perceptually as easy as simply depositing content and expecting students to perform at exams having regurgitated and memorized the syllabus. A large community of weblogs can be overwhelming for both instructors and students, and I will look at why in the following section.

7.3.1 Large Blog community Overwhelming

Generally academic weblog communities are fairly small and manageable for both students and instructors, and the leap into the wider blogosphere is exciting and motivating. However, occasionally a course has as many as 400 participants, which make communication between blogs an erratic and time consuming venture. It would be slightly conceited to expect students to read and comment on as many as 80 weblogs on a regular basis, and the size of the community may thus unfavorably prevent the anticipated communication with academic weblogs in the wider blogosphere. Additionally, instructors may also find a large and undermanned community impossible to attend professionally as an ongoing assessment time is likely to amount to a preposterous number of hours. The instructors assessing the studio blogs at the University of Queensland found that using five minutes to read and comment 80 blogs required nearly seven hours of tutoring every week (MacColl et al., 2005), and allocating that kind of hours and resources to an already time constrained environment may eventually turn into an illusive chimera. The feedback loop between the blogger and her audience is important to solicit communication and interaction, and I will describe this in closer detail next.

7.4 Feedback Loop

The feedback loop between the students and the instructor(s) is of vital importance to eliminate misunderstandings and frustrations, and to elicit motivation and enthusiasm. Campbell's student found that receiving feedback from the others was motivating and often

sparked further discourse, while two students found them contriving and boring (Campbell, 2003:52). Even minor problems could escalate into large and insurmountable issues if the extensive and timely feedback loop discontinues as it is the very umbilical cord between the experts and the apprentices and their prospects to succeed (Stiler and Philleo, 2003). However, as important as the feedback loop is for their success it is equally as important that the instructor assumes her Socratic mentor-expert role as students need guidance in the right direction and not final answers constituted by a superior expert (Ganley, 2004). When students work collaboratively to reach a common consensus they typically need more support to maintain an effective learning context, but support is assistance and not pre-designed templates of feasible solutions which would be a lethargic approach in a networked constructivist learning environment as its very philosophy is to make students less predictable and dutifully competent (Ganley, 2004).

The feedback loop between the instructor and the students should be as flexible as it is consistent and allow students to construct their own suggestions and solutions. Active learning is all about emergence and emergence is all about change, and Johnson highlights the wariness and uncertainty we feel when moving from an unknown to a known phase of a transition as we lose control in the process. However, “understanding emergence has always been about giving up control, letting the system govern itself as much as possible, letting it learn from the footprints” (Johnson, 2001:234). When chaos erupts students should be required to govern the problem solving process in collaboration with their peers while simultaneously allowing the instructor to observe from the periphery kindly coaxing them through challenging obstacles, and intruding only when the problem solving progress has been completely exhausted. In fact, instructors have experienced that “too much teacherly presence too soon shuts down the conversation” (Ganley, 2006).

The public nature of blogs caused students considerable apprehension concerning their privacy, which concern I will examine more explicitly in the following subchapter.

7.5 Privacy Concerns

A common and concerted predicament amongst many students in several of the investigations is the privacy concern the public nature of weblogs provoke. Many of the participants in Campbell’s research described the publicity as being “scary, intimidating, and discomforting, causing feelings of anxiety, insecurity, apprehensiveness, and vulnerability to rise” (Campbell, 2003:55). Students in Xie and Sharma’s course voiced a genuine concern regarding the authenticity of the feedbacks and found the public nature of weblogs

intimidating (Xie and Priya, 2005). Both the students and the lecturers in the RAMBLE project at Oxford found the publicity problematic and consequently prohibited other non-RAMBLE individuals access to their experiment (Trafford, 2005). The students attending Leslie Instone's course were also vastly at unease with the publicity of weblogs and prevented them from publishing anything personal (Instone, 2005). The students in Stiler and Philleo's courses found the publicity of weblogs problematic, and when given alternatives 4 students chose other journaling formats. Bull et al. also mentions that communicating through blogs poses challenges regarding publicity (Bull and Bull, 2003). However, contrary to experienced publicity angst and privacy concerns other students prospered from the publicity as it brought the issue of authenticity into their learning, and proclaimed it actually motivated them to write, finding it to be both challenging and exhilarating (Martindale and Wiley, 2004; Ganley, 2004; Sade, 2005; Robertson and Whiting, 2006; Brooks et al., 2003; Fernheimer and Nelson, 2005). Undoubtedly, the resistance to publicity is a complex paradox for educators as it is the publicity of weblog that aligns students with a social forum of peers, professors and professionals that extends far beyond the institutional context.

As apprehensive and uncomfortable the public exposure is experienced by some students the lack of world visibility may be as vexatious for educators who have institutional restrictions regarding public visibility, as the preliminary reason for providing weblogs to the students is typically to have instant access to the wider blogosphere (MacColl et al., 2005). Students that are worried about the publicity of blogs should adapt a professional approach in their respective blogs, which I will take a closer look at next.

7.5.1 Adopt a Professional Approach

It is generally wise to adopt a professional approach while articulating critical reflections and unveiling opinions and ideas in a publicly available blog post. If possible one should preferably refrain from writing anything that is too private, too controversial, or too negative. It is more beneficial than harmful for students to be visible and to place their work under public scrutiny providing that their topics are approached prudently as the opposite may occur if their reflection and ideas are too sacrilegious or biased. The primary audience for student blogs is always their fellow students and instructors, but being that they are publicly accessible there is likely to be another audience lurking in the vicinity either regularly or by coincidence, and it is thus wise to keep that in mind before publishing blog posts to the web.

While residing in a public space it is important to beware of the ethical conventions governing the space, and even without written rules and regulations to obey to the

blogosphere, academic and not, do expect their participants to conform to an ethical code of behavior. In the following subchapter I will take a brief look at our ethical responsibility.

7.6 Ethical Issues

Before students start to blog the instructors should make them aware of the publicity of weblogs, and thus, to be aware of the ethical issues that arise when they publish their ideas and opinions into the public sphere. Even though many students feel that their blog is private and read only by peers, the exact opposite may be more correct since they are engaged in a particularly accessible public domain. Weblogs do not have a particular set of rules and regulations, but it is recommend that they abstain from straying too far away from the ethical rules architected and employed in professional journalism since they are dealing with people who have genuine feelings. In most cases, academic blogs do not provoke or stigmatize individuals or professional corporations purposely, but assignments may lead them into odd and unforeseen circumstances. When Walker asked her students to review any other blog on the web she was totally taken by surprise when she found she had “opened a can of ethically problematic worms” (Walker, 2005). The reviewed blogs were generally positive about the review when approach by the students; however, one student was shocked when she discovered that the author of the blog she was reviewing was both horrified and appalled upon realizing that he was being surveyed. Another author of one of the blogs that was reviewed argued it would be better to write a positive review of a blog you like than a lukewarm of one you dislike (Walker, 2005: 7). It is certainly an equitable hypothesis to pursue when you are communicating with vulnerable human beings.

7.7 Summary

In this chapter I have examined the variety of problems and hesitancies that surfaced frequently when scholars introduced weblogs and blogging to students in a blended learning environment at higher educational institutions. Every scholar encountered some kind of problem with the weblogs, however, the scale varied considerably with some scholars running into only minor problems while others faced more extensive and complex impediments.

The investigation revealed that students in three of the seventeen case studies had problems with the weblog technology, and that these problems prohibited them from familiarizing with the weblog application. The grading requirement in one of the case studies elicited a problem in that some of the students, and predominately the weaker ones, joined the course for the extra grades and put little effort into the blogging activity, and one case study

found this to be a particular problem amongst the weaker students. Structure and guidance was another dilemma amongst many case studies. The lack of time another issue of concern, and led students in Instone's course to refrain from participating actively and caused considerable stress and anguish amongst Campbell's students. In the course conducted by MacColl et al. there were too many students in the weblog community, which made it impossible for students and instructors to read and comment on all the studio weblogs. The feedback loop amongst students and amongst students and instructors is a very important aspect with weblogs and Stiler and Philleo believe the feedback loop is vital in order to succeed. However, as important as the feedback loop is, Ganley suggests we should only use it when all other options have been exhausted as too much too soon impedes the discourse. The publicity of weblogs was also a big problem amongst many students, and prohibited many from participating actively and in publishing anything personal. The ethical issue of blogging surfaced in Walker's case study, but did not seem to be a problem in the other case studies.

8.0 Conclusion

This thesis has investigated whether weblogs and blogging can be employed successfully in blended learning environments in higher education, and if weblogs function as an effective computer-based tool to generate and encourage reflective thinking amongst students in compliance with a dynamic socio-constructivist learning approach. I have examined past and present learning theories to justify my research approach, and I have given a detailed description of the weblog anatomy to explain why I think this platform is ideal as an online learning tool in education.

The results from the case studies I examined indicate that weblogs in blended learning environments generated and constructed reflective thinking in compliance with a socio-constructivist learning approach amongst most students in nearly all the case studies. The survey also shows an improved interaction and collaboration between the students and the instructors, which was triggered by the comment and hyperlink features on the weblogs, all of which are important elements in the socio-constructivist learning approach where social discourse is favored, and where scaffolding by more capable peers is instigated by the instructors.

Several unexpected problems erupted in nearly all of the investigations, and some students despised the activity of blogging and found weblogs to be distancing and separating and approached the activity with trepidation and disgust. The most common problem expressed in the case studies is privacy concerns due to the publicity of weblogs. Students found the publicity intimidating and refrained from expressing many of their ideas and opinions. Another issue of concern amongst the students was the lack of time, and emphasized the importance of additional time to read and reflect on course content appropriately to write academically reflective blog posts, to reply to comments on their blog posts, and to be able to read and comment on the blog posts written by their peers. The lack of technical skills amongst some students in the case studies generated apprehension and lack of familiarizing with the weblog tool, and it was suggested that better information and instruction should be given at the beginning of the course to enforce the weblogs potential and appeal. It was evident that many students wanted improved structure and guidance throughout the semester, and to be given obligatory blogging assignments as early in the semester as possible. In the case studies that promised additional grades as a participation bait teachers found that many students sign up for the sake of the grades, and therefore put very little effort

into the blogging activity. In one case study students were confronted with ethical issues when asked to analyze a blog chosen freely from the Internet. The experience brought up the issue of ethics in Cyberspace, and that students should remember that the people they deal with via their blogs are real people with real feelings.

The case studies were conducted at a variety of university courses ranging from technology based courses to arts and humanity courses, and the outcome seem to have nothing to do with the type of course, but is predominately related to prior information, obligatory work, structure, and assistance and practice during the course of the semester. Inviting the weblog platform into the classroom poses many challenging questions, but also compelling new approaches to learning that is advantageous to learners and instructors in an increasingly 'wired world'. In spite of problems and hesitancies regarding the weblog platform only one of the investigation was unsuccessful in regards of the initial research approach, but the students suggested that weblogs would remain part of the curriculum because they believed it had potential (Instone, 2005). Another case study was unsuccessful with most of the intentional perspectives of the investigation, but found it positive regarding active student participation (Sade, 2005). In spite of student participation and academic reflections in blog posts, Paul Trafford found that his students in the moblog project did not use the comment option constructively, and that they did not enjoy blogging (Trafford, 2005). All the other case studies are positively inclined towards the use of weblogs in blended classrooms in spite of unexpected problems regarding publicity, time, and technical uncertainty. The case studies show thus that a majority of the case studies are in favor of using weblogs, which is in compliance with my own presumption prior to the investigation that weblogs and blogging are compatible with constructivism in blended learning environments.

I believe weblogs are ideal in blended weblog and face-to-face learning environments if both educators and students embrace the medium with curious and explorative enthusiasm. In addition, the educators have to enforce enough structure, rules, practice, and prior information to give the students an opportunity to familiarize with the medium as quickly and effortlessly as possible. On the other hand, it is important that instructors abstain from giving too much structure and rules as it is likely to make the students dependent on persistent teacher scaffolding, and thus make them less independent students. A blended learning environment totally dependent on teacher coaxing and scaffolding would contradict the constructivist ideal of students working collectively in the problem-solving process to create motivated and academically independent students, and it would oppose the purpose of

incorporating weblogs and blogging into the learning environment to reinforce the constructivist ideals.

My investigation has identified a range of experiences amongst students and scholars in the seventeen case studies, but while comparing their final outcomes I have found the majority to have completed their investigation with positive results. Although a lot has been said and written in favor of blogs, I did not know prior to my survey whether the actual case studies had completed their surveys positively inclined towards their incorporation and use in blended learning environments. I find the result to be interesting and believe the findings would be of vast interest and help for those who are thinking about inviting the weblog platform into their classrooms. It is thus equally as important reading for scholars who have condemned weblogs and blogging as a waste of time and energy, and who believe that they are not worthy their attention. However, it was accentuated by several scholars that further research is of paramount importance to find the best ways to use weblogs and blogging in educational contexts, an approach that can be recognized and embraced by both students and teachers. I rest my case with Barbara Ganley who after several years with weblogs and blogging in a blended learning environment at a higher educational institution contends that

[I]t is in the balance between the virtual blogging community and the face-to-face interactions of the classroom that we can push the boundaries of education to include, formally, collective cognition (Ganley, 2004).

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