A SYNTHESIS OF GOOD DESIGN PRACTICES FOR STAND ALONE "GLOBAL E-LEARNING" FOR GLOBAL ORGANISATIONS

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ABSTRACT

Title: A Synthesis of Good Design Practices for "Global e-Learning" for Global Organizations

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Global organizations spend millions of dollars designing stand alone Global e-learning. The shortage of research in stand alone Global e-learning and a consequent lack of empirically validated guidelines presents a challenge for global organizations in their efforts to design and deliver e-learning courses that are suitable for a diverse range of learners (World Bank, 1999). Guidelines proposed by Henderson (1996), Edmundson (1996), and Gunawardena and Sanchez (1996) are often used in the design of global courses. However, it is difficult to find under what conditions a particular guideline or educational strategy is effective. This study aims to reduce this lacuna in the knowledge about the design of stand alone e-learning courses. The current work is an exploratory study of four Global e-learning courses. Using Reeve's (1997) e-learning dimensions, the study focused on exploring Global e-learning from the learner's point of view. This analysis of e-learning design is important because it can identify the important considerations as perceived by the learner. Personalizing the learning content, opportunities for learner interaction, flexible design, and the use of multiple epistemologies emerged as important design considerations. Using recommendations from learners, a set of ten design guidelines emerged. In the strategic planning process these guidelines can provide useful tools for evaluating existing Global e-learning initiatives or determining critical success for future Global e-learning initiatives. The discussion focuses on essential elements to be considered for the development of stand alone Global e-learning in global organizations.

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CHAPTER 1: THE RESEARCH PROBLEM

The design of "Global e-learning courses" (e-learning that is offered to a group of learners from many cultures) requires an understanding of many education-related factors such as multimedia content, instructional design, cross-cultural learning and electronic technologies. The main question guiding this dissertation is: how should we design stand alone Global e-learning to tap into the cross-cultural commonalities among learners so that each learner acquires knowledge and skills and makes meaning effectively, regardless of his or her language, culture or location?

The shortage of research on stand alone Global e-learning and a consequent lack of guidelines, presents a challenge for global organizations (organizations that share and source resources on a global basis) such as the United Nations (UN) in their efforts to design and deliver e-learning courses that are suitable for a diverse range of learners (World Bank, 1999). This study aims to reduce this lacuna in the knowledge about the design of stand alone e-learning courses.

A consensus exists amongst educational theorists and social scientist is that individual development, culture, and learning are all interrelated (Wild & Henderson, 1997; Willems, 2007). However, the questions of "how" they relate and influence one another, as well as the best practices to leverage those interrelationships for improved individual learning is still widely debated. It is not possible to design e-learning courses to address every possible identifiable cultural variable that may influence the learning process (Dunn & Marrinetti, 2002). The research on how learners experience Global e-learning is minimal. It is critical that instructional designers assess the range of possible affective states that users may experience while interacting with the system (Hudlicka,

2003). The most effective e-learning environments are adaptable to accommodate the widest range of learner needs across a diverse global village (Stevens, Gatling & Murdock, 2004).

Consequently, the main research theme of this study was developed by collecting learners' voices reflecting their experience with Global e-learning courses and collating those results with the available literature. The study explores many unanswered questions about Global e-learning. For instance, what is Global e-learning like from the global learner's point of view? How might that influence good design practices? This analysis seeks to identify the important design considerations as perceived by the learner. The findings led to the development of suggested guidelines within which Global e-learning design approaches can be evaluated and compared.

With particular reference to the United Nations (UN), there are many reasons cited for adopted an e-learning methodology as an approach for organizational development (UNICEF, 2003). These include (a) the geographic distribution of field offices, (b) the increase in the number of staff working in field offices, and (c) the need to provide training content that can easily be changed and updated.

An organization's ability to meet its mission is enhanced by an investment in human resources, much of which occurs through learning activities and programs for staff development. Learning programs in this context are designed to develop skills that prepare staff for a lifetime of learning in their personal and professional lives. Employees will need to continually develop and upgrade their skills and competencies in order to perform their duties to full capacity. However, instructor-led training is expensive and time consuming, especially if staff members need to travel to attend training seminars.

E-learning has brought about a new context for learning and training within the UN and other global organizations such as the World Bank. With recent advances in network, software and bandwidth technology, it is possible to offer global access to learning opportunities for all staff members. Staff acquire new skills and access knowledge rapidly, thus eliminating traditional barriers to high-quality training, and enabling individuals and their organizations to become more responsive to rapidly changing environments (UNICEF, 2003).

Global organizations such as the UN have their own rationale and approach for using e-learning. Staff learning and development units are up against many constraints such as time (shorter development cycles) and money (economies of development). As a result, the prevailing pedagogical model of e-learning implementation in many global organizations tends to promote a one-size-fits-all pedagogy (UNICEF, 2003; Willems, 2007). One e-learning course is intended for all or most employees within the organization.

The adoption of and transition to e-learning, like other strategic changes, can face resistance (UNICEF, 2003). In the last year alone, informal discussions with learning committees in UN agencies found that many staff members felt that the e-learning environment is not real, the learning content is not relevant to their needs, that case studies and examples utilized are "foreign," assessment strategies are incongruent their experiences, and, finally, many staff members found the overall learning experience de-motivating because they had to learn alone.

Thus, instructional designers who design for learning in multinational and international organizations face a tremendous challenge when designing courses, where

many cultural differences exist between the learners and no analysis has been considered (Arya, Margaryan & Collis, 2003). Sometimes instructional designers design e-learning programs through some form of localization (Leask, 2000; Strother, 2003). Localization involves taking a product and making it linguistically and culturally appropriate to the target locale (country/region and language) where it will be used. In the context of global organizations, staff members have diverse cultural orientations reflected in differences in values, interpersonal interactions, communication patterns, time orientation and scheduling, rules of activity and engagement, ways of learning, and approaches to problem solving.

Certainly, the challenges associated with training diverse groups of learners are present in traditional-learning environments as well. During a traditional-training seminar, however, the trainer is present in the classroom, and a quick glance from the in-class trainer reveals who is attentively taking notes, pondering a difficult concept, or preparing to make a comment. A learner, who is frustrated during a lecture, or confused during a classroom assignment, is equally evident. In regular teaching-learning situations, cues can help to establish understanding by helping trainers to identify moments when learners do not comprehend and by helping learners to interpret the meaning of what is being taught.

In addition to the lack of visual cues, the sense of community, which develops through the interaction between learners and learners and trainers in a traditional-learning setting, is lost. Separation by distance influences the rapport that often develops when individuals from different field offices and sections join together to participate in a class setting. However, it is important to note that even in a workshop where there is a diverse

group, an instructor cannot be expected to "bring forward examples that appeal to everyone's interest and draw on everyone's experiences" (Wilson, 2001, p. 206). The key to success is to rely on some specific proven instructional options that can appeal to a diverse range of learners (Edmundson, 2003, 2004; Rattanapian, 2002).

Another problem that is widely cited in the literature is that many e-learning courses designed for international audiences are biased towards self-motivated and independent learners (McGee, 2002). This learning environment may prove culturally incongruent with the learning styles of individuals from some cultures. For example, learners from many South East Asian countries are not familiar with 'independent' learning assumed in North-American e-learning courses (Ballard & Clanchy, 1997; Bates, 1997; Mahesh, 1997; Ziguras, 1999). Anakwe, Kessler and Christenser (1999) found that the motivation and communication patterns of learners from individualist cultures were supported in distance learning environments to a greater extent than those of learners from more collectivist societies. In collectivist societies, the view of the individual is one that locates his or her identity within that of the group as a whole (Tiffin, 1998).

Additionally, the manner in which different cultures use graphical interfaces, images, symbols, colour, and sound vary widely (Chen, Mashnadi, Ang & Harkrider, 1999; Cifuentes & Murphy, 2000; Fernandes, 1995; Gillani, 2000; Ju-Pak, 1999). For instance, sacred colours in the Judeo-Christian West (red, blue, white, gold) are different from sacred colours for Buddhists (saffron yellow) or Muslims (green).

Thus, it would appear that traditional instructional models fail to address important aspects of the issue of multiple cultures in the design process (Powell, 1997).

Perhaps as a consequence of a weak literature base, designers adopt a culturally homogenous approach, and, as a result, the learning environment tends to not be a culturally rich one (Henderson, 1996). In other words, the shortage of culturally specific literature and research presents a challenging problem for organizations such as the UN that wish to design comprehensive e-learning programs suitable for many kinds of learners (World Bank, 1999).

Studies exploring learner experience in Global e-learning environments can be grouped into two categories. The first category of research compares and contrasts learners from different nationalities and their experience in Global e-learning environments (Lim, 2004; Kim & Bonk, 2002; Kum & Vanessa 2000; Owens, 1998). The second category analyzes one or two dimensions of learner experience in Global e-learning (Chen et al., 1999; Burge, 1994; Du Praw & Axner, 1997; Edmundson, 2006; Goodfellow, 2001; Lee & Doo, 1997). These studies are not necessarily relevant to the needs of global organizations. In many global organizations, one stand alone e-learning course is designed for staff from many different cultures (UNICEF, 2003)

Frameworks and guidelines proposed by Henderson (1996), Edmundson (1996), and Gunawardena and Sanchez (1996) provide resources and recommendations for the design of Global e-learning. Practitioners or local decision-makers who work in global organizations, are interested in research relevant to our own context of practice. Under what conditions is a particular framework or educational strategy effective? Is the strategy suited to contexts similar to mine? How does it work? How can previous research findings be implemented in my work context? How can its efficacy be improved? Which groups of students benefit most from the strategy? How is the strategy

perceived by different groups of learners? Practitioners like to know details of the scenarios in which the previous research is likely or not likely, to work. This kind of concrete information can help practitioners to make informed decisions about the extent to which the findings of the relevant research are applicable to their work context.

While it is probably not feasible to address every identifiable trait that may influence the design process, what may be feasible is to find those elements of Global e-learning that could make or break the learning experiences, and adapt those—leaving the others alone (Marrinetti & Dunn, 2000). Given the investment that most UN agencies and other global organizations are making towards e-learning, the increase in demand for e-learning in all agencies, and the decreased funding for learning in general, it is necessary to begin a thorough investigation of this problem. The majority of Global e-learning studies to date have provided a perspective which emphasizes course design, technology, and interaction and interface design. This study adopted a more holistic view by focusing on diverse learners' experiences with stand alone Global e-learning.

There are three objectives to this study. The first objective is to describe learners' experiences in global e-learning. The second objective is to provide guidelines that may be useful in the assessment of existing or off-the-shelf-course. The third objective is to draw on the implications of learners' experiences and the existing literature for the development of better practice guidelines for the design of globally accessible e-learning courses. The main question guiding this dissertation is: how should we design stand alone global e-learning to tap into the cross-cultural commonalities among learners so that each learner acquires knowledge and skills and makes meaning effectively, regardless of his or her language, culture or location?

CHAPTER 2: WHAT DOES THE RESEARCH TELL US ABOUT GLOBAL E-LEARNING?

The purpose of the following literature review is to identify (a) what is already known about global e-learning, (b) key characteristics and concepts of global e-learning, (c) the relationship between these key concepts, (d) existing theoretical perspectives on global e-learning, (e) inconsistencies or other shortcomings in our knowledge and understanding of global e-learning course design, and (f) what areas need further exploration.

The literature review was conducted in two phases. In the first stage, secondary sources such as magazine journals, Web sites and non-refereed journals were reviewed to gain a general understanding of global e-learning. These sources assisted with the identification and isolation of specific issues such as culture and instructional design, and they furthermore provided the background necessary to isolate a tentative research problem. Once these specific issues were highlighted, primary sources such as journal articles were reviewed. Resources were gathered from numerous databases (e.g., Google Scholar, ERIC, Proquest, and PsycInfo). Key research terms used to gather the literature included: global e-learning, cross-cultural distance education, culture and online learning, diversity and e-learning. The primary sources were gathered and used to guide and inform the study. This part of the review was more thorough and extensive, in order to obtain as broad and detailed knowledge as possible of all aspects of the topic. Both these stages enabled the author to define and limit the problem, and to develop a concise plan of action.

Organizational Learning and Development in the Non-profit Sector

A learning organization is an organization that continuously develops and increases knowledge capacity (Senge, 1994). This adds value to the impact of the organization—a more skilled and knowledgeable workforce can only benefit the organization. Since the 1970s, traditional training practices for the non-profit sector have included the use of technology, but the mass use of online-learning materials has become popular in the sector only since the late 1990s (Musyoki, 2002).

Thus, many non-profit organizations currently use e-learning for staff development purposes (Isoph, 2005). A survey by a non-profit association on e-learning found that the most common type of e-learning programs delivered by non-profit organizations is on-demand, self-paced learning (Le Cavalier, 2003). Half of the organizations surveyed use custom-built courses. The survey found high satisfaction amongst users who participated in custom-made courses. Key benefits reported included: convenience, easy access by learners, and cost-effectiveness. One of the major drawbacks reported was that the planning and design of a custom-made, e-learning course required a huge time investment from staff in the organization who were responsible for organizational learning (Bersin & Associates, 2004; Ellis, 2004; Le Cavalier; Urdan & Weggen, 2000).

By contrast, problems with technology, lack of time for training, limited or no human interaction, and irrelevant course material, are some of the barriers to e-learning that have been identified (Bates & Poole, 2003; Dignam, 2004; Mungania , 2003).

Overview of the UN Learning Context

UN offices are located in over 180 countries around the world. The majority of staff are located in country offices outside of headquarter (New York, Geneva, and Paris) duty stations. There are two categories of staff. The first category is International Professionals. These staff members live outside of their national country. They can however occupy posts in headquarter locations even if they are a national of that country. National staff members are nationals of the country they work in. In most UN agencies International staff are expected to rotate to a new location every five years while National staff do not rotate.

Every UN agency has a learning and career development unit/section that is responsible for staff learning and development. Internal learning opportunities include traditional workshops, coaching/mentoring, Webinars, etc. Staff members are also able to participate in external-learning opportunities such as conferences and seminars. In recent years, the United Nations Systems Staff College (UNSSC) has developed learning programmes available to all UN agencies (Human Rights Approaches in Programming, Monitoring and Evaluation of Programming, and Common Country Assessment) in order to streamline learning programmes within the UN system.

In the past five years, stand-alone e-learning has become a popular learning methodology for mandatory learning (i.e., Security Training in the Field, Prevention of Sexual Harassment in the Workplace, and Ethical Behaviour in the Workplace). Staff participate less in traditional workshops and more in e-learning courses. Almost every agency buys off the shelf courses in areas that cover functional competency areas such as

coaching, performance management, conflict resolution, etc. Many agencies now hire e-learning vendors to design custom-made courses in technical areas such as the UN Programme Process and Emergency Preparedness and Response.

There are many different instructional design models used in the UN, and they are based for the most part on the generic "ADDIE" model which stands for analysis, design, development, implementation and evaluation. Often, the analysis stage is ignored. In instances when off the shelf courses are implemented, the design and development stages are not considered .This omission has many implications for how learners experience Global e-learning.

Overview of Distance Education

Definitions of Distance Education Cited in the Literature

Distance education, or distance learning, is a field of education that focuses on the pedagogy, technology, and instructional systems design of learning. Over the years, the definition of distance education has been redefined numerous times. This is evident in the evolution of Moore's (2000) distance education definitions. In 1990, Moore described distance education as "all arrangements for providing instruction through print or electronic communications media to persons engaged in planned learning in a place or time different from that of the instructor or instructors" (p. xv). Later, Moore and Kearsley (1996) refined the definition to specify that the learning is planned and includes "organizational and administrative arrangements" (p. 2). Most definitions in the literature specify that distance education is teaching and learning that is separated by time and space, using a variety of technical media to support teaching and learning (Keegan, 1996).In this study, distance education will refer to planned learning that normally occurs in a

different place from teaching, and as a result it requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special techniques of course design, and other technology, as well as special organizational and administrative arrangements (Moore & Kearsley).

Types of Distance Education

The historical inception of distance learning goes back more than a century when correspondence study started (Moore & Kearsley, 1996). This early form of distance learning was termed *correspondence learning* where the content was delivered to the learner mainly through print. The 1990s were an era of incredible growth in the conceptualization of distance education, motivated by the introduction of new multimedia technologies, and the Internet into education. The emergence of a new term to describe technologically enabled learning occurred-e-learning.

E-learning

The term *e-learning* is used synonymously with Web-based learning (WBL), Internet-based training (IBT), advanced distributed learning (ADL), Web-based instruction (WBI), online learning (OL) and open/flexible learning (OFL) ;(Forman, Nyatanga, & Rich, 2002). Kaplan- Leiserson (2006) has an online e-learning glossary which provides the following definition of e-learning:

> E-learning covers a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It

includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio- and videotape, satellite broadcast, interactive TV, and CD-ROM. (p.1)

E-learning can be delivered through synchronous and asynchronous means. Synchronous e-learning models tend to follow the traditional-classroom model. Online lectures are the "driver" of the course (Midkiff & DaSilva, 2000). The asynchronous e-learning model requires students to learn independently. The next few paragraphs will go into more detail on the pedagogical differences between synchronous and asynchronous e-learning.

Asynchronous e-learning. Asynchronous e-learning takes place when the learner, not the teacher/instructor wants it to- learners can complete the course with minimal or no interaction with the course designer (Omwenga & Rodrigues, 2006). Asynchronous learning is sometimes referred to as distributed learning which is defined as online learning that takes place anywhere and anytime it is needed. Some characteristics defining asynchronous e-learning can include (a) a self-paced course, (b) exchanging e-mail messages with a mentor, and (c) posting messages to a discussion group.

In asynchronous e-learning environments, student may feel isolated or be less motivated to complete the course because most often they are without any real-time human interaction (Morse, 2003). In addition, learners are not provided with immediate feedback on their performance.

Synchronous e-learning. Synchronous distance education (DE) is defined as "the time-and-place-dependent nature of classroom instruction proceeding in synchronization with a DE classroom located in a remote location and connected by videoconferencing, audio-conferencing media or both" (Bernard, Abrami, Lou, Borokhovski, Wade,

Wozney, Wallet, Fiset & Huang, 2004, p. 408). In a synchronous e-learning course, communication and interaction between the participating individuals occurs instantly and the participants can access the information at the same time. Some of the characteristics defining synchronous e-learning include (a) audio conferencing, (b) satellite broadcasting, (c) video teleconferencing, and (d) chat rooms.

Blended learning. Blended learning is referred to as distributed, hybrid, flexible, or multimodal learning (Duhaney, 2004; Gibson, 2006) and is described as the combination of classroom instruction with self-paced online materials (Cennamo & Kalk, 2005). Blended learning mixes various event-based activities, including face-to-face classrooms, live e-learning, and self-paced learning. There is often a mix of traditional instructor-led training, synchronous online conferencing or training, asynchronous self-paced study. Blended learning appears to provide strong support for instructors looking to create learning settings based on strong learner-centred modes of delivery (Oliver, Herrington & Reeves, 2005).The blend often depends on the level of face-to-face communication that can be provided for students.

Global e-learning. Years ago, the literature on Global e-learning was referring to learning resources developed in one country and taught/offered to another country (Mason, 1994). At that time, global education trends fostered the development of partnerships between academic institutions in different countries (McIsaac & Gunawardena, 1997; Mason). These international academic partnerships were found to have four educational benefits. The advantages included (a) providing educational opportunities for individuals in developing countries (UNESCO, 1996), (b) opening access for education to women and individuals with disabilities in low-income countries

(Bates, 1997), (c) an increase in collaboration between international learners (Bates & Escamilla de los Santos, 1997), and (d) a decrease in cultural bias between learners of different backgrounds (Mason).

There are some well-known documented problems with these global partnerships. Many educators overlooked the cultural contexts of distance learners in global distance education courses (Paul, 1995). A few of the problems reported from the learners' perspective included the dominance of Western-learning theories used in the design of the course which many times were incongruent with the learning styles of individuals from non-Western cultures (Edmunds, 2006;Henderson, 1992; McLoughlin & Oliver, 2000;Moore, 1996). Western learning theories refer to Euro-United States and other Anglo-perspectives (including Great Britain, England, Canada, and Australia). The problems also included the lack of appropriate media for culturally diverse learners (Benson, Frumkin, & Murphy, 2005), and cultural misunderstandings associated with language and inappropriate examples and metaphors in the course content (Meacham & Zubair, 1992).

In recent years, in order to provide training to large numbers of individuals in a convenient, cost-effective way, many global organizations (organizations that share and source resources on a global basis) have turned to e-learning for staff-development purposes. As a result, there has been an interest in the design of e-learning for a culturally diverse group of individuals who work in the same organization (Dunn & Marinetti, 2002; Marinetti & Dunn, 2000).

Because no formal definition of Global e-learning exists, for the purpose of this dissertation, Global e-learning is defined as e-learning that is offered to a group of

learners from many cultures. This diversity will extend but not be exclusive to age, nationality, ethnicity, educational background, intelligence levels, learning styles, and language.

Asynchronous stand alone global e-learning. Most UN agencies do not have resources to offer synchronous e-learning. There are many reasons for this: (a) poor Internet connections in some field offices, which make it difficult to use Web-based technology; (b) large number of learners; (c) learners having different needs and concerns; (d) learners in drastically different time zones; and (e) many learners having unpredictable and widely varied work schedules (UNICEF, 2003).

While synchronous e-learning courses do exist in some UN agencies, these programs are difficult to maintain and implement. The main reasons cited for this are (a) hardware or logistics support being too expensive to maintain, (b) a lack of extensive funds, and (c) learning having usually to take place at specified times.

Self-paced, "stand alone", asynchronous e-learning is predominately the main form of e-learning that one finds in most UN agencies and global organizations. This type of e-learning allows learners to access training courses on their own time, working at their own pace. Sometimes, the learner can e-mail the course administrator in their informational technology unit if they have problems or have questions about course registration.

There are a number of advantages that stand alone learning offers over synchronous e-learning in the UN learning environment: (a) participation—opportunity for equal levels of involvement by all learners regardless of location, functional area and level; (b) reflection—the ability to reflect on information , on one's responses, and the

subject matter itself, with the ability to research areas of interest more deeply; and (c) staff members can work on their own time, at their own pace, and focus on areas that interest them, with reasonable control over their own path through the material (Ellis, 2004; UNICEF, 2003).

There are several disadvantages reported by learners who participate in stand alone e-learning courses. These disadvantages may involve the lack of motivation to complete the course because of feelings of isolation or disconnection, and little or no interaction with facilitators and other colleagues (Kamsin, 2005; Kruse, 2004; Noriko& Bob, 2000). However, using strategies and technologies that encourage cooperative and independent work, can help eliminate these limitations (Hill, 1997; Kamsin).

There are four types of stand alone Global e-learning courses common in UN agencies. In the first type, the organization buys off the shelf courses from e-learning companies in technical (e.g., Excel, PowerPoint) and soft skills areas (e.g., conflict resolution, team building, and time- management). In the second type, the organization buys off the shelf courses from e-learning companies and customizes the content (e.g., add UN content, graphics and icons to existing course content). In the third type, an organization works together with an outside vendor to design e-learning courses. In the fourth type, an organization creates e-learning courses in-house, using e-learning experts, instructional designers, and programmers in their organization.

Best Practices in E-Learning

Best practices are a set of standards or guidelines, created based on research and practical experience, which are used to measure the quality of resources, methods, and

courses. According to Rossett (2002), e-learning learning has many promises, but it takes commitment and resources, and it must be done right. "Doing it right" means that online learning materials must be designed properly- with the learners and learning in focus, and that adequate support must be provided. Tables 1-4 summarize best practice in e-learning adapted from (Barker, 2002,) and the IST Programme of the European Commission (2003). The purpose of this framework is to help designers to think through every aspect of what they are doing during various steps of the e-learning-design process. The e-learning framework can be used to ensure that no important factor is omitted from the design of e-learning, whatever its scope or complexity.

Table 1

Summary of Best Practices on E-Learning: Learning Strategy

Learning strategy
1. Use e-learning to address the learning challenges of a distributed workforce.
2. Use e-learning to improve synergies between internal and external participants in complex business processes and projects.
3. Fulfil compliance-training requirements cheaply and efficiently using e-learning.
4. Use e-learning to provide on-demand learning.
5. Use e-learning to improve time to return on investment during new organization cost-cutting initiatives.
6. Tie learning to performance.
7. Assess learning outsourcing options.

Table 2

Summary of Best Practices on E-Learning: Organization and Process

Organization and process
1. Create a centralized learning and development team.
2. Source content both centrally and locally.
3. Create standards and benchmarks for eLearning content.
4. Share internal and external best practices with all teams active in developing, commissioning, or implementing learning.
5. Negotiate risk-sharing deals for off-the-shelf content libraries.
6. Represent learning early during new strategic initiatives.
7. Gain support from senior management.
8. Find ways to win over middle and line managers.
9. Foster a good partnership between the training department and information technology.
10. Create meaningful learning objectives.
11. Invest in change management and ongoing user support during a move from classroom learning to blended learning.
12. Create incentives for informal learning and knowledge sharing.
13. Upon successful completion, student is awarded course credits or credentials that. recognized by a relevant professional accreditation body and by employers

Table 3

Summary of Best Practices on E-Learning: Learning Content

Learning content
1. Develop a mix of off-the-shelf content and custom content to match the business situation.
2. Learning resources, in addition to teaching materials, are (a) varied, (b) easily accessible, and (c) relevant.
3. Learning materials and delivery reflect sound technical design so that they are: navigable, easily updateable and frequently updated, complemented by multimedia, rather than distracted by them, inclusive of "live" links to relevant and previewed documents subject, reliable sensitive to bandwidth constraints of students.
4. Approaches to learning that: foster active learning, build on learner's strengths and acquired skills and knowledge support interaction and the development of learning communities, increase learner control over time, place and pace of instruction.
5. Create integrated learning programs including online and classroom activities.
6. Supplement formal courses with informal learning activities.
7. Combine basic with just-in-time learning.
8. Take a learning-objects approach.
9. Assessment of learning that is authentic, real-life tests faced by learner, against stated learning outcomes, frequent and timely, in various forms.
10. Design all content with reusability in mind.
11. Use easy-to-use development tools to create low-cost custom content in-house.

Table 3 (*continued*)

Learning content
12. Create a "knowledge assembly line" of high-impact presentations by subject-matter experts.
13. Migrate from physical to virtual classrooms to extend reach and reduce cost.
14. Create content-selection practices that meet requirements for deployment speed.
15. Obtain mass-customized content from generic-content vendors.
16. Content skills and knowledge that are relevant to employment and/or the best thinking in the field.

Table 4

Summary of Best Practices on E-Learning: Learning Infrastructure

Learning infrastructure
1. Rationalize learning-infrastructure investments by taking a centralized approach.
2. Ensure that learners have access to process support persons, e.g., technical support, learning skills support
3. Create a learning architecture.
4. Integrate learning-management systems (LMS) with other enterprise systems (i.e., Human Resources systems).
5. Consider LMS from enterprise-application vendors.
6. Develop infrastructure to enable greater multiuse of digital content for formal and informal learning activities.
7. Incorporate learning into employee portals.
8. Consider custom LMS systems for low-cost tactical solutions.
9. Registration procedures that include: a clear statement of expectations of learners and an orientation program/service for those desiring it, e.g., a demonstration course

Best Practices in the Global E-learning Literature

The study of Global e-learning involves a multiplicity of disciplines and therefore relies very much on the contributions from many areas of study (Evans & Nations, 1992; Miller, 1989). A theoretical framework for analyzing the various dimensions of Global e-learning is provided by contributions from the field of communications, social

psychology, linguistics, educational psychology, and comparative education. The theoretical framework in this study reflects these areas as they apply to Global e-learning environments.

Numerous researchers have attempted to understand the variables that influence student learning in Global e-learning environments by exploring the link between nationality and learner experience. These studies are useful because they help to identify differences that can exist between cultural groups in Global-learning environments. Lim's (2004) study found, for instance, that there were significant differences in the motivational styles of Korean and American students studying in an online learning environment. Owens (1998), too, found that there were significant differences in computer technology use by students due to their ethnicity and gender. When Kum and Vanessa (2000) investigated the effects of cultural background and learner perceptions of Web based learning, they found that Anglo-Saxon students felt more confident, and had fewer difficulties than Asian students. Banham and Wong's (2001) case study demonstrated how two cultural contexts (Asian and Australian) collaborated to create a curriculum that met the socio-cultural and determinants of both cultural contexts to deliver a program that withstood academic rigor and scrutiny. Finally, when Kim and Bonk (2002) explored cross-cultural differences between Korean, American, and Finnish students, they found that Korean students were more socially and contextually driven online than were American and Finnish students.

The above literature review on Global e-learning reveals a number of recurring key issues that should be considered when designing Global e-learning packages. They include the following:

1. Design of WWW based course support sites that can be adapted to different types of cultural differences (Collis, 1999);

2. Development of Web sites for cross-cultural communication and interaction (Collis & Remmers, 1997);

3. Creation of different types of structured learning environments for learners of different cultures (McLoughlin, 1999);

4. Awareness of writing styles for international audiences in a global environment (Collis & Remmers, 1994; Kearsley, 1990; Meacham & Zubair, 1992; Murray-Lasso, 1990; Pincas, 2001);

5. Selection of appropriate content and visuals for Web sites intended for cross-cultural use (Collis & Remmers, 1997);

6. Design of Web sites for use in local cultures (Chen, Mashadi & Hawkridge, 1998);

7. Usage of multiple cultural models of instructional design for developing computer based learning resources (Holtz, 1999);

8. Evaluation of computer based learning resources for cultural sensitivity (Reeves, 1997); and

9. Interpretation and analysis of cross-cultural-interaction patterns in virtual environments (Chase, MacFadyen, Reeder & Roche, 2002; Lee & Doo, 1997; Ma, 1993).

Gaps in the Global E-learning Literature. There is no doubt that learners in online courses are implicated in multiple cultures (Chase et al., 2002; Henderson, 1996; McLoughlin, 2002; Abdelnour- Nocera, 2002). While many of the above-mentioned

studies have found significant differences between different cultural groups, it is not feasible to design e-learning courses to address every possible identifiable cultural trait that may influence the learning process (Dunn & Marrinetti, 2002). There is little understanding of how culturally diverse students experience stand alone Global e-learning. This study sought to identify the implications of that experience for the future modification or design of e-learning courses that would be meaningful for all learners.

It is important to point out here that while acknowledging that cross-cultural differences and nationality may influence learners' experiences in Global e-learning environments, the purpose of this study is not to study individual differences based on nationality or culture in Global e-learning environments. In this study, one stand alone e-learning course was offered to a global audience. Comparison of one cultural group with another is not the scope of this study. These types of studies have been conducted by numerous researchers. In fact, the notion of localizing or customizing courses for different cultural groups is wholly rejected by the social norms in the organization (the UN) under study in this dissertation. Cultural pluralism is, by definition, an enduring and central feature of the United Nations Organization. Cultural pluralism can be defined as the mutual respect between individuals and between groups that differ in their life styles (Nostrand, 1976).Member states hold us accountable to ensure that cultural pluralism and diversity are inseparable from the respect for human rights, fundamental freedom and human dignity. Diversity is upheld as a source of richness. What would be most useful to educators who work in global organizations is to have practical guidelines on how to design and implement a product that taps the needs of a diverse learner population. (UNICEF, 2003).

Culture Matters: Approaching Teaching and Learning Using Culturally Sensitive Approaches

Why Does Culture Matter?

There are many definitions of culture; however the one that best suits my present purposes is that of D'Andrade (1984). Culture consists of:

> learned systems of meaning, communicated by means of natural language and other symbol systems, having representational, directive and affective functions, and capable of creating cultural entities and particular senses of reality. Through these systems of meaning groups of people adapt to their environment and structure interpersonal activities... Various aspects of cultural meaning systems are differentially distributed across persons and statuses...
> p.116

Culture affects who we are, how we think, how we behave, and how we respond to our environment. It affects how we learn. However, the questions of "how" different variables relate and influence one another are not well understood (Stevens, Gatling, & Murdoch, 2004). All learners learning styles originates from innate tendencies and environmental experiences. Because cultural groups often share common values, the experiences of children growing up with those values are reflected in their classroom learning behaviours (i.e., cultural learning style). Therefore, a culturally relevant pedagogy is central to the academic success of learners.

There is a growing literature base of cultural dimensions that correlates with nationalities (Smith, Dugan, & Trompenaars, 1996; Hofstede, 1994; Hall, 1990). It is assumed that these dimensions influence the dynamics of learners' perception and success in dealing with a distance learning environment (Cifuentes &Murphy, 2000). This will be explaining in more detail in the following sections.

Learner Differences

Some authors have asserted that cognitive style and culture may not be related (for example Kubes, 1998) whilst others have asserted that there are cross-national differences in cognitive style (Bonk, 2002). For example, Allinson and Hayes (2000) found that managers in North European and Latin cultures were more imaginative in their management style than their counterparts in developing countries and Arab countries. Furthermore, at secondary and tertiary levels there is research evidence to suggest that East Asian learners, exhibit more effective learning styles and academic performance than their western counterparts (Biggs 1990, Watkins & Regmi 1990, Kember & Gow 1991). Turner (2000) assessed the learning approaches of students from the People's Republic of China studying at the degree level both in the UK and in a UK-franchised degree programme in Beijing and concluded that students from China approach learning in the UK system with a culturally different learning style from that of British-educated students. Accordingly, differences in cognitive style may contribute to the way in which a learner approaches and engages with e-learning.

Overall research on instructional design which has tried to match activities to learning styles or to cognitive styles has given mixed and uncertain results (Lawrence, 1997)

Learner Preferences

Research (Biggs, 1988; Entwistle & Ramsden, 1983) on learner preferences has confirmed two primary orientations: a deep or meaning orientation and a surface or reproducing orientation. A learner with a deep or meaning orientation seeks to relate and reinterpret knowledge. A learner with a surface orientation, in contrast, does not seek understanding and tends to use superficial study strategies that rely on memorization and

does not lead to increased understanding. Cross cultural differences in self-reported approaches to learning have been observed (see Watkins & Mboya, 1997); According to Reid (1987), learning style preferences can be grouped into three categories; visual, tactile, kinaesthetic, and auditory. While researching the learning styles of Korean and Chinese students, Reid found that students were partial to visual stimulation as a learning preference. Powell and Anderson (1994) found that Native American students preferred a visual learning style because it focused on observation rather than just verbalization. Hispanic students preferred a kinaesthetic and tactile learning environment (Stebbins, 1995). Reid found that Arabs preferred auditory learning; which can be interpreted as a reflection on the strong emphasis of verbal communication within their society. Japanese students on the other hand, did not reveal a preference for a particular learning style. (Reid). Kember (1999) found that Asian cultures view memorization and understanding as complementary processes of learning. In fact, Dahlin and Watkins (2000) claim that in Asian cultures repetition is viewed as a method for building comprehension of the subject matter.

It is possible to explain the main dimensions that underpin different approaches to learning styles (see Curry, 1987; Biggs, 1988). Even so, the competing theories and techniques of measuring them, and the effectiveness of such measures are contested in the literature (Lawrence, 1997). Claims about learning styles from the perspective of fixed traits lead to labels and descriptors of styles as the basis for strong claims about the generalizability of learning styles which is questioned by researchers (Bloomer & Hodkinson, 2000).

What Cross-Cultural Studies Cannot Tell Us About Global E-Learning

Intercultural aspects of DE are emerging as a focus of research arising from the globalization of learning via multimedia communications (Edwards & Usher, 2000). The current socio-cultural and psychological theories we have at our disposal fail to answer many questions surrounding Global e-learning. How should we design a course when individuals from different cultural groups are present? How do you account for the influence of "workplace" culture on the learners' experience? How can one e-learning course respond positively to the needs of learners from numerous cultures?

Hofstede's (1994) work categorizes people into a unique system of classification without any consideration for inconsistencies or diverse ways of seeing people. Further, individuals are seen in isolation from wider social influences such as educational context. As well, the theory suffers from a linear blind spot- they do not offer much explanation and elaboration about how culture changes. Ogbu's (2002) theories may account for the educational difficulties of certain language and ethnic minority groups (Latinos, African Americans, Native Americans) but they are not able to account for the educational success of other minority groups (Japanese, Korean, Chinese, and Jewish immigrants). Finally, these theories have identified patterns for different cultures and have ignored how societies evolve as a result of immigration, modernization, technological advancement and globalization.

Most cross-cultural learning theories also endure from some of the same pitfalls of socio-cultural theories cited in the literature. We need to be careful about adopting single cause explanations for certain learning behaviours (i.e.," it is culturally innate for

them to learn like that"). The cross-cultural learning theories do not consider important mediated variables that may influence how students grapple with the learning material. These theories fail to demonstrate an accurate understanding of how these students conduct their learning, nor do they acknowledge, as suggested by Biggs (1999), prior learning and cultural influences. Finally, these theories do not sufficiently take into consideration the wider context- the context of the family, community, and wider society.

There are individuals who are able to eventually cross-cultural boundaries and succeed academically in learning environments that are new and unfamiliar to them. The socio-cultural and learning theories fail to distinguish between different cultural groups or subgroups that are able to succeed academically and learn successfully and those who are not able to do so in Global e-learning.

Hofstede's (1994) work on cross cultural differences is criticized because of (a) a simplistic and rigid definition of culture, (b) questions on the validity of the survey instrument, and (c) incorrectly or incomplete identification of cultural variables. His framework poses serious problems and therefore I did not use it for three reasons. First, the aim of this study is not to compare and contrast learner cultural differences in e-learning, but rather to explore how one e-learning course is responded to by culturally diverse learners who work in global organizations. It is not easy in global organizations to precisely categorize the cultural diversity of the learning related activities of the particular population of interest. Second, Hofstede's essentialist framework offers no means of understanding how collaboration happens among members of different cultural groups in a common setting. In the present study, the common setting is the UN work environment which to some extent provides a degree of cultural commonality among

learners. Third, as just suggested, Hofstede's concept of culture does not explain how staff in multinational organizations is influenced by various sub cultural dimensions in their organization. The premise of the present study draws on Geertz's (1973) view of cultural theory. His theories help understand particular cases which have been very carefully observed and thickly described, and at best predict only when similar cases may develop in similar people in a similar system.

Differences between Face-to-Face and Online Learning Environments

There have been numerous studies conducted comparing online learning to traditional instruction. In general, most research concludes that e-learning is at least as effective as traditional methods. Blake, Gibson and Blackwell (2003) note that in the 248 empirical studies they reviewed, online learning is found to be just as effective as classroom instruction. Online learning's equality with classroom instruction is true for a variety of subjects. Some examples include agricultural economics (Batte, Foster & Larson, 2003) and financial management (Ashkeboussi, 2001).

Whether in a traditional classroom or workshop setting, an e-learning mode or through the use of a blended-learning model, cross-cultural issues have a major impact on how learning is designed. Most authors regard cross-cultural learning situations as fundamentally problematic. Hofstede (1994) identifies four main problem areas with these interactions: (a) differences in the social positions of teachers and students, (b) differences in the relevance of the training content, (c) differences in cognitive ability profile between the populations from which teacher and student are drawn, and (d) differences in expected patterns of teacher-student interaction.

The challenges associated with training a diverse group of learners are present in traditional-learning environments. To overcome some of these challenges, many educators and researchers (Davis, 1993; DiCerbo, 2000; McArthur-Blair, 1995) recommend that instructors/teachers should (a) include anecdotes and personal experiences in the classroom; (b) meet with students informally before, during, and after class; (c) work with student teams onsite in business environments; (d) moderate guest lecturers with face-to-face discussion with students; (e) meet out of class with those students having difficulty with course material, discuss aspects of the course that might be difficult in writing; (f) discuss personal/confidential student problems affecting course performance; and (g) and promote team participation and team communication.

In my own experience facilitating face-to-face seminars at the UN, a quick glance of my audience can reveal who is attentively taking notes, pondering a difficult concept, or preparing to make a comment. A learner who is frustrated during a lecture or confused during a classroom assignment is equally evident. In regular teaching-learning situations, cues such as these help to establish understanding by helping trainers to identify moments when learners do not comprehend and by helping learners to interpret the meaning of what is being taught.

The pedagogical competencies required to manage DE- learning environments are different than a traditional-classroom environment (Schoenfeld-Tacher & Persichitte, 2000 as cited in Bernard et al., 2004). Cyrs (1997) conducted a meta-analysis of the literature and identified four areas of faculty competence related to distance education that were mentioned in all of the studies analyzed. These areas are course planning and organization, verbal and nonverbal presentation skills, collaborative teamwork, and

questioning strategies. Barker and Wendel (2001) found six key characteristics of the ideal virtual teacher:

1. An interest in innovation and in technology
2. Creativity and enthusiasm
3. A desire and ability to work collaboratively
4. A commitment to put students first
5. A willingness to work with parents, and
6. Some technology skills and the ability to adapt quickly to change.

In a DE environment where a teacher/facilitator is present (synchronously or asynchronously), his or her role could for instance can entail (a) setting or facilitating setting of communication rules and group decision-making norms; (b) providing compelling opportunities for online discussion, negotiation, and debate; (c) moderating a discussion; d) fostering sharing of knowledge, questions, and expertise; (e)contributing outside resources (online, print-based, others) and encouraging learners to do as well; (f) responding to discussion postings adequately without taking over; (g) providing acknowledgment of learner contributions; and (h) moderating disagreements and group problems (Himestra, 1994).

Another example where the teacher is facilitating asynchronously is the e-tutor. The e-tutor uses questions and probes for student responses that focus discussions on critical concepts, principles and skills (Zafeiriou, 2000). These roles may include a number of tasks such as (a) opening the discussions, (b) focusing on relevant content and issues, (c) intervening in order to promote interest and productive conversation, (d)

guiding and maintaining students' involvement in discussions, and (e) summarizing debates.

However, in stand alone e-learning courses, a teacher or facilitator is not present. These courses are designed to be self-paced with no involvement from a teacher or facilitator. This is considered one of the distinctive features of this type of learning.

Use of Pedagogical Models for E-Learning Design and Evaluation

In the context of this study, a pedagogical model "is a set of procedures, guidelines and tools which guide the practical development of online courseware" (Northcote, 2000, p. 2). There is no explicit pedagogical framework for the development of Global e-learning. A single, generic model is unlikely to fit the variety of dimensions that are involved with Global learning. However, a set of ideas and principles that have proved to be effective offers the possibility of more pedagogically sound e-learning courses. Several researchers have proposed checklists or guidelines for e-learning, as well as multimedia from various points of view; (a) Horton's (2001) ten point criteria for evaluation and scoring mechanism of e-learning; (b) Merrill's (2001) five star rating for evaluating tutorial or experiential (simulation) courseware; and (c) Reeves' (1997) pedagogical dimensions of computer-based education (CBE) model can guide the design, development and implementation of e-learning programs.

Pedagogical models of interactive instructional design utilize different dimensions, which are central for the design of interactive learning (Collis, 1999). For example, Collis, Vingerhoets and Moonen (1997) identified 19 critical dimensions for effective e-learning design: four related to time, five related to the content of the course,

one related to flexibility in expected prerequisites, four related to instructional approach and resources, and five related to course delivery and logistics.

Best Practices Design in E-Learning Design and Evaluation

One Global e-learning guide that is often cited in the literature is the cultural adaptation process (CAP) from (Edmundson, 2004). This model was designed to guide instructional designers in evaluating existing courses to see if there is a match with the needs of the target audience. After I reviewed the model, I found that it would be difficult to use in the context of this study where numerous cultures are present in the learning audience. The CAP model would be useful for instance if a course is designed in one country for a culturally homogenous group and then offered to learners from a different cultural (homogenous) group.

Another model was developed by Fay and Hill (2003) as a result of their work with a university in Greece and a university in the UK. The authors identified a conceptual framework for cross-cultural design. Fay and Hill used this basic model as a way to understand the implications of designing a course from one cultural perspective and teaching it to another. Again, this would not be useful in the context of this study because multiple cultures are present.

Reeves (1997) developed a scheme to assist in the evaluation of pedagogical issues in multimedia learning systems, and it is this model, albeit modified, that is used in the course of the current research study. The dimensions he elaborated are portrayed along a continuum, as seen in Figure 1. He suggests that the general principle of good multimedia design should be situated towards the right hand side in each category

illustrated in the Figure 1. The model represents a multidimensional approach; it reflects the contrast between objectivism and constructivism for the positioning and evaluation of interactive learning systems. Later, Henderson (1994) added the dimensions of cultural profiling, and of integrating a multiple cultural perspective to Reeves' dimension of cultural sensitivity.

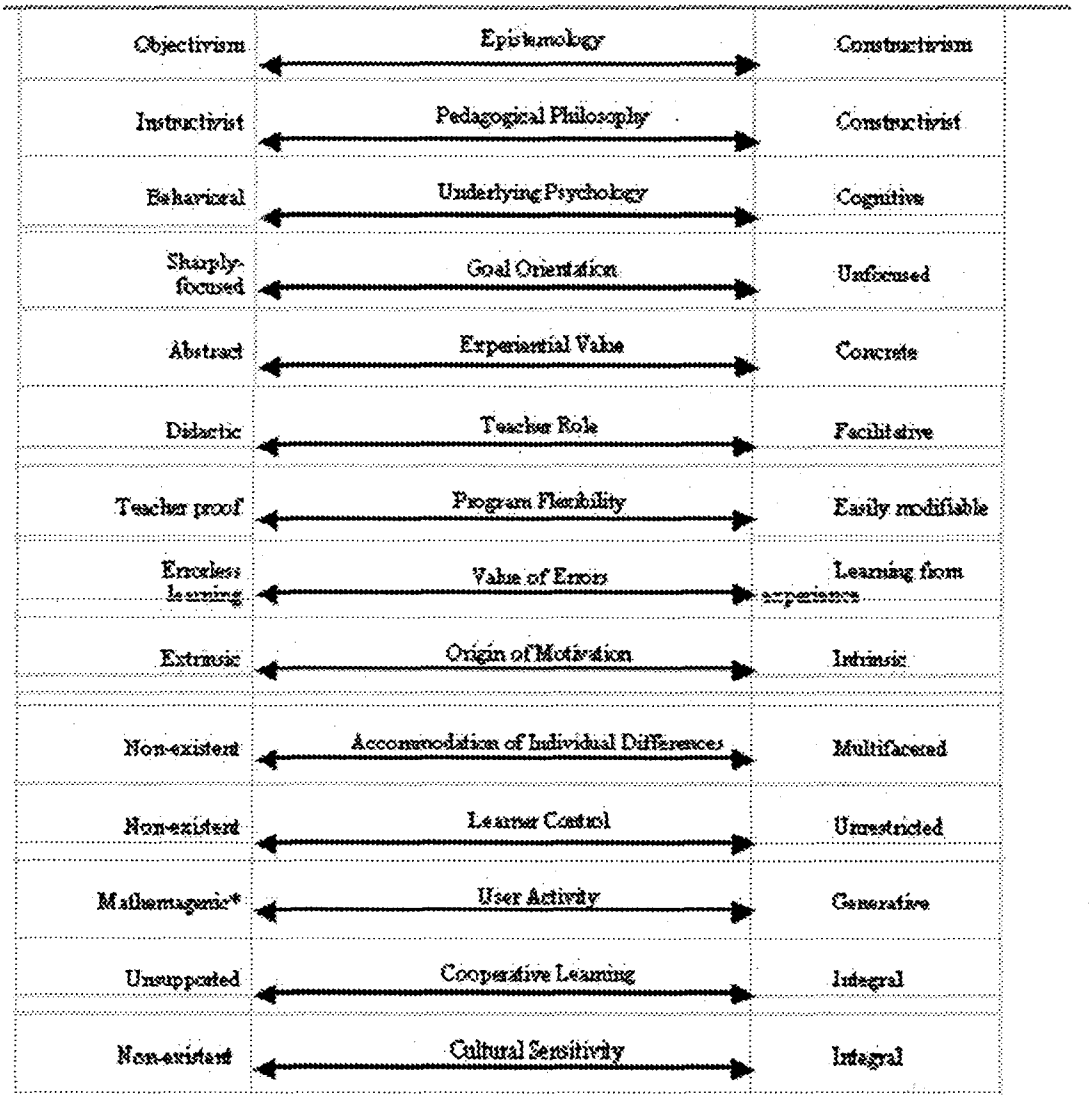

Figure 1. A diagram of Reeves' pedagogical dimensions (adapted by Henderson, 1996).

Analysis of the Dimensions of Reeves' Pedagogical Model

The following section will review at some length the meaning behind the dimensions in Reeves' pedagogical model as seen in Figure 1.Epistemology

Epistemology is, in part, the study of how humans acquire knowledge. It answers the question, "How do we know?" One of the fundamental dichotomies in educational epistemological thinking is between objectivism and constructivism. Objectivism views knowledge as being person independent and possible to be transferred from teacher to learner. That is, knowledge is externally mediated information (Jonnasen, 1991). Simply put the learner gains knowledge from the learning support system in order to assimilate that knowledge. There is an external reality that each individual should come to know in the same way. Knowledge is externally referenced, rather than internally generated. Ertmer and Newby (1993) reported that the objectivist approach is best applied when tasks require a low degree of processing (e.g., basic paired associations, discriminations, rote memorization), and seems to be facilitated by strategies most frequently associated with a behavioral outlook (e.g., stimulus-response, feedback-reinforcement). According to Henderson (1996), an objectivist/instructivist epistemology structures the learning environment to be accurate, sequential, and direct. Performance is rewarded so that learning is cumulative, receptive and is based on practice, performance, and giving accurate information on demand. What emerges from this description is that the objectivist approach cultivates set learning outcomes, placing value on replicability, reliability, and control.

An objectivist strategy allows for the creation of categories and organizing principles so that the learner has a framework for the knowledge being acquired. Most

commonly supported strategies include multiple-choice or true-false tests, particularly when it is important to be able to identify images, or to be able to organize facts and figures (Nash, 2003). Assessment questions deal with identification, classification, time-lines, and comparison of data. The learning system often has components that ensure that positive reinforcement is given for right answers; the same cycle is repeated for wrong answers. External truths and knowledge exist for learners to memorize, and for students to learn to categorize and classify.

Subjectivist individual constructivism, on the other hand, is a learning theory that emphasizes a learner's construction of knowledge and reality (Driscoll, 2000). Under an individualistic constructivist framework, students are not perceived as passive learners, but as recipients of knowledge supplied by the learning system (Knabe, 2004). Instead, students are considered to be engaged individuals seeking understanding of the world around them, largely through active learning and discovery. Constructivism asserts that knowledge is embedded in the learning activity.

Specific methods for creating constructivist learning environments vary, but can include the following: (a) encouraging knowledge formation—reading, offline researching, discussion with a course tutor and other students; (b) encouraging flexible learning processes—learners can complete online learning in any order (i.e., students are required to look at the implications of the knowledge and to apply them to a practical situation; (c) encouraging self-directed exploration—learners have choices in the topics they explore; (d) encouraging discovery learning—learners are encouraged to actively engage in their own explorations, either via the formalized resources (books, internet etc.), or via their own life/work experience; and (e) encouraging construction of concepts,

schema and mental models—the learning material is structured in a way that gives a visual guide to some of the concepts and paradigms being constructed and explored (Hung & Nichani , 200; Nunes & McPherson, 2003).

To cite an example from the UN, the objective of one module in an e-learning course on country programming requires that learners describe the steps of the Country Program Process (CPP; UNICEF, 2003) a method for designing projects with the government and other UN agencies. This course applies a constructivist approach to teach staff about the process. UN program officers need basic knowledge of the UN country programming process. There are numerous dynamic and complex variables affecting the program process, particularly on a global basis. Learning the basics of a Country Programming Process in one country may not be completely or directly transferable to another area.

Indeed, research findings show that the constructivist approach of Western educational institutions may not serve as an appropriate educational approach for Asian learners (Ballard & Clanchy, 1997; Bates, 1997; Kearsley, 1990; Mahesh, 1997). These studies have further revealed the complexity of constructivist learning, indicating that learners from some cultures cannot learn easily in North-American DE courses. Some learners have difficulty in adjusting to an environment with so many choices (i.e., a possible reflection of constructivist pedagogy). For instance, Hawkridge, Jaworski and McMahon (1990) present evidence that the game-like style of many educational software programs are not always culturally congruent with cultures such as those of India and China that focus on a more formal and structured learning environment. Smith and Smith (1999) illustrated the differences between Chinese and American students' experiences in

DE. They found that Chinese students preferred a structured learning environment, whereas Australian students were more comfortable with a learning environment that was more open and flexible. Also, Chinese students found it difficult to work in an environment that focused on individual learning with minimal teacher supervision (Ballard & Clanchy, 1997). In exploring Indonesian students' experiences with Western DE models, Dunbar (1991) concluded that Indonesian students who are from a heteronymous culture, found it difficult to adapt to a Western DE model that focuses on autonomous and independent learning environments.

Current Western paradigms in learning lean towards various forms of constructivism as the main epistemological approach to learning (Arya et al., 2005; Belge, 1995). However, interestingly, many off-the-shelf courses developed in North America apply a strict instructivist epistemology (UNICEF, 2003). Thus, two questions that emerge from this review on epistemology. First, which approach is most useful for stand alone Global e-learning? And what epistemological methods are best for a group of international learners?

Pedagogical Philosophy

The pedagogical philosophy underlying the teaching and learning process, then, can range from a strict instructivist (behaviourist) approach to a radical constructivist approach (Reeves, 1997). With respect to objectivism, educators assume a separation between knowing and doing, treating knowledge as an integral, self-sufficient substance, theoretically independent of the situations in which it is learned and used. Knowledge is regarded as absolute and permanent. Within this framework, the course structure is designed to enable learners to find a correct solution. The instructional method is course-

directed and the course structure sets performance objectives to create a systematic approach to the learning content (Gance, 2002). Learners are expected to understand the correct processes involved in reaching the right answers to a set of given activities in the learning environment. Learning is an individual activity with emphasis on learner autonomy and independence.

An advantage in utilizing this philosophy is that by dividing instruction into small sections with practice and feedback, it is easier for a variety of learners with different prior knowledge and experience to learn the material. The approach can adapt to an individual's learning pace, and also gives the learner a feeling of accomplishment each time they finish a section, so keeping their motivation high (Sanders, Gass & Wiseman, 1991; Vrasidas, 2000).

Constructivist pedagogy is content-oriented and learner-centered. The learning environment is information-rich and socially meaningful (i.e., collaboration- and communication-filled). For example, learners learn factual knowledge through the presentation of basic facts, but also the context in which these facts are to be applied and integrated. Knowledge then becomes about interpreting and making meaning of the environment. Ordering and re-ordering knowledge, testing it out, justifying this interpretation, and fostering interaction between learners' existing knowledge and new experiences are the underlying principles of this type of learning. Within the course environment, the learner works through authentic tasks based on concrete situations.

For example, the learning objective of a course developed by one UN agency is to identify solutions to threats in basic security when working in field missions (UNICEF, 2003). The course applied anchored instruction (Dunlap & Grabinger, 1996b) as a

method of encouraging learners to understand the concepts. This type of instruction is a form of context-based learning that encourages staff members to solve realistic problems they face with security issues while on mission. The course environment encourages reflection, critical thinking and problem solving (a constructivist approach). Because the concepts presented in this course involved numerous complex relationships, it would not have been useful to present staff with content and then to simply test them on acquisition of the course content (an objectivist approach).

In corporate e-learning environments, learners should be provided with the opportunity to interact with work-based assignments and solve real world problems at their own pace (Arya et al., 2003). This learning environment may, however, be incongruent for learners from Asian cultures, who prefer a structured learning environment (Bork, 1990; Chen et al., 1999). Indeed, in their study on distance learners from Hong Kong, Murphy and Yum (1998) concluded that Asian learners, who participated in flexible learning environments, needed the opportunity for training in self-guidance (Shih & Cifuentes, 2003). Also, McCombs (1988) found that in a nonlinear hypermedia-learning environment, learners from certain cultures become confused and uncertain about how to navigate their way through the course. These problems may be alleviated by training learners to use strategies specific to nonlinear instruction, such as selecting the sequence of instruction, and learning to organize their knowledge and to navigate within the courseware to avoid disorientation (Sweany, McManus, Williams, & Tothero, 1996).

Finally, while it is known that cultural differences do exist in terms of pedagogy in global environments (Bork, 1990; Gee, 2001; Gunawardena, Nolla,Wilson Lopez-

Islas, & Ramirez-Angel, 2001; Robbins, 1997), what is not well-known is how to (a) describe/identify pedagogical approaches that work well enough for diverse group of students in a stand alone course, and (b) clarify what aspects of unfamiliar course pedagogy are most difficult for students to overcome.

Goal Orientation

Course goals can range from the concrete and measurable (e.g., defining the United Nations' Developmental Framework) to more or less unfocused ones (e.g., identifying professional and personal developmental progress). Ng and Bereiter (1991) distinguish between (a) task-completion goals, (b) instructional goals set by the system, and (c) personal knowledge-building goals set by the student.

A course designed under an objectivist perspective will design instruction in clear, concrete terms—that is, through direct instruction, the course fixes pre-specified goals that the learner is expected to attain (Bannan & Milheim, 1996). On the other hand, constructivist design includes multiple opportunities for students to synthesize, organize, and restructure information. One type of instruction developed by constructivists is inductive learning. In inductive learning, the learner has evolving goals, continually modified by the student or teacher (Bannan & Milheim). Constructivist instruction nourishes and encourages the pursuit of personal knowledge-building goals, while still supporting instructional goals.

Instructional design models may include the implicit assumption that instructional goals will be identical for all learners. This may sometimes be necessary, but not always. As suggested by Cole (1992), the relevance of different types of goals is linked to the design of the learning environment. She maintains that some knowledge should be

presented more directly to the learner. For instance, the goal in a course on financial management for staff at one UN agency is that learners complete an audit report. In such cases, direct instruction, perhaps in the form of a computer-based tutorial, may suffice for learning.

Other forms of knowledge are more creative or of a more complex nature (e.g., designing a communication strategy) where direct instruction may be less appropriate. In the latter cases, online programs that promote inductive learning such as micro worlds (Rieber, 1992), and virtual reality simulations (Henderson, 1997) may be more appropriate. Beasley and Waugh (1996) researched the effects of hypermedia content structure focusing on learners' structural knowledge acquisition, retention, and disorientation. An important design implication they found was that when a learner's attention is partially focused on the objective, the learner's disorientation will decrease and their retention will increase. The knowledge of the objective enhances the learner's goal orientation.

A comprehensive review on current e-learning courses in the UN system found that most courses focus on task oriented learning goals (UNICEF, 2005). A learner motivated by task-completion goals is not as focused on learning per se, but rather completing the task involved in the learning process. Ames and Archer (1988) defined this intrinsic focus as mastery goal orientation.

One approach for enhancing the induction of learning goals is to design strategies that can support or facilitate self-regulated learning skills (Alexander & Judy, 1988; Boekarts, 1997). Other possible design approaches that support goal induction can be found in situated learning approaches, such as cognitive apprenticeship (Brown, Collis &

Duguid, 1989) or the goal-based scenario approach (Campbell & Monson, 1994; Schank & Cleary, 1995; Shank, 1994).

Attempting to accommodate the goals of all learners in a Global e-learning course is not an easy task. Hypermedia learning environments are created to allow learners to forge their own paths through richly interconnected information and therefore the learning environment can accommodate multiple learning goals (Nelson, Watson, Ching, & Barrow, 1996)). Ideally, a learning program would assess learning needs and preferences and offer the learner the appropriate learning content. However, it may be difficult or even impossible to have all the relevant knowledge of users, or for that matter their goals, thus limiting the effectiveness of this approach.

In workplace environments, there are numerous reasons why staff choose to participate in e-learning courses. Learners may choose to participate in a learning program because they are curious about the topic area (Reio & Wiswell, 2000), or learners may decide to participate in a course as a preparation for a reward or benefit, such as a certificate (Hopey, 1999). Often, staff may feel threatened by job loss if they are not up-to-date in the technical skills and competencies for their particular position (Forrester, Payne & Word, 1995). E-learning courses in organizations attract learners with a great disparity of backgrounds and interests. How do we design course goals to accommodate these differences? Which methods work best in respect to individual learning goals across the range of desired outcomes for learning when one course is offered to all staff?

Experiential Value

The experiential value continuum in Reeves' model ranges from abstract to concrete. Current criticisms of dominant pedagogical schemes are that they are often too abstract and removed from real world experiences (Brown et al. 1989). When information is presented in encapsulated formats, often via abstract lectures and text sand it is largely left up to the student to generate any possible connections between conditions (e.g., a problem) and actions (e.g., the use of knowledge as a tool to solve the problem). There is ample evidence that students who are capable of regurgitating memorized information rarely retrieve that same information when confronted with novel conditions that nevertheless warrant its application (Bransford, Brown & Cocking, 1990).

Reeves, Herrington and Oliver (2002) argued that embedded activities within a learning environment should match as nearly as possible the real world tasks of professionals in practice. This is authentic learning. Based on findings from a literature review and an independent research study, the authors propose the following characteristics that define authentic activities. They contend that authentic activities should (a) have real-world relevance, (b) require students to define tasks and subtasks, (c) are complex tasks requiring time, (d) provide the opportunity to examine multiple perspectives, (e) involve collaboration, (f) require time to reflect, (g) seamlessly integrate with assessment, (i) result in the creation of valuable student products, and (j) allow for a diversity of outcome. Much of the research states that the use of authentic learning settings can provide strong student support, particularly important in online learning environments where isolation is an additional mitigating factor and when cognitive

engagement and higher order learning is required (Grabinger, 1996; Herrington, Oliver, & Reeves, 2003; Jonassen, Peck, & Wilson, 1999). UNICEF, (2003) found that learners appreciated cases presented to them that reflected real examples such as they would encounter in the context of their professional work.

So, how do we prepare and support instructional designers to create authentic and meaningful learning environments within diverse work settings and among diverse knowledge-holders? How can we better prepare employees to use and apply their acquired knowledge in new situations and contexts? And how do we then address individual differences in designing these activities?

Program Flexibility

UNESCO (1996) advocates that flexibility should be incorporated for learners using open and distance learning. This demand for flexible learning has emerged because it is now recognized that in order for learning to be optimally accessible, it should address learner differences in culture, gender, learning style, and so forth (Edmundson, 2006). The term flexible, when applied to teaching and learning, has no single, agreed-upon meaning. Flexibility is dependent on the designer's approach to learning activities. Attempts to define the term flexible with reference to related terms like open learning and distance education, are fraught with difficulty, as these labels mean many different things to many people. Van den Brande (1993) defined flexibility as enabling learners to learn when they want to (i.e., frequency, timing, duration), how they want to (i.e., modes of learning), and what they want to (i.e., learners can define what constitutes learning to them). In their study on learners' perceptions of flexibility, Collis et al. (1997) found that flexibility should include the following dimensions: time, content, entry requirements,

instructional approach and resources, course delivery and logistics. The issue of program flexibility is a complex one that must be addressed and assessed constantly during any program design. However, program flexibility may range from being so tamper-proof, that teachers or designers are not allowed to make local adaptations, to too open or unstructured to provide insufficient guidance and support for valid implementation (Reeves, 1997).

Flexible delivery of resources for learning can also impose barriers in its own right. The barriers to effective online learning as reported by Collis, Parisi and Ligorio (1996) include (a) problems with cultural and environmental teaching style differences; (b) problems relating to different educational values and cultures; (c) problems of language and semantics; and (d) technical problems relating to platforms, operating systems and lack of standard interfaces. Goodfellow, Lea, Gonzalez & Mason, 2001 and McLouglin (1999) found that hypermedia learning environments can create problems for learners who need structure and guidance because the program environment may be too flexible. This open level of control on the part of the learner may not be congruent with cultural expectations. Seufert (2002) noted that instructional designers must try to accommodate learner differences in Global-learning environments by designing flexible-learning environments. But, as is evident from the above discussion, this is not as easy as it sounds.

So, how do we support learners who need structure and guidance, while at the same time provide learners with some flexibility in how and what they want to learn? The evidence thus far does not provide us with much guidance as to how to approach this question.

Value of Errors

The continuum for the dimension of value of errors in Reeves' model ranges from errorless learning to learning from experience. Errorless learning occurs when the course is designed to allow learners to provide only correct responses throughout the course. The underlying psychology behind this type of learning is behavioral (Reeves & Harmon, 1996). Learning from experience allows the user to commit mistakes in order to learn from them. Examples are courses that include true/false type questions, fill-in-the-blanks and multiple choice items.

In errorless-learning environments, the user can choose only a correct answer, because the system does not allow the user to move to another part of the course without first succeeding in gaining the right answer. This approach is based on the theoretical assumption that if a learner has submitted a quiz for grading, and receives instant feedback on how well he or she did, then the learner will be more likely to continue working on the material in the course until they reach mastery (i.e., errorless learning; Tarris, 1963). Principles of the Alphabet Learning System (PALS) is an example of errorless learning, because only the keys that match an acceptable form of spelling are accepted by the learning program (i.e., the words that correspond to what the on-screen characters are saying are enabled; Reeves, 1992a).

Authentic or performance assessment is known to be effective in constructivist learning environments as it enables both process and product knowledge to be assessed—it can be supported by group work, critical reflection, higher-order thinking and self-directive learning (Scardamarlia & Bereiter, 1992, as cited in McLouglin & Luca, 2001). Transfer research has consistently concluded that a critical element in the transfer of

learning includes opportunities to practice skills in varied contexts with monitoring and feedback, so that misconceptions and faulty reasoning can be identified and corrected (Herrington, 2002).

What are the benefits of knowing the different ways in which diverse learners respond to information about their errors? How can these studies inform the design of stand alone Global e-learning, particularly when respecting the fact that more than one cultural group is taking the course?

Origin of Motivation

Motivation is defined as "some kind of internal drive which pushes someone to do things in order to achieve something" (Harmer, 2001, p. 51). It can be a response to extrinsic forces, imposed through an external requirement to acquire new knowledge or skills, or it may be intrinsic, more of a response to an internal force driven by the individual's desire to achieve personal objectives (Malone and Lepper, 1987). Expectancy theory (Vroom 1964, 1974) is based on the assumption that people are motivated by what they regard as the likely impact of their actions. Intrinsic motivation refers to a learner's internal desire to perform a task for no reward other than personal satisfaction or enjoyment. Whereas, when a learner is motivated by rewards and incentives external to their interest and satisfaction, these factors are termed extrinsic motivators.

There are many theories regarding how and why students are motivated. Alkin (1992) wrote that "motivational research has been hindered because of an unrealistic expectation that a cookbook can be provided telling educators how to motivate their students" (p. 864). While there is no cookbook, there are general principles of

motivational design that can be considered when designing instruction. Wlodkowski (1985) provided motivational-design models that have been well documented. Perceived relevance is by far the most reported successful motivator. Bonk (2002), Hardre (2001), Herndon (1987) and Kontoghiorghes (2001, 2002), asserted that materials relevant to a learner in either a work capacity or as a personal interest are successful motivators for learning. In addition to relevance, Hardre listed meaningful feedback as an important element for learner motivation.

According to and Malone and Lepper (1987), researchers identified four characteristics of motivational learning environments: (a) challenge, (b) curiosity, (c) fantasy, and (d) control. According to Garris, Ahlers and Driskell (2002), game design incorporates all of these characteristics and therefore should increase student motivation.

Clearly, designing online course content that adheres to the motivational theories mentioned above provides a considerable challenge for instructional designers. It is a challenge for designers to both increase and sustain learners' intrinsic motivation, and to keep learners from dropping out from online programs/courses. In analyzing online learning, designers need to learn and understand more about how learners interact with the media. The learners' expectations and desired learning outcomes should be the ultimate focus for developing successful online learning systems.

Designers depend on relevant content and engaging activities to motivate learners. But this can cause a dilemma when learners are taking the same course; for instance, what if learners are only extrinsically motivated for work purposes and others are intrinsically motivated?

Accommodation of Individual Differences

The dimensions of this value falls between the continuum of nonexistent (i.e., no provision is made for individual differences) and multifaceted (i.e., provision is made to accommodate individual differences). This dimension concerns itself with providing learners with different modes of learning based on individual needs, while allowing them to choose their preferred mode of learning, in order to derive meaning from the material under study. This ensures that the presentation of information is tailored to suit individual learners and particular situations (McIsaac, 1993). These individual differences fall under various categories such as (a) physiological (i.e., providing options to change screen color, fonts, etc); (b) learning styles (i.e., verbal versus visual learners, sequential versus global learners, sensing versus intuitive learning); and (c) prerequisite knowledge.

When researching the learning styles of Korean and Chinese students, Reid (1987) and Lee (1976) discovered that these students were partial to visual stimulation as a learning preference. Powell and Anderson (1994) found that Native American students also preferred a visual learning style, because it this type of learning focused on observation, rather than just verbalization. However, Reid (1987) discovered that Arabs preferred auditory learning, which can be interpreted as a reflection of the strong emphasis on verbal communication within their society. He also found that Japanese students, on the other hand, did not display a preference for a particular learning style.

Osbeck, Perreault, & Moghaddam pointed out that "studies across multiple cultures suggest that individuals and groups are more inclined to like those characters that they perceive as (culturally) similar to themselves" (p. 59). Indeed, Ayersman and Minden (1995) suggested that hypermedia is the ideal way to accommodate a variety of

individual differences, including cognitive style. They claim that while other forms of traditional computer-aided instruction are available, some other types require that the instruction be modified or that the learner adapt to the instruction. 'Hypermedia' design is interesting because it can be developed to accommodate various learner needs. Dimitovoa, Sadler, Hatzipanagos & Murply (2003) proposed a software solution to improve e-learning environments in a way that matches students' learning styles more effectively. And Schulemeister (2004) suggested that hypermedia can accommodate learner differences in online environments because learners have a high degree of freedom, allowing them to interact with learning content and then adapt different learning content to their needs and preferences.

It may be unrealistic to expect teachers in all educational settings to alter educational environments in order to meet each student's educational needs, such as differences in cognitive style. In the end, some of the responsibility for learning must rest with the learner. Nevertheless, how can one learning package accommodate differences in aptitudes, prior knowledge, motivation, experience, and learning styles? What scaffolding is needed to support learning in a way that accommodates individual differences?

User Activity

The continuum of user activity in this dimension falls between mathemagenic and generative environments. Some learning environments are primarily intended to enable learners to access various representations of content (Hannafin, 1992). Hannafin labels these as mathemagenic learning environments. *Mathemagenic activity* is a term coined by Rothkopf (1970) and means an activity that gives birth to learning. According to Reeves (1997), a mathemagnetic type of environment can provide a structured means to evaluate and organize various representations of content. He says that a mathemagenic dimension of learning is often used to describe direct instruction.

Other learning environments, called "generative", engage learners in the process of creating, elaborating or representing knowledge (Hannafin, 1992). Collectively, these strategies produce generative learning, that is, they make the learner an active participant in the process. Generative learning environments are aligned most closely with constructivist pedagogy, whereas mathemagenic environments are often based upon instructivist pedagogy.

Contemporary CBE programs, such as the ABC News Interactive series (ABC News Interactive, 1991) and the IBM Multimedia programs (IBM Corporation, 1991), include generative capabilities nested within otherwise mathemagenic presentations of content. Thus, in essence, generative learning is a process of generating ideas using static information as a starting point, and re-organizing this into more flexible knowledge structures. These knowledge structures are more flexible because they are organized to reveal relationships between ideas, and the process also allows students to reflect upon the key features that would be of value in the learning system.

Two types of generative activities are most often found in learning environments: (a) activities that generate organizational relationships (e.g., titles, headings, questions, objectives, summaries, graphs, tables, and main ideas); and (b) activities that generate integrated relationships between what the learner sees, hears, or reads, and remembers (e.g., demonstrations, metaphors, analogies, examples, pictures, applications, interpretations, paraphrases, or inferences).

Online environments can support generative learning by providing learners with: (a) simulations that they can be manipulated to learn concepts; (b) database sites they can use to interpret, make inferences, or predictions; and (c) sites that function as triggers for discussion about concepts. The idea behind learners as producers supports a generative approach to learning, and this, in turn, aligns itself with a constructivist epistemology (Dabbagh, 2001).

To what extent is it important for learners to have the opportunity to access the same content, but in different ways? And to what extent is it important to have all learners engage in the process of creating, elaborating, etc.? We know how to create generative and mathemagenic learning environments, yet which of the two is more useful for learners in stand alone courses? Can both environments be usefully incorporated within the same setting?

Cooperative Learning

The cooperative-learning continuum falls within the continuum of supported and unsupported learning. In unsupported cooperative learning, the course environment does not integrate collaborative learning, and learners do not work in pairs or small groups to accomplish shared goals. On the other side of the continuum, learners work in pairs or small groups to accomplish shared goals. There are many approaches to cooperative learning, but all have the following characteristics in common (Davidson, 1994): (a) a learning activity suitable for group work, (b) the learning is small group based, (c) tasks encourage cooperative behaviors, (d) student interdependence; and e) individual student accountability and responsibility for task completion.

Slavin (1992) and Johnson and Johnson (1987) argued that instructional design which promotes learning in pairs or small groups to accomplish shared goals benefits the learners both instructionally and socially. Preference or lack thereof of cooperative learning activities appears to be culturally bound. A good example of this is found in the differences between the learning styles of Australian, Aboriginal, and Torres Strait Islander learning styles (Harris, 1990; Osborne, 1982). In this example, cooperative distance-learning methods seemed to work well for Australian students but not for Aboriginal and Torres Strait Islanders who were in the same class.

In fact, there appears to be many social benefits to cooperative learning methods. Tu (2001) believed that interaction in an online environment is important because it has the potential to increase an individual's social presence in the Web environment. Lee and Doo (1997), in a study examining online interaction patterns in a global e-learning environment, found that students enjoyed interacting with each other because it

eliminated some social and cultural barriers. Students also claimed that in posting and reading messages in online message boards, they were able to work at their own pace and thus reduce a certain level of stress and anxiety. Ma's (1993, 1998) research in this area demonstrated that in international e-mail exchanges, students become better informed about each other's culture, and participants tended to share more about themselves than they would in traditional settings. Irvine and York (1995) reported that African American, Native American and Hispanic students also demonstrated a preference for group work and verbal tasks.

Learners differ, of course, in the level of interaction patterns they feel comfortable with, the type of group work they prefer, and how they express themselves in interactive learning activities (Ely, 1990). Chase, Macfadyen, Reeder and Rocher (2002) found that there are many issues of miscommunication, due to cultural gaps between the speakers of the minority culture and the dominant culture in Global-learning environments. Borsiarsky (1995) found that learners from some cultures prefer to learn on their own without the need or the desire to work with or communicate with other learners. In fact, they point out that for some learners, cooperative e-learning adds an extra burden to the apprehension or uneasiness they feel towards taking online courses.

There is a paucity of research concerning the challenges arising from creating and facilitating cross-cultural discussions and group work. Gunawardena et al. (2000) suggested that we explore students' perceptions of online environments in order to gain a better perspective on how different cultures perceive online interactions.

Teacher Role

Hilary Perraton (1988) defined the role of the distance teacher as a facilitator of learning, rather than a communicator of a fixed body of information. E-learning can be designed to support different pedagogical roles for teachers. Some e-learning courses are designed to place teachers in the role of a "facilitator." Other programs are designed to support the more traditional didactic role of an instructor as "the teacher." Finally, some courses are designed to have no or minimal teacher involvement. The continuum I will review in more detail runs between two extremes teacher proof and facilitator.

In the teacher-proof model the courseware is designed to reduce or eliminate involvement of the teacher. For instance, this includes software applications to teach students different subjects and concepts through pre-structured and programmed materials. The courseware either replaces or supplements material that students are expected to learn through other media (print, video, audio cassette). Lesson formats range from tutorials to simulations. Students can also use Internet resources for exploration and research. In the teacher -proof role, some argue that the interactive multimedia program itself can fulfil the coaching role, and some programs are designed to eliminate pedagogical roles for teachers, to effectively make them teacher- proof (Reeves, 1997). There have been some attempts to design interactive multimedia and computer based instruction that provides inbuilt coaching in certain stand alone courses (see Collins, 1988).

On the other end of the continuum is the egalitarian facilitator. This courseware is designed to include teacher/student interaction, with the teacher is playing an integral role in the learning environment. For example, the teacher manages and administers the

learning process, provides electronic counselling of students, and facilitates online registration (Collison, Erlbaum, Haavind, & Tinker, 2000:2000; Ip, Linser, & Jasinski, 2002). The facilitator's role as a "guide" promotes learning by guiding students to focus and deepen the dialogue without getting in the way (Collison et al., 2000; Mason, 1991). The ideal online facilitator intervenes selectively and encourages participants to work issues out for themselves, allowing students to fill the (metaphorical) empty spaces (Ip et al., 2002).

Henderson (1996) advocated the design of courses that manage to allow multiple forms of teaching and learning simultaneously. She suggested that rather than imposing a predetermined style of engagement, courses should be flexible enough to cater for diverse approaches. In this case, being responsive to the desires of students would mean accepting that not all students want to study "flexibly." For example, in the context of South East Asia, the teacher decides how much information to give to the students as a basis for later analysis and exploration (Kelly & Ha, 1998).

Because this study focuses on stand alone courses with minimal or no interaction with the course designer, it would be useful to have an understanding of how the "teacher proof' model encourages or inhibits meaningful learning in a global environment.

Cultural Sensitivity

Thus, the research suggests that the situation surrounding e-learning is much more complex, and that flexibility in instructional design is needed to cater for variability in usage within individual, cultural, contextual, cooperative quadrants (Henderson, 1994). A culturally informed instructional designer must try to accommodate the needs of a diverse student population. However, the challenge is that there are numerous cultural

dimensions that can influence the design, and research to date has not been able to inform us as to how the dimensions of cultural contextuality can optimally inform instructional design. On page 22 of this chapter, I summarized the cultural issues that have been identified in the literature.

Limitations of Reeve's Model

Henderson (1996) suggested that Reeves' (1994) model can provide useful guidance for global e-learning development and evaluation. Unlike other pedagogical paradigms which tend to change over time, this model does not. Each of the dimensions in the model is taken from one of a set of diverse educational theories and is presented as a two-poled continuum with contrasting values at opposing ends. These continua are not meant to be seen as linear ranges. Finally, this approach recognizes the impact of both pedagogical and technical issues; the interaction between them each can be applied in the development, delivery, and evaluation of global learning.

A potential limitation of the model in its current form is that it may not always be useful for practitioners because it requires a great deal of knowledge of pedagogical principles (Thomas & London, 1997). Henderson (1994) argued that Reeves assumes that good e-learning will only include the dimensions found on the right side of the model. Most of the right hand values of the pedagogic model of instructional design relate to constructivism, suggesting that constructivism is universally compatible with all learners' cognitive styles. This current research is not, however, guided by the belief that either the right or the left side of the dimensions are more effective over the other in the context of global learning; we just do not know.

Reeves (1997) provided suggestions for researchers and practitioners who plan to use his model in analyzing e-learning courses or programmes planning to use his model as a guide. First, the dimensions should be subjected to rigorous expert review by leaders in the design and application of computer-based education. Second, once there is evidence for the qualitative validity of the dimensions, quantitative scales should be integrated into each dimension, for instance a ten-point rating system (he emphasized that originally quantitative values had not been added to the dimensions, for fear that researchers might get too distracted by the numerical values, and not concentrate on the qualitative aspects of the dimensions themselves). Third, the validated dimensions should be applied to many different forms of online learning environments and computer-based education, in a wide variety of educational contexts.

Indeed, in the intervening years, Reeves' interface dimensions have been widely applied to multimedia materials in all levels of education across many discipline areas. They have been recognized and utilized as valuable, valid tools for the evaluation of interactive multimedia programs, courses and materials (Edmundson, 2006; Henderson, 1994). Furthermore, Reeves' evaluation tools are especially relevant to educators, as they serve to assess the worth of educational materials in terms of the principles of instructional design, learning and education technology. The pedagogical dimensions have been continually tested in the last nine years, and the results reported in various research studies (see Edmundson).

The approach taken in this study is novel in that it is guided by the methodological approach of other researchers who have applied the Reeves model, to the study of e-learning. In the CANDLE project, a subset of the 14 pedagogical dimensions

of computer-based education was used to review a multimedia program (Earle, 2002). g. Kennedy and McNaught (1997) applied Reeves' model to provide a more informed basis for communicating and understanding the features that a designer might incorporate in software development. Weaver, Pertrovic, Dodds, Harris, Delbridge and Kemm (2002) applied Reeves' framework to study the design of an interactive multimedia resource. Kumar and Lichack (1997) manipulated the pedagogical dimensions of the model to evaluate multimedia courseware for a computer science course.

The objective of the present study was not to create a model or toolkit to identify all the possible differences between learners that might influence the design of the e-learning environment. Rather, the dimensions in Reeve's model were used to identify only those dimensions which need to be considered in Global e-learning contexts (that is, the design of one learning tool for global audiences). In the beginning of this chapter, Global e-learning is defined as e-learning that is offered to a group of learners from many cultures. It is hoped that guidelines can be developed which links pedagogical perspectives to teaching and learning strategies for designing Global e-learning. In reviewing existing Global e-learning courses, the guidelines could be used to explore how these pedagogical perspectives could be considered in course design.

Instructional Design to Address Important Cultural Diversity-Implications for Design and Delivery

There is a need for cultural diversity to be explicitly addressed within current instructional design models in order to promote a successful learning experience (Chute and Shatzer, 1995). As mentioned previously in this chapter, most of the research base on cultural differences has been conducted primarily in the fields of anthropology,

sociology, business, communication, or international, cross-cultural, and multicultural education (Barrett, 1996; Demeester, 1999; Kim, 1996). Any training efforts in today's global organizations must take into account potential barriers that exist when a group of learners with diverse backgrounds must participate in a common learning programme. According to Henderson (1996), a course designer must design systems that are appropriate from the learner's perspective. However, since Global e-learning is a new medium of learning delivery, few researchers have attempted to study global e-learning from the learner's perspective.

During the entire design process, intercultural factors have to be taken into account at all levels (stakeholder analysis, user requirements, development and design, implementation and evaluation) for the e-learning programme to succeed (McLoughlin, 1997). However, often this is neglected due to (a) time constraints, (b) lack of resources, and (c) limited knowledge of the intercultural factors in the design process.

Sanchez and Gunawardena (1998) made the following recommendations for designing distance learning for diverse learning groups. Instructional designers should (a) provide a variety of instructional strategies that can be supported through a variety of media, allowing students to chose among activities that have one objective; (b) provide consistent, clear, and frequent feedback in a variety of formats; (c) provide opportunities for collaboration; (d) encourage and provide opportunities for reflection; and (e) design curriculum that engages learners in making connections among theory and practice using higher-order thinking.

McLoughlin and Oliver (2000) recommend the following for cross-cultural instructional design: (a) design authentic learning activities; (b) create flexible tasks and

tools for knowledge sharing; (c) ensure different forms of support, within and outside the community; (d) establish flexible and responsive student roles and responsibilities; (e) provide communication tools and social interaction for learners to construct knowledge; (f) create tasks for self direction, ownership, and collaboration; (g) ensure flexible tutoring and mentoring roles that are responsive to learner needs; (h) create access to varied resources to ensure multiple perspectives, and (i) provide flexibility in learning goals, outcomes, and modes of assessment.

It is not easy to find out if the frameworks and guidelines mentioned above have been tested and validated in different contexts. Not all efforts to apply these guidelines can be assumed to have been successful. Key general points for useful research to improve the evidence base for the design of Global e-learning are:

- Research needs to be more comparative across situations, and organizations and address the challenge of understanding what works, in what way, and in different situations.
- More evaluation research needs to be initiated on Global e-learning programmes, so that evidence is used to steer and improve, on the base of evidence, their effectiveness, and so that they generate knowledge that can be transferred to other situations.
- More research is needed to understand the analysis and design processes that are effective in development of Global e-learning, in terms of finding out what works for what purpose, and how to fine tune the design of these courses in particular situations.

In the context of this study, existing stand alone Global e-learning courses were analyzed. It is hoped the analysis of current courses will contribute towards future development and delivery of Global e-learning courses.

Summary of the Research Questions

This study is based in a work environment where managers are more concerned about managing cross-cultural interactions than managing cross-cultural differences. My goal is description, not comparative judgment. There are numerous resources available to guide instructors and instructional designers in managing these differences in traditional-classroom settings. Additionally, numerous researchers have pinpointed how to design courses when *two* cultures are present in one synchronous global e-learning course. The studies answered questions such as: (a) Are there differences in learners' online-collaborative behaviours across cultures? (b) How do learners feel about the international collaboration experience? (c) What are the implications of such cross-cultural differences for designing and facilitating collaborative learning among culturally diverse learners? and (d) How to Western (i.e., American) and Eastern (i.e., Korean) students differ in the experiences in online learning?

While it is accepted in the literature that there is no formula, nor recipe for the design of e-learning, there are a number of practical and theoretical guidelines available for us to learn from. It is important to note that there is limited research on the conditions in which a particular guideline is effective. For instance, what types of learners benefit most from the implementation of these guidelines? This dissertation is informed by the existing frameworks and array of advice, tips, guidelines and principles offered in the literature. The present study is significant because it contributed to the validation of these guidelines using learners' perceptions of their experience in Global e-learning courses.

More and more global companies are offering e-learning to their staff. Yet, there is minimal research available to guide us on designing self-paced "stand-alone" e-learning when no teacher or instructor is present. How should we design a course when individuals from different cultural groups are present? How can one stand alone e-learning course respond positively to the needs of learners from numerous cultures and backgrounds? These questions have not been answered in the literature.

As a learning specialist in a global organization, my interest is to design and deliver learning programmes that appeal to all my learners. It is hoped that findings that emerge from this study, can guide educators who are responsible for designing global e-learning courses.

To reiterate the research objectives mentioned on page seven, there are three objectives to this study. The first objective is to describe learners' experiences in global e-learning. The second objective is to provide guidelines that may be useful in the assessment of existing or off-the-shelf-course. The third objective is to draw on the implications of learners' experiences and the existing literature for the development of better practice guidelines for the design of Globally accessible e-learning courses. The main question guiding this dissertation is: how should we design stand alone global e-learning to tap into the cross-cultural commonalities among learners so that each learner acquires knowledge and skills and makes meaning effectively, regardless of his or her language, culture or location?

CHAPTER 3: METHODOLOGY

Qualitative Design

The primary data for this study was collected from learners who participated in Global e-learning courses. This type of approach puts the user at the center of the research. According to Creswell (1998) qualitative research is an appropriate choice of methodology when (a) there has been little or no research on this topic (i.e., in this case, to date, there are no studies that have explored an e-learning pedagogical framework and learner experience in stand alone global e-learning); (b) no recognized theory has been developed (i.e., current distance education, socio-cultural and cross-cultural psychological theories do not explain how students experience global e-learning); and c) the study was exploratory (i.e., the research questions do not involve testing a hypothesis, validating or disproving a current theory).

This type of exploratory research is pursued when a problem has not been clearly defined as yet, or its real scope is yet to be determined. Qualitative research allows the researcher to familiarize herself with the problem or concept to be studied, and perhaps generate hypotheses to be tested at a later time. Because this study explored learner experience, with particular interest in the process of learning and not the learning outcome (i.e., learner achievement), qualitative research methodology was a good fit. As Morgan (1996) says that using research methods that explore experiences "serve to complete a conceptual framework for understanding student learning, which is firmly grounded in students' realities" (p. 263).

This study sought to allow learner experiences of Global e-learning to emerge. Findings from this study could always inform a quantitative or mixed-methods design at a later time. For example, a course at the UN could be designed based on the findings from this study, and empirically tested for effectiveness. Or, perhaps the findings could inform a questionnaire on learner quality preferences in global e-learning environments. In this case, the data could then be analyzed using multivariate statistics.

I used a qualitative research methodology known as a "case study." A case study attempts a thorough, holistic examination of a phenomenon in its real-life context, through multiple sources of evidence (Feagin, Orum, & Sjoberg, 1991; Yin, 1981).

The data for this study was collected from four e-learning programs in four organizations. Therefore, it will use what is known as a multiple case-study design (Yin, 1994). Examining and comparing multiple cases will illustrate how to "understand how processes and outcomes are qualified by local context. [and will] allow the research to develop more powerful explanations and descriptions" (Miles & Huberman, 1994, p. 172). This is intended to reflect the critical and interpretivist perspective of the research. It is hoped that a variety of discourses surrounding global e-learning will emerge.

Role of the Researcher

Identifying and managing researcher roles and the boundaries between researcher and participant can be difficult within any form of qualitative research. In the context of this study a naturalistic paradigm was followed. This paradigm assumes that there are multiple interpretations of reality, and that the goal of researchers working within this perspective aims to understand how individuals construct their own reality within their social context. This study used the sample principles as described in Agostinho's (2004)

research, using a naturalistic paradigm in e-learning research. First, naturalistic ontology suggests that "realities are whole that cannot be understood in isolation from their contexts" (Lincoln & Guba, 1985 p. 39). In the present study, I, as researcher, completed all the e-learning courses as a participant. During the first and second phase, I discussed emerging issues and themes with the participants. Participants also shared their opinions and views about the course. The themes that emerged from Phase One were used as guidelines in analysing the data from in Phase Two and a few of the guidelines that emerged from both Phases Two were validated in Phase Three of the study; "the aim of inquiry is to develop an idiographic body of knowledge in the form of 'working hypotheses' that describe the individual case" (Lincoln & Guba p. 38).

Hoefl (1997) pointed out that the researcher in a qualitative research study should follow two important guidelines. He recommends that the qualitative researcher develop the appropriate skills to engage in this research. My fieldwork experience for my MA thesis (Kakkar, 2000), and research on educational portfolios) have provided me with many opportunities to acquire knowledge and expertise in the field of qualitative inquiry. Finally, Hoefl (1997) has also suggested that the qualitative researcher should adopt a research design reflective of naturalist inquiry. The current research design fits the parameters of this inquiry.

Overview of Phase One, Two and Three

The objectives of Phase One were the following: (a) develop and test the appropriateness of the research instruments; (b) assess the feasibility of a full-scale study/survey; (c). design a research protocol; (d) assess whether the research protocol

was realistic and workable; (e) collect preliminary data; and (f) determine what resources (finance, staff etc.) would be needed for the next phase of the study.

After finalizing the research tools and identifying important themes to analyze, Phase Two was initiated. This phase involved the study of courses from three UN agencies.

A few of the guidelines for best practices design that emerged from Phase Two were integrated in the design of a new e-learning course. The objective of Phase Three was to validate the recommendations that emerged from Phase Two. The recommendations from Phase Two were integrated in the design of a new e-learning course.

Phase One: Design of the Research Tools

To begin answering the research questions, Phase One was initiated to provide preliminary results and to help build a method that would further investigate Global e-learning. The purpose of this initiative was to become familiar with the broad range of issues facing learners in a Global e-learning environment, and also to act as a check on any pre-existing assumptions. The primary goal of this first step was to substantiate the findings in the literature. The secondary goal was to empirically generate an unrestricted list of factors that potentially affect the experiences of learners in global e-learning environments, and that might not yet be identified in the literature. Prior to commencing the pilot study, an Ethics Approval Form was submitted to the Ethics Committee in the Department of Education, and approved (see Appendix A).

Participants

In this study, Global e-learning was defined as e-learning that is offered to a group of learners from manyculture. The participants involved in this stage of the research were UN staff members (i.e., recipients of global e-learning) who had completed a stand-alone e-learning course in the topic area of basic managerial skills. Throughout the study participants will be referred to as learners. Learners comprised an extremely heterogeneous group in regards to age, education, native language and cultural background, years working at the UN, professional level, and nationality. The only commonality between the learners was that they all worked for the same agency, and had successfully completed the same e-learning course. The participants who participated in the interview stage consisted of two Canadians (UN01, UN02), three Europeans (UN03, UN04, and UN05), three Asians (UN06, UN07, and UN08), and two Middle Eastern learners (UN09) and (UN010).

The diversity of this group was representative of staff in global international organizations, in general. Any common patterns that emerged from such a group of Global e-learners were of particular interest and value in capturing the core experiences of Global e-learning. In this type of heterogeneous group, key exceptions to the rule can also emerge, and in qualitative research it is often the exceptions that point to important issues that need more in-depth investigation.

Data Collection Methods

Reeves (1991) stated that, "the phenomena involved in learning are so complex and so difficult to measure that multifaceted evaluation methods are required to obtain meaningful information" (p. 108). The term *mixed methods approach* refers to

evaluations that combine two or more evaluation methodologies (Gall, Borg & Gall, 1996). For example, a piece of courseware may be expertly reviewed, checklists may be completed by students, and there may also be observation and interviews. While the mixed-methods approach may not be new, it is becoming an increasingly popular methodology for courseware reviews (see Lebec, 1993). The data-collection methods used in this study include interviews, evaluation frameworks, and a questionnaire.

Interview Tool

The steps involved in creating the interview tool are presented in Table 5.

Table 5

Summary of the Steps Involved in Designing the Interview Tool

Version	Design-Development	Location	Procedure	Implications
First version	Identification of categories through a review of the literature	Appendix B	I interviewed three participants	The original interview questions were confusing and had to be reworded. New questions were added because participants discussed issues not covered in the literature review.

continued

The literature review was

				revisited.
Second version	New questions were added on program flexibility and motivation.	Appendix E	I interviewed seven participants	Specific themes emerged and these themes were further explored in Phase Two.

The following steps outline the stages involved in the development of the interview tool in more detail (adapted from Lofland and Lofland, 1995):

1. Deciding on the information required from staff members. Kvale (1996) defined qualitative research interviews as "attempts to understand the world from the subjects' point of view, to unfold the meaning of people's experiences, to uncover their lived world prior to scientific explanations (p. 43)." Burge (1994) and others have also employed qualitative interview techniques to gain student perspectives in DE environments. Rubin and Rubin (1995) viewed the purpose of qualitative interviews as a means to obtain thick descriptions from cultural environments, creating a basis for interpretation and planning for change. Further, through the use of rich data obtained from interviews, preliminary conclusions may be drawn and/or new questions can emerge for further study.

2. Recruiting staff members. Because this stage was a pilot study to review the quality of the interview protocol, it was important to choose a group of staff members similar to the target audience (i.e., global e-learners).

3. Choosing the method(s) for interviewing staff members. Methods often used for this purpose include personal interviews, focus interviews, or telephone interviews. In

order to maintain consistency between staff members in headquarter locations (i.e., New York) and those in the field, the researcher chose phone interviews.

4. Deciding on the content of the questions. The first step in the development of the questions for the interviews was to identify the categories to study. A category is an abstract class, group, or set consisting of individual elements of any type. According to Coxon (1999), "the two most basic principles about category formations are that, (a) they provide maximum information with the least cognitive effort, and (b) that the perceived world comes as structured information rather than as arbitrary or unpredictable attributes" (Coxon, 1999, p. 13). Categories are often discerned by first identifying a "prototypical instance" of the phenomena to serve as a foundational representation of the properties or attributes of the category (Coxon, 1999, p. 13).

Categorizing the properties of a phenomenon is intended to provide a basis for comparing both the "maximization and minimization of similarities and differences discovered within the data" (Glaser & Strauss, 1967, p.55). This process may reveal interrelationships within or between categories, or may generate new categories. The identification of minimized differences (i.e., similarities) within a category tends to establish a "probability of a theoretical prediction".

The development of preliminary categories to explore during the interview was drawn from previous research in the area of global e-learning (see literature review). Coding categories were developed through an iterative process and used to categorize major themes. The major themes were then recorded into subcategories, established by researchers in the field of e-learning. The categories chosen were (a) instructional design, (b) course content, (c) assessment, (d) pedagogy, and (e) language.

5. Developing the wording of the questions. Each question was short and concise in order to clearly address a single issue related to the overall goal. The questions were designed so as not to lead the respondent to a particular answer.

6. Putting questions into a meaningful order and format. Question 1 was intended for demographic purposes. Question 2 explored what motivated the student to participate in the e-course. Question 3 asked students about any prior concerns they had before taking the e-course. Questions 4 to 8 probed e-learning dimensions. Questions 10 and 11 were intended to explore themes that had not been previously identified in the literature.

Evaluation Tool

Table 6 is a summary of the steps in the design of the evaluation tool (using Reeve's dimensions as guidance). The original evaluation tool as proposed by Reeves is included in Figure 2.

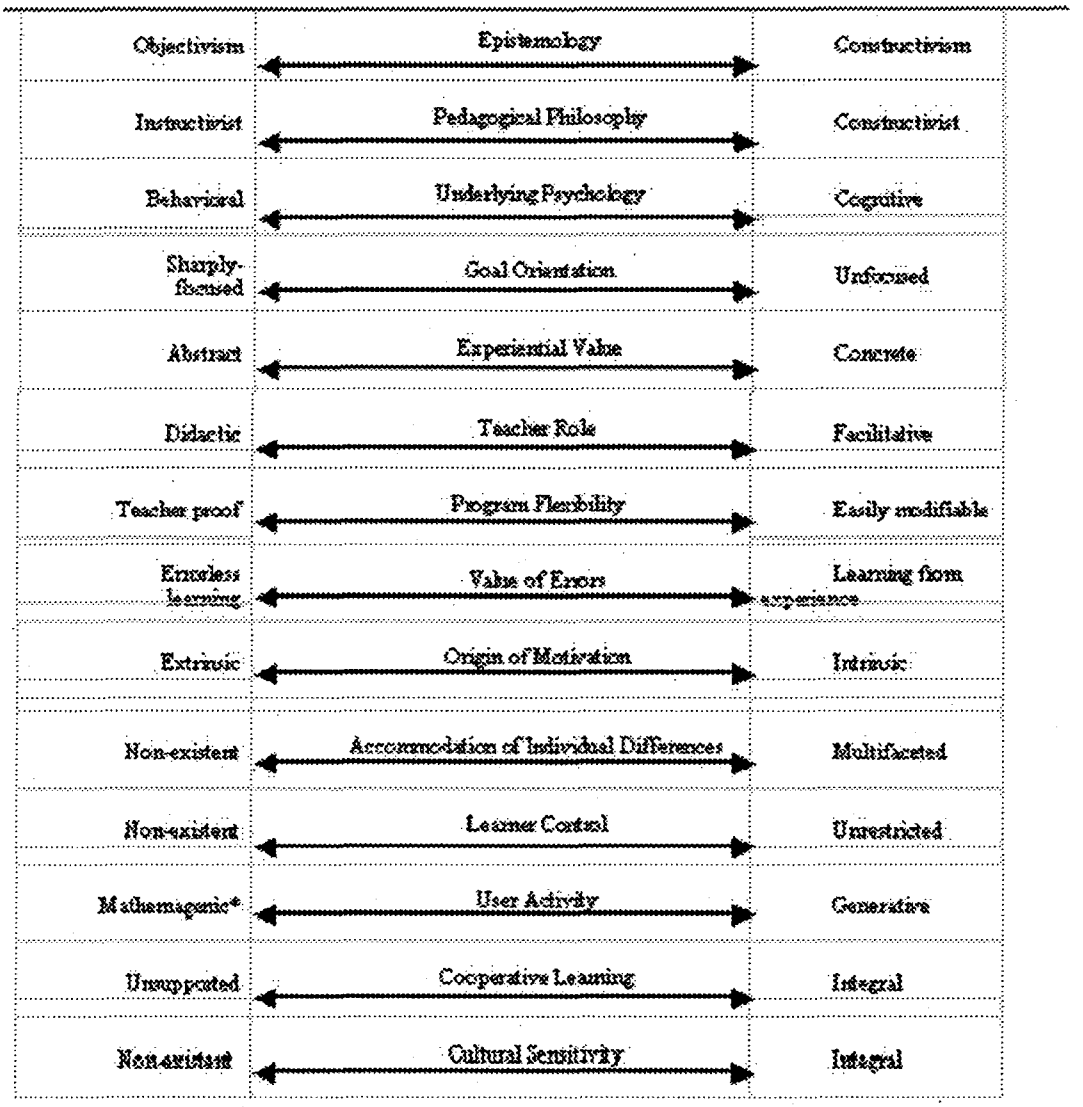

Figure 2. A diagram of Reeves' pedagogical dimensions (adapted by Henderson 1996).

Table 6

Evaluation Tool

Dimension	Left hand	Right hand
Epistemology	-Structured learning environment -Linear presentation of material - Learning environment guides the learning - Clear learning categories - Learning is sequential - Learning is easily measured - Instruction shapes desirable behaviour through the arrangement of stimuli, responses, feedback, and reinforcement	- Flexible and open learning environment - Student is actively creating the learning environment - Content presented holistically, hypermedia learning environment, - Learning is difficult to measure - Variety of learning strategies are required depending upon the type of knowledge to be constructed by the learner
Pedagogical Philosophy	- Well defined objectives - Learning content is removed from the learners' environment. -Learning is presented in small chunks -Objectives exist apart from the learner. -Learners viewed as passive recipients of instruction - Little attempt is made to individualize the learning needs of each learner	-Learning is presented holistically - Learning environment is rich and diverse - Learning can be estimated only through observation and dialogue - Pace and sequence in which one of learning is determined by the learner
Goal Orientation	-Goal set by the learning system - Task competition goals - Goals focused and static - Concrete and measurable goals - Completing traditional assessment exercises. (True/False, Fill in the blanks, Multiple choice)	-Personal knowledge building goals set up by the system. - Goals tailored for the needs of different learners - The environment nourishes and encourages pursuit of personal knowledge building goals
Experiential Value	-Abstract concepts are presented to the learner -Knowledge is presented and learner	-Concrete examples are given to the learner -Action based problem solving

	must attempt to make the connections to his or her world -Completing traditional assessment exercises (True/False, Fill in the blanks, Multiple choice	- Situating practice and feedback within realistic scenarios - Ranging from activities based on real situations to models that focus on applying conceptual knowledge or skills, such as critical thinking or problem solving. - Authentic activities provide the opportunity for learners to examine the task from different perspectives, using a variety of resources.
Program Flexibility	- Learner is required to perform all tasks and navigational paths as set forth by the course environment - All task and assignments are completed in the e-environment	- Learner can choose how and when to perform tasks - Learning program allows for multiple ways of learning - Gives learners a choice of assignment topics and modes of communication
Value of Errors	-Errorless learning - Learning through trial and error	- Multiple right answers -Learners provided with coaching and feedback on answers
Origin of Motivation	-Externally rewarded learning. - When a learner is motivated by rewards and incentives external to the learner's interest and satisfaction, all learners learn the same material - No choice in assignments, path flow and learning strategies and learning styles (for example, visual, verbal, global, sequential, inductive or deductive)? - Facilitates shallow and passive learning	-Is a process of generating ideas using static information as a starting point and re organizing this into more flexible knowledge structures
User Activity	- Learners have the opportunity to access the same content, but in different ways	- Learners have the opportunity to generate ideas using static information as a starting point and re organizing this into more flexible knowledge structures

continued

Teacher Role	- No teacher involvement - Limited or no access to tutors, subject matter experts etc.	-Facilitator or teacher plays an visible role in the course
Cooperative Learning	-Course does not integrate collaborative learning; learners do not work in pairs or small groups to accomplish shared goals. - Learning is completed in the e-environment.	- Web sites integrate collaborative learning; learners work in pairs or small groups to accomplish shared goals -New and wider avenues for contact and collaboration. - Create tasks where learners can share ideas and work together on projects
Cultural Aspects	Cultural differences are completely ignored (even if unintentionally) - The course may have a Western slant to it	- Strategic use of cultural content and resources - Images and examples free from stereotypes and uses internationally recognized symbols. Global vs. local issues the appropriateness of material developed nationally versus materials produced or adapted for local contexts.

Table 7 provides a summary of the steps involved in the creation of the Evaluation Tool presented in Table 6. A detailed analysis is provided after the table.

Table 7

Summary of the Steps in the Design of the Evaluation Tool

Version	Design-development	Location	Procedure	Outcome
First version	I used Reeves (1997) dimensions as is.	Appendix C	I analyzed one stand alone e-learning course using the original model and definitions for each dimension(Appendix D).	I found that it was hard to interpret the dimensions because I felt there were not detailed enough.
Second version	Each dimension was expanded to include a more detailed description of each dimension. This was guided by other researchers who used Reeves' dimensions in their studies (see Kennedy and McNaught, 1997).	Appendix F	I analyzed one self-paced e-learning course (different from the course used in the first version).	This tool was easier to use because each dimension was better defined than the first version. However, since I was the only one who had used it at this stage, I wanted a colleague to use the tool to analyze a course.
Third version	There was a need for inter-rater reliability.	Appendix G	A learning specialist and I reviewed another e-learning course.	There were problems with interrater reliability on the items of user activity and origin of motivation. These dimensions were clarified and tested again to finalize the Evaluation Tool.

The development of the evaluation tool followed the four main steps adapted from Horten (2001) and Reeves and Harmon (1994), and were the following:

1. Compilation of existing frameworks, using the Reeves model. Many previous studies were reviewed including Thomas and London (2001), McLoughlin and Oliver (2000), Edmundson (2006), and Kumar and Lichack, (1997). All were found to have applied or selected dimensions of the Reeves evaluation framework in their research. The commonality in all these studies was that each dimension was reviewed along a continuum. One side of the spectrum tended to reflect instructivist, behavioural, abstract dimensions with low levels of learner control, activity or cooperation. Approaches at the other end of the spectrum reflected constructivist, cognitive, contextual dimensions, with high levels of learner control, activity and collaboration.

2. Refinement of an evaluation methodology, based on the results and existing schemes. The original evaluation framework, developed by Reeves and Harmon (1994), proposes a model incorporating 10 dimensions of interactive learning which, as the authors advocate, can provide an understanding of what Web-based instruction can and cannot accommodate. These 10 dimensions are composed of pedagogical philosophy, learning theory, goal orientation, task orientation, source of motivation, teacher role, metacognitive support, collaborative learning, cultural sensitivity, and structural flexibility. The authors suggested that each should be evaluated on a dimensional scale. Reeves (1997) later expanded the pedagogical dimension to include epistemology, pedagogical philosophy, underlying psychology, goal orientation, experiential value, teacher role, program flexibility, value of errors, motivation, and accommodation of individual differences, learner control, user activity, cooperative learning, and cultural sensitivity.

3. Development and testing of the evaluation tool. To develop the evaluation tool, methods developed by Reeves (1997) and others (Edmundson, 1996) were used. Details of each dimension from the Reeves list were incorporated, and then expanded, so that they were more easily understood. In the present study, a qualitative scale was used. In addition, important pedagogical concepts were explained, and examples given, to make the understanding of that particular requirement easier. The definition of each of the dimensions proposed by Reeves was explained further to include more descriptions and examples. A column for open-ended comments was included to aid with specific problems, with the expectation that this would add significantly to the overall evaluation process.

4. Pretesting of the evaluation tool. The purpose of the pretest was to determine the usefulness of the evaluation tool and to make modifications as necessary. The pedagogical dimensions were scored on continua, placing any particular pedagogical dimension on a range from objectivist to constructivist.

Benson, Elliott, Grant, Holschuh, Kim, Lauber, Loh, and Reeves (2002) proposed the use of the following guidelines when researchers use an evaluation tool to review a multimedia course. They suggest that the reviewer should (a) review the instrument in detail before reviewing the e-learning product; (b) spend sufficient time exploring the e-learning program before beginning the actual evaluation; and (c) complete the learning program from beginning to end, to conduct the actual evaluation.

An evaluation framework was developed to review existing stand alone global e-learning course (see Appendix C). The evaluation tool was then used to analyze one self-paced

global e-learning courses offered at one UN agency. An analysis of one course using the evaluation tool can be found in Appendix D.

Procedure

Interviews

Interviews were held by phone, at a time most convenient for the learners. Learners interested in contributing to the study signed a consent form (see Appendix A). Consent forms were sent to participants via e-mail. Individuals who were interested in participating were asked to return signed copies. Once signed, the learner was asked if the interview could be taped. At this time, participants were informed that they would not be referred to by name during the interview. Many learners did not feel comfortable about the interview being taped. In these instances, extensive notes were taken throughout the process. If the interviewee consented to the taping of the interview, notes were taken on a timed schedule, which was later matched to the transcript of the interview.

During the first interview, it became clear that the questions were confusing to the learner. For instance, on the question about assessment, the interviewee wondered: "*I am not sure what you mean by assessment.*" During the second interview, the interviewee shifted from the original interview question and discussed issues on program flexibility, motivation and locus of control, performance evaluation, competencies, experience, and technology infrastructure. During the third interview, the staff member did not answer the interview questions and discussed other issues, such as learner goals, feedback mechanisms, learning styles and multimedia choices, lack of control, relevance, professional development, grade increments, and language proficiency. After the third interview, a decision was made to redesign the original interview guide. A new interview

guide, which incorporated feedback from the three participants, was designed and administered to the remaining seven participants (see Appendix E).

Themes derived from the literature review also had to be adjusted. The following breakdown describes the theme behind each question: Questions 1 and 2—demographic purposes; Question 3—origin of motivation; Question 4—learning objectives; Question 5—epistemology and pedagogical philosophy; Question 6—goal orientation; Question 7—goal orientation , Question 8—experiential value; Question 9—program flexibility; Question 10—accommodation of individual differences; Question 11—program flexibility ; Question 11—accommodation of individual differences; Question 12—experiential value and pedagogical philosophy; Question 13—value of errors, and Question 14—exploration of cross-cultural issues.

Evaluation Tool

A modified version of Reeves' dimensions (1997) was used, to review three courses from the same UN agency (see Appendix C). A pilot study of the evaluation framework was initiated in order to (a) ensure that the content in the revised framework was satisfactory, (b) determine how long it would take to complete the template, and (c) decide if the descriptions of each dimension were detailed enough.

After analyzing the results from the first course, it became apparent that it was difficult to use Reeve's original dimensions as is, because the descriptions for each dimension were not detailed enough. I found that I was not properly analyzing the course because I was "guessing" on how to interpret what I was finding in the course (see Appendix D).

Another evaluation tool was developed (see Appendix F). The revised evaluation framework was different from the first version in that it included more detailed definitions for each dimensions. The revised definitions were guided by the literature and from other researchers who had applied Reeves' (1997) framework in reviewing e-learning courseware.

In order to check for consistency, a colleague analyzed the revised tool, to ensure inter-rater reliability. In this study, inter-rater reliability, which measures homogeneity, was administered by having two researchers apply the framework (see Appendix F) to the same course by both researchers,. The objective was to establish the extent of consensus on the evaluation tool. Consensus was measured by dividing the number of agreements by the total number of observations. There was still some disagreement with the dimensions of origin of motivation and user activity. A further version of the tool was developed (see Appendix G). The literature was revisited and Hannifin's (1989) research on user activity was explored and Kumarawadu (2004) and Bonk (2002) on the origin of motivation. Another tool was developed (see Table 6) where adjustments were made uniquely for user activity and origin of motivation. The same colleague who reviewed the previous template was asked to review the new template. The colleague's analyses were cross-checked against mine to ensure that there was agreement between us on user activity and motivation. The new tool (see Table 6) was then used to review a third e-learning course, to ensure that it could work in the research context.

Questionnaire

Table 8 is a brief summary of the steps I used to design the questionnaire. A more thorough and detailed analysis is provided after the table.

Table 8

A Summary of the Steps involved in the design of the Questionnaire

Version	Design-development	Location	Procedure	Outcome
First version	The questionnaire items were similar to the interview items except they were close ended.	Appendix I	I pretested the original tool with three staff members.	One new item was added because participants felt that an open-ended question on the context of e-learning in their agency was necessary. Question 12 was confusing to participants and had to be reworded.
Second Version	Two adjustments (addition of one new question and re-wording) of another question were deemed necessary.	Appendix J	Seven staff members completed the online questionnaire.	No problems were reported.

The purpose of implementing a questionnaire, after analyzing the results from the interviews and the evaluation framework, was to cross-tabulate results to ensure consistency. Questionnaires can be useful confirmation tools. According to the United Nations Food and Agricultural Organization, (1997), there are nine steps involved in the development of a questionnaire. The following steps were adapted from this program:

1. Decide the information that is required. Information was sought from learners to triangulate results with the evaluation framework and interviews. Because many

learners were not available for further interviews, it was decided to provide learners with the opportunity to complete the questionnaire.

2. Define the target respondents. The target respondents were the same as for the interviews.

3. Choose the method(s) of reaching target respondents. Online survey tools are common to all UN agencies. They provide learners with the opportunity to complete a survey from the convenience of their desktops, and also to maintain participants' anonymity. In this study, In order to prevent the same participant from doing the same survey more than once, a feature was embedded in the "programming" of the tool, to block a participant from doing the survey again.

4. Decide on question content. The content was adapted from the interview protocol. None of the items was altered. Instead, each question in the questionnaire was similar to the questions in the interview protocol (both sentences say the same thing). For instance, in Question 5 of the interview, the participants were asked if the objectives in each module of the course were clear. In the questionnaire, the participants were asked to rate the following statement "the goals of the course were clear to me." The ratings were: strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. An open box was available and participants were given instructions to explain further, if they wished

5. Develop the wording of the question. The following questions were posed prior to framing the questionnaire: (a) Does the question contain difficult or unclear terminology? (b) Does the question make each alternatives explicit?"; "Is the wording objectionable? (c).Is the wording loaded or slanted?

6. Put questions into a meaningful order and format. A similar format to the interview guide was used.

7. Check the length of the questionnaire. The length was reviewed during the pre-test.

8. Pre-test the questionnaire. Prior to disseminating the questionnaire, a pilot study (see Appendix I) was conducted to (a) test how long it would take to complete the questionnaire, (b) verify that the questions were clear, (c) confirm that the instructions were clear, and (d) allow elimination of questions that did not yield usable data. In the case of an electronic questionnaire, additional pilot-testing was necessary to make sure the questionnaire worked on different computer systems, and with respondents who had varying degrees of computer experience.

Four learners, in different country offices in the same organization were asked to review the questionnaire (see Appendix I). All the staff members had just recently completed a stand alone e-learning course. Learners were asked to complete the questionnaire online. Afterwards, a copy of the questionnaire with the learners' results was printed out, and discussed by phone with the participants. Information was obtained on (a) how long it took to complete the questionnaire (b) whether the instructions were clear, (c) whether all the words were comprehensible, (d) whether any questions were unclear or ambiguous, (e) whether there were objections to answering any questions, d) whether the layout was clear and attractive, and (f) whether there were any questions missing.

After analyzing the results from the pilot-testing phase, two changes to the instrument were considered necessary. First, all respondents maintained that an open-

ended question on how organizations design and deliver e-learning was necessary. New questions, revised Numbers 13 and 14, were added. Question 12 also confused many of the participants. They were not sure how to define the word *able.* Question 12 was reworded, to focus on learner perception of ability (see Appendix J). When the questionnaire was finalized, seven participants were sent an online consent form to their e-mail addresses (see Appendix A). Once the participants' acceptances through electronic signature were received, a copy of the questionnaire was sent out. They were given two weeks to reply to the questionnaire online.

Other Variables

Previous attempts at describing learner perceptions in e-learning programs found that one of the biggest problems proved to be handling the number of variables which potentially influences the effectiveness of the program, and deciding what constitute dependent, independent and irrelevant variables in a given situation. The European Evaluation Net (2005) developed a comprehensive framework of variables influencing learner experience in e-learning. Over several e-learning evaluation projects, five major clusters of variables emerged; individual learner variables, environmental variables, technology variables, contextual variables, and pedagogic variables. Each of these can be disaggregated into more precise groups, and further disaggregated, until specific variables can be identified and isolated. How, and to what extent, these variables influence the learners will emerge from the data analysis.

Confirmability, Dependability, Credibility and Transferability

To ensure confirmability, the following steps were taken (a) raw data was used for analysis purposes, (b) process notes in the form of audit trails were kept by the

researcher, and (c) instrument development information was rich in detail. To ensure dependability, stepwise replication (i.e., all the steps in the interview development and procedure were detailed, to allow other researchers to follow the steps) was initiated. To ensure credibility, the following steps were completed: (a) prolonged engagement (i.e., as many staff members as possible were interviewed to ensure that data saturation had occurred); (b) persistent observations (i.e., looking for multiple influences); and (c) peer debriefing (i.e., this was done with a similar status colleague (not with a junior or senior peer) who was outside the context of the study, and who had a general understanding of the nature of the study; and (d) member checks (i.e., participants were asked to corroborate findings).

Transferability refers to the degree to which the results of qualitative research can be generalized or transferred to other contexts or settings. Specific strategies used to achieve transferability include thick descriptions (i.e., thick descriptions of the dimensions as well as richly described appendices, and purposive sampling). All participants were chosen because they had completed a stand alone e-learning course.

Other Data Collection Methods Considered

Other possible data-collection methods that were considered included a focus group. However, it was not possible to gather a group together, because of the geographical distribution of the participants. Online technologies and video conferencing tools were available in only a few regional offices. A focus group would have secured insights into people's shared understanding of everyday life, and the ways in which individuals are influenced by others in a group situation.

Qualitative Data Analysis

Data analysis in qualitative research is an inductive process. Unlike quantitative analysis, organization of data into categories and identification of relationships occur during data collection. Patton (1990) contended that patterns and themes emerge out of data and lend themselves to interpretational analysis. Gall et al. (1996) defined interpretational analysis as "the process of examining case-study data closely in order to find constructs, themes and patterns that can be used to describe and explain the phenomena being studied" (p. 562).

Phase Two: Multiple Case Study (Course 1, 2 and 3)

The second phase involved the review and analysis of three stand alone Global e-learning courses and used the instruments developed in Phase One.

Course 1

A total of 14 participants contributed to this stage of Phase Two. The total time involved to collect the data was approximately four months. I used the research instruments (interview protocol, evaluation tool and questionnaire) that were developed in Phase One.

Participants

The learners in this case study were UN staff members who worked full time in one UN agency. In the results, this agency was referred to as UN Agency 1. All participants had completed a stand alone e-learning course. Staff members were an extremely heterogeneous group in regards to age, education, native language, and background, years working at the UN, professional level, and nationality. For identification purposes, participants were referred to by a number. Two Americans (UN1,

UN2), three Europeans (UN3, UN4, and UN5), one Asian (UN6) and one South American UN7) all participated in the interview stage. One Canadian (UN8), two Asians (UN9, UN10), 2 Italians (UN11, UN12), one German (UN 13) and one East Asian (UN 14) completed the questionnaire.

Learners varied in level of education, functional area, and job level, ranging from assistants to section managers. The only commonality between the participants was that they all worked in the same agency and had all completed the same e-learning course within relatively the same time frame, one to two months.

Gaining entry to the setting was not difficult. A colleague in this UN agency, working on e-learning projects, helped. The colleague provided the names and contact information of staff members who could be potential participants. The colleague contacted staff members who had completed the e-learning course and inquired about their interest in participating in the study. A total of seven staff members agreed to participate in the phone interviews, and a total of seven different staff members opted to complete the questionnaire (i.e., staff who participated in the interviews were different from those who completed the questionnaires).

Data-Collection Methods and Procedure

The data-collection methods were guided by the instruments developed in the Phase One. These instruments included the evaluation template, the interview guide, and questionnaire.

Evaluation tool. A review of the course, using the evaluation tool (see Table 6 on page 78) was carried out. A modified methodology from Phase One was used. During the pilot study, familiarity with the courses reviewed had been obtained, because I had seen

similar courses from the same company at presentations and at conferences . In this instance, I was completely unfamiliar with the course and decided to first complete the course as a learner, before attempting to go through the review. Completing the course as a learner took over one hour, and afterwards, this researcher felt more comfortable completing the evaluation framework. It took approximately 45 minutes to complete the template. The completed framework is in the CD accompanying this dissertation.

Phone interviews. Phone interviews were conducted in order to ensure consistency in the research environment. Semi structured interviews were utilized, with a combination of closed and open-ended questions. The interview guide (Appendix E) was closely followed, although some questions and/or words were repeated or reworded to facilitate communication. Phone interviews with five staff members in New York, and two staff members in field offices were conducted. Each interview took a minimum of 15 minutes to a maximum of 45 minutes to complete. Not all staff members wanted to be taped during the interview. Learner responses were recorded on a computer, during the interviews.

To construct an encouraging climate that fostered openness and self-disclosure, the researcher's credentials in the field, as well as her professional position, were established. An opportunity was provided for participants to ask questions during the interview, and to self-reflect on comments for possible further understanding. The results of two phone interviews were sent to two staff members for feedback (i.e., for audit trial-reliability purposes). However, they did not respond to the two e-mails sent.

Questionnaire. A Web link was sent to staff members who agreed to complete the questionnaire. A separate e-mail was sent to each participant who had agreed to complete the survey. Participants were given directions on how to access the survey, and how long the survey would be active. Staff had two weeks to complete the questionnaire.

Course 2

A total of 15 participants were involved in this stage. The total time involved in collected the data was approximately six months. I used the research instruments (interview protocol, evaluation tool and questionnaire) that were developed in Phase One.

Participants

For identification purposes, participants were referred to by a number and the letter B to indicate there were participants from the second case study. One American (UNB1), five Europeans (UNB2, UNB3, UNB4, UNB5, and UNB6), and one Asian (UNB7) participated in the interview stage. One Canadian (UNB8), two Asians (UNB9, UNB10), three East Asians (UNB11, UNB13, and UNB14), and one German (UN 15) completed the questionnaire. Staff members varied in level of education, ranging from bachelor's degree to a doctorate. Staff also comprised various functions and levels, ranging from assistants to section managers. The only commonality between the participants was that they all worked at the same agency and had completed the same e-learning course within relatively the same time frame, one to twp months.

Data Collection Methods and Procedure

The procedure guidelines from Course 1 were followed in gathering data for Course 2.

Course 3

A total of 11 participants contributed to this study. The total time involved in collected the data was approximately six months. I used the research instruments (interview protocol, evaluation tool and questionnaire) that were developed in Phase One.

Participants

For identification purposes, participants were referred by a number and the letter C to indicate that they were participants from the third case study. Three Americans (UNC1, UNC2, and UNC3), 3 Europeans (UNC4, UNC5, and UNC6), and one Asian (UNC7) participated in the interview stage. Two Canadians (UNC8, UNC9), one Russian (UNC10), one East-Asian (UNC11) completed the questionnaire. The only commonality between the participants was that they all worked at the same agency and had completed the same e-learning course within relatively the same time frame.

Data Collection Methods and Procedure

The same procedure guidelines from Course 1 were followed in gathering data for Course 3.

Phase Three: Validation of the Findings from Phase One and Two

A total of eight participants contributed to Phase Three. After analyzing learner experiences in Phase One and Two, a set of guidelines emerged to improve the design of stand alone Global e-learning. Three of these guidelines were included in the design of an asynchronous stand alone global e-learning course in one UN agency. Data was collected by the UN agency.

Course 4

In the summer of 2006, one UN agency hired an e-learning vendor to design a course for over 9000 staff. The external company designed the course using three of the recommendations that emerged from the second phase of this study. The three recommendations incorporated in the design on this course included (a) personalized learning paths, (b) blended learning, and (c) various modes of content presentation. The e-learning vendor together with two learning officers in the agency conducted a study with eight staff members who completed the alpha version of the first module of the course.

Participants

Eight staff members who had completed the alpha version of the first module of the course participated in this phase. Eight staff members completed an online questionnaire, and two staff members were interviewed. All participants had completed one or two e-learning courses in the last two years. Four of the participants had more experiences in the subject matter, while the other four knew very little of the subject matter.

Questionnaire

As stated above, the researchers used the online questionnaire. Each participant was provided with a link to an online survey and were requested to complete the questionnaire after they had completed the alpha sample module.

Interviews

In order to gather richer data, one learning officer interviewed two participants and asked the same questions as the questionnaire, but probed the participants for more detail.

Qualitative Data Analysis

As previously mentioned, this study used constant comparative analysis to enable modification of the analyses, as further data were gathered (Charmaz, 2000; Glaser, 1978, 2002; Glaser & Strauss, 1967). The process consisted of two main steps: incident identification, and categorization. First, the individual units of data, called *incidents* ranging from single sentences to short paragraphs, were marked. The incidents were labelled and then combined, and duplicates were removed. All of these incidents were then sorted into a category system as proposed by Glaser.

Content analysis was adopted to analyze the transcribed data of each interview. Each interview transcription was read line-by-line, and then divided into meaningful analytical units, called categories. After identifying meaningful categories, they were coded. Glaser and Strauss (cited in Lincoln & Guba, 1985, p. 339) described the constant comparison method that follows four distinct stages: (a) comparing incidents applicable to each category, (b) integrating categories and their properties, (c) delimiting the theory, and (d) writing the theory.

When the seven interviews and seven qualitative responses from the questionnaire were examined, both individual case and cross-case analytic techniques were used (Patton, 1990; Yin, 1994). This began with a search for patterns within the data on each of the staff members and then across all staff members, using a constant comparative method (Glaser & Strauss, 1967). The set of participant interview transcripts entries were read several times and separately marked to capture main ideas or domains. Independent lists of coding categories, under the broad categories identified in the literature review, were made. According to Goetz and LeCompte (1981), this method "combines inductive category coding with a simultaneous comparison of all social incidents observed" (p. 58). This method ensures that as social phenomena are recorded and classified, they are also compared across categories. Thus, hypothesis generation (i.e., relationship discovery) begins with the analysis of initial observations. This process undergoes continuous refinement throughout the data collection and analysis process, continuously feeding back into the process of category coding.

Data Analysis Using Hyperesearch ©

I wanted to compare and contrast the results from conducting constant comparative analysis with a qualitative software analysis tool. In order to cross reference the results, a qualitative software analysis tool was used to analyze the data. The first attempt used the software tool, Atlas. The tool was found difficult to use, and the instructions were hard to follow. After reviewing other qualitative software tools (e.g., reading journals and talking to colleagues), it was decided to use the software Hyperesearch ©. The total learning time to fully operate and understand the functionalities of Hyperesearch © took approximately five hours. In order to analyze the

data, a systematic procedure for entering the data in Hyperesearch © had to be followed. First, cases were developed. The cases were staff members who were interviewed, and staff members who completed the questionnaire. A total of 14 cases were created. Second, documents were transferred and copied from Microsoft Word © to Hyperesearch ©. The files had to be "cleaned up," because breaks in dialogue, spaces and paragraph indentations affected the readability of the documents. Third, using the descriptions of the dimensions of the Reeves model, the text was reviewed and portions of the text that could be coded were highlighted. Codes were assigned, based on the descriptions for each dimension in the Reeves model. These codes were developed from the literature review. Fourth, codes were assigned that would reflect the specific definition associated with Reeves' model. This process involved applying a prescribed or developing set of categories to the data.

The mouse was used to point and click at the start and end of the passage in the text to be coded. The code to be applied was selected from a scrolling box. New codes were quickly and easily created as necessary. Codes could be of three types, though Hyperesearch © does not treat them differently: descriptive (e.g., male); thematic (e.g., assessment), and explanatory (e.g., feelings). In this case, only thematic and explanatory code types were used.

The study began with around 30 cases, and built on these codes. Eventually the schema produced consisted of 209 codes, organized in a tree-like structure, going down four levels (e.g., motivation; intrinsic; task orientation; frustration). Around 40 of these codes were descriptive, and most of the rest were thematic. The analysis, using a qualitative computer research tool, did not yield the same results as the constant

comparative method. First, this was because data were segregated into chunks, and it was difficult to extract rich data. For instance, it was found that ten of the twelve participants preferred to have clear goals presented to them in the course. The reason for this was not available. Second, suggestions and feedback from staff on how to improve e-courses could not be captured using a computer database. Therefore, after a discussion with one of the supervisors of this study, it was decided not to continue the use of Hyperesearch (c) in this study.

Summary of the Phases in the Methodology

Table 9 below provides a snapshot view of all the phases, tools, courses and number of participants in each phase of the study.

Table 9

Summary of Methodology

Phase	Tools	Course/s	Participants
1	Interview Tool (Appendix E Evaluation Tool (Table 6) Questionnaire (Appendix J)	This course was a custom made course in a UN technical area.	3 *7 for the interviews
2	Same as above Interview Tool (Appendix E Evaluation Tool (Table 6) Questionnaire (Appendis J)	Course 1- Off the Shelf Management Course Course 2- Custom made course with an e-learning vendor Course 3- Course was designed in house with the support of an external e-learning programmer	41
3	Interview (from external sources Questionnaire (from external sources)	Course 4- Course was a custom made course	8

Link between Interview Questions, Questionnaire, Evaluation Tool, Research Objectives and Research Analysis

Research on critical success factors for online learning suggests that considering as many factors in the design stage can ensure greater success than if it is left to the final evaluation (McLoughlin & Oliver, 1999). Procedures for obtaining feedback and incorporating that feedback into future program planning is a critical success factor for distance learning (Hawksley & Owen, 2002) Thus, the findings from this study grew directly out of the analysis of "real" e-learning curriculum material. The findings from this study will be compared and contrasted with the current literature base on e-learning design.

The first objective of this study was to describe learners' experiences in Global e-learning. It is hoped that through an analysis of learners perspectives, important learning components will emerge that should guide the design and delivery of stand alone Global e-learning.

The interview tool was chosen to elicit the information mentioned above. Of the 16 questions in the interview protocol, three were closed-ended questions. These questions were needed to ensure that the learner who was participating in this study had completed the "right" course. The remaining questions (course objective, motivation, learner goals, experiences with cooperative learning, course content, feedback and assessments, cross-cultural biases etc.) were opened ended to allow learners voices to emerge about their experiences in participating in an asynchronous stand alone e-learning course. It is anticipated that the primary outcomes of the interviews will focus on a heterogeneous group of learners, but professionally homogeneous user group in such a

way that they can be understood and are acceptable for the entire group. A corollary to this outcome therefore is to uncover critical incident which may be due to cultural factors.

The items for the questionnaire reflect the same ones as those for the interview. I included a questionnaire for two reasons. First, I wanted to cross-tabulate results to ensure consistency and second I wanted to give staff who could not participate in the interviews the opportunity to participate in the study.

The second objective is to provide guidelines that may be useful in the assessment of existing or off-the-shelf-courses. Reeve's dimensions were used as a guide to analyze the e-learning courses learner's had completed. I completed the e-learning course and reviewed each dimension as it related to the e-learning course. It was hoped that in analyzing each dimension I would be able to identify as many issues as possible that influence the stakeholders (in this global e-learning students). One way to identify critical issues is by putting each stakeholder group (in this case the learner) at the center of the framework and exploring issues along Reeves' dimensions (Edmundson, 2006). By repeating the same process for other groups (Course 2 and 3), I could generate a comprehensive list of issues that emerge in stand alone Global e-learning.

Thus, the primary purpose of the proposed guidelines that emerged from this study is to generate a consistent process by which practitioners of Global of e-learning consistently address the existing characteristics of an e-learning course and initiate analysis in order to adapt or redesign e-learning to fit their needs, if necessary. Squires and McDougall (1996) distinguished between predictive and interpretative evaluations. Predictive evaluation of software is the assessment of the quality and potential of a

software application before it is used with students. Interpretative evaluation is concerned with assessing the observed use of an application by students. By definition, interpretative evaluation is conducted in context. In this study an interpretative evaluation will be conducted after students have completed a stand alone-learning course. Previous guidelines designed by others such as Henderson (1996) will be compared and contrasted against the guidelines that emerged in this study. It was hoped that from the results from this "interpretive analysis", I could design a guidelines for predictive evaluation.

The third objective is to draw on the implications of learners' experiences and the existing literature for the development of better practice guidelines for the design of globally accessible e-learning courses. After analyzing learners experiences in e-learning course (in particular towards the interview questions and questionnaire items, that ask learners to provide recommendations how they would improve the course), I proposed a new guidelines for the future design and delivery of Global e-learning, which focuses on the most important aspects to be considered when designing or evaluating a Global e-learning courses. These guidelines were constructed to give instructional designers an idea about what might influence the achievement of equitable outcomes before they actually make changes to a course. The information gathered from this process allows the designer to ask the right questions and to identify an appropriate action plan. The aim was to provide instructional designers and learning experts with practical, research-based guidelines that could readily apply to future course design in global organizations similar to the UN.

CHAPTER 4: RESULTS

As previously mentioned, this study used constant comparative analysis to enable the researcher to scrutinize the data as they were gathered (Glaser & Strauss, 1967). The process consisted of incident identification and categorization. First, individual units of data were marked "incidents" that ranged from single sentences to short paragraphs. The incidents were labelled, then combined, and duplicates were removed. All of these incidents were then sorted into a system of categories as suggested by Glaser and Strauss. To permit the reader to judge the evidential basis of a case study, ratios were included (Bachor, 2000). The ratio is the number of times a point is raised within a theme, divided by the total number of points raised within each theme. To illustrate with a very general example, if the theme of a response to a question was "authentic real life examples" and there were a total of twelve respondents, 12/12 would mean that all respondents had made salient remarks about this theme. Next, quotes that best illustrate the reported theme were selected from these twelve responses. This procedure provided a rough indication of the importance or weight that could be attached to the data in question.

Phase One: Designing the Research Instruments

Phase One was initiated in order to (a) develop and test the appropriateness of the research instruments, (b) assess the feasibility of a full-scale study/survey, (c) design a research protocol, (d) assess whether the research protocol was realistic and workable, (e) collect preliminary data, and (f) determine what resources (finance, staff etc.) would be needed for the next phase of the study. This phase provided methodological guidance for the conduct of the study's second phase.

Extension of the Literature Review

After completing the first two interviews in Phase One, the literature review was revisited because specific themes and issues emerged that were not covered in the initial literature review. Additional literature research was initiated stemming from the works of Ng and Bereiter (1991) on goal design, from Alexander and Judy (1988) on self-regulated learning and goal design, from Malone and Lepper (1987) on motivation and learning, from McIsaac's (1993) research on learning environment design, and from Ayersman and Minden (1995) on hypermedia learning styles. Thus the procedures for the second phase of the study were refined as described next.

Further Development of the Methodology

The original evaluation tool (Table 6) that was developed for Phase One was revised numerous times before it could be used, because I found the definitions for each dimension were not detailed enough for me to analyze the courses. The additional review of the literature mentioned above was helpful at arriving at a consensual understanding of the dimensions of the model. The original interview guide (see Appendix B) also had to be revised because some issues emerged that were not included in the interview questions, and some of the questions were difficult to understand.

Analysis of the Results: Themes Drawn from Phase One

For each one of the dimension of the Reeve's model specific themes emerged in the questionnaire and interview results, and hence a stronger focus was placed on each of

these themes in analyzing the data analysis of Phase Two. A summary of these themes is included below:

1. Epistemology: The responses from the participants on instructivist and constructivist approaches were inconsistent. In the next phase multiple epistemologies were explored.

2. Pedagogical philosophy: This instructivist-constructivist dimension was difficult to analyze because it was similar to epistemology, and no overall theme emerged.

3. Goal orientation: Participants indicated that both personal and professional factors as well as personal motivation, had a strong influence on their goal orientation.

4. Experiential value: A theme that emerged was that learners felt that they felt more motivated to take the course if they could see the value (i.e. increase work performance) in it.

5. Program flexibility: The only theme that emerged was that of the self-paced nature of e-learning, allowing learners to complete the course on their own time.

6. Value of errors: Although participants did not comment extensively on this dimension, they mentioned a preference for the use of simple versus more reflective type of assessment.

7. Origin of motivation: The two themes that emerged where curiosity about the course topic and if the course was mandatory or not for their work.

8. Accommodation of individual differences: Learners felt that the different instructional design approaches, and how media was used in the course met their different learning needs.

9. User activity: This was a difficult dimension to analyze, and no tangible themes emerged from the data analysis.

10. Cooperative learning: Half the learners wanted to have the opportunity to work with other learners' and preferred to have cooperative learning opportunities, while others did not want cooperative learning.

11. Teacher role: There was none

12. Culture: The four overall themes that emerged included: language, media preferences, self-paced course structure, graphics and interfaces.

It is important to note that there were no cross cultural differences that emerged in Phase One.

Findings for Research Objective One: How Do Learner's Experience Global E-Learning?

Course 1

Learner Profile

The learner breakdown for Course 1 for the interview portion was as follows: two Americans (UN1, UN2), three Europeans (UN3, UN4, and UN5), Asian (UN6), and one South American UN7. One Canadian (UN8), two Asians (UN9, UN10), two Italians (UN11, UN12), one German (UN 13) and one East Asian (UN 14) completed the questionnaire.

Course Description

This e-learning course was an off the shelf course bought from a major e-learning company. The topic of this course was performance planning which falls under the realm of management and leadership learning. This course was available to all staff. A staff

member could take the course in one sitting or complete it at their convenience in multiple sittings. The total learning time involved was between two and three hours. This was a stand alone e-learning course.

Analysis of Course 1 Using the Evaluation Tool

The raw data for the analysis of Course 1 can be found on the CD attached to this dissertation. The summary of the course analysis revealed the following.

1. Epistemology: I found a structured learning environment with a sequential order for all learning events.

2. Pedagogical philosophy: There was limited or no opportunities manipulate the learning environment.

3. Goal orientation: The course objectives are specific and well defined.

4. Experiential value: The examples were generic and did not reflect the UN working environment.

5. Program flexibility: Other than the opportunity to move around from screen to screen, there was limited flexibility in choosing what to learn.

6. Value of errors: There were open-ended questions which provided the learner with the opportunity to review many "right" answers and possibilities.

7. Accommodation of individual differences: Learners could access content in more than one way such as printing out files, screen shots, and quizzes.

8. User activity: There is minimal learner activity in the course.

9. Origin of motivation: There are some interesting case studies that try to make the learner curious about the learning topic.

10. Cooperative learning: There are no opportunities to work with other learners or opportunities to participate in group work.

11. Teacher proof: The learners could e-mail the course administrator if they encountered any problems with the course registration.

12. Cultural aspects: Learners could adjust the way the content was presented to include audio alone or audio and video.

Results from the Questionnaire Course 1

The key highlights from the questionnaire are included below. The quantitative results were calculated and presented below. A few of the qualitative responses are included as well. The raw data from the questionnaire is included in the CD. If a word or phrase was mentioned more than once, the number of times it was mentioned was included in a bracket next to the word. Table 10 provides a brief overview of the results from the questionnaire.

Table 10

Highlights from Questionnaire Course 1

Question	Results
Question 2 My motivation for taking this course:	Mandatory, curious, professional development, interest
Question 7 I knew how to navigate through the course with ease:	Agree (7)
Question 8: Please add any additional comments you wish to the above question:	It was easy to go from one module to another module except that it was difficult to jump ahead because the programme blocked you. UN8
Question 15: The course is flexible because it meets the needs of many learner	Agree (3) Neither Agree nor disagree (3)
Question 26: What recommendation would you give to your learning section about e-learning in general	E-learning should not replace workshops. UN10

Course 2

Learner Profiles

For identification purposes, participants were referred to by a number and the letter B to indicate there were participants from the second case study. One American

(UNB1), five Europeans (UNB2, UNB3, UNB4, UNB5, and UNB6), and one Asian (UNB7) participated in the interview stage. One Canadian (UNB8), two Asians (UNB9, UNB10), three East Asians (UNB11, UNB13, and UNB14), and one German (UNB 15) completed the questionnaire.

Course Description

This course was designed under the guidance of an external e-learning vendor and a UN team serving as subject matter experts. The course subject was in a "technical area". Technical areas can be the Millennium Development Goals, Reproductive Health, Human Rights, and Gender Budgeting. This course was mandatory for all staff who worked in the area of programme delivery. The target audience was either operations or programme specialists. The total time to complete the course required about 6 to 7 hours. The course was a stand alone e-learning course.

Analysis of Course 2 Using the Evaluation Tool

The raw data for the analysis of course is included in the CD attached to this dissertation. The key highlights from the course summary are presented below:

1. Epistemology: There were one or two -two examples of flexible and open learning opportunities in the course.

2. Pedagogical philosophy: Specific learning objectives were presented in small chunks or bits of learning (learning objects).

3. Goal orientation: Course goals were clear/measurable and repeated throughout the whole course as a reminder for the learner.

4. Experiential value: The examples were very simplistic and provided only a brief overview of the material.

5. Program flexibility: Learners could choose to turn the audio on/off or they could jump from module to module.

6. Value of errors: Learners reviewed the material through trial and error.

7. Accommodation of individual differences: There were no support materials, job aids or challenging examples for those learners who may have more experience with the content.

8. User activity: User activity was minimal there were no opportunities for the learner to engage deeper with the learning content.

9. Origin of motivation: When the learner begins the course it is difficult to tell why the course is relevant to them.

10. Cooperative learning: No opportunity for cooperative learning but learners could e-mail an expert if they had specific questions.

11. Cultural aspects: The examples and photos that were used in this course were mostly from a Western-European perspective. Some of the dialogue was difficult to understand if you are a non-native English speaker

Results from Questionnaire Course 2

The raw data from the questionnaire is included in the CD. If a word or phrase was mentioned more than once, the number of times it was mentioned was included in a bracket next to the word. Table 11 provides a brief overview of the results from the questionnaire.

Table 11

Highlights from Questionnaire Course 2

Question	Results
Question 2 My motivation for taking this course:	Mandatory (6), Interest (1)
Question 5. The learning environment was clear and the course goals were well defined.	Strongly agree (7)
Question 7. I knew how to navigate through the course with ease.	Strongly agree (3) Agree (4)
Question 11. The goals of the course matched my expectations.	Strongly agree or Agree (3) Neither Agree nor disagree (4)
Question15. The course is flexible because it meets the needs of many learners:	Strongly agree (1) Agree (2) Neither Agree Nor Disagree (4)
Question 27. What would you change about this course?	Include more case studies that reflect situations in different countries. (UN B9).

Course 3

Learner Profiles

For identification purposes, participants were referred to by a number and the letter C to indicate that they were participants from the third case study. Three Americans (UNC1, UNC2, and UNC3), three Europeans (UNC4, UNC5, and UNC6), and one Asian (UNC7) participated in the interview stage. Two Canadians (UNC8, UNC9), one Russian (UNC10), and one East-Asian (UNC11) completed the questionnaire.

Course Description

This course was designed by a UN learning officer using the services of an e-learning company only for the course programming. All instructional design of the course was completed by the learning officer. The course was in the subject area of management and leadership. The target audience was managers or staff who were applying for management posts. It was not a mandatory course. The total learning time involved was two hours.

Analysis of Course 3 Using the Evaluation Tool

A summary of the course analysis is presented below. The raw data from the evaluation framework is included in the CD. Highlights from the course analysis are presented below:

1. Epistemology: There was a combination of behaviourist and constructivist principles.

2. Pedagogical philosophy: There was an attempt to make the learning experience as individualized as possible to allow for learners with different background experience in this subject area to be able to find relevance in the learning material.

3. Goal orientation: The course was designed to meet the needs of a variety of learning goals. For example, learners who were curious about the concepts were given the opportunity to explore case studies and examples in depth before moving forward.

4. Experiential value: All case studies, examples, photos, jobs aids, and templates were specific to the environment of the agency.

5. Program flexibility: Staff could move around from module to module.

6. Value of errors: There was a combination of question "types" used. For specific technical questions, learners needed to go through a trial and error process before receiving the correct answer.

7. Accommodation of individual differences: Staff new to this subject area could review the basic concepts; master these concepts and then move to more advanced topic areas.

8. User activity: There were many interactive exercises that required the user to try and test out different scenarios and examples. For example, the learners were encouraged to try out different scenarios to see what they could get right and what the implications were of choosing the incorrect answer.

9. Origin of motivation: It was difficult to analyze this. The material was engaging and there were interactive exercises to increase retention and curiosity (i.e., when you make these mistakes, the consequences include).

10. Cooperative learning: Learners were highly encouraged at the beginning and at the end of the course to attend the three-day workshop that would reinforce the concepts further and allow the learners to work on projects.

11. Teacher proof: No teacher or tutor in this course.

12. Cultural aspects: The course had an extremely user friendly language using different examples of learning content.

Results from Questionnaire Course 3

The raw data from the questionnaire is included in the CD. If a word or phrase was mentioned more than once, the number of times it was mentioned was included in a bracket next to the word. Table 12 provides a brief overview of the results from the questionnaire.

Table 12

Highlights from Questionnaire Course 3

Question	Results
Question 4. In one word how would you describe this course?	Simple, Easy, Useful
Question 5. The learning environment was clear and the course goals were well-defined.	Strongly agree (4) Agree (1)
Question 10. The goals of the course were clear to me. Please add any additional comments you wish to the above question.	We knew from the start what to get out of the course. (UNC 11).
Question 14. The course content was relevant to my professional work at the	All the examples were great because they were reflective of the situation in my country office. (UN C8).

UN Please add any
additional comments you
wish to the above question.

Summary of Learner Profiles

Table 13 is a summary break down of learners by cultural background. Table 13 includes staff who participated in both the interviews and those who completed the questionnaire.

Table 13

Learner Profiles from Phase 1 and Phase 2

Ethnicity	*Learners*
North American (American, Canadian)	12
European	19
South American	1
Asia-East Asian	15
Middle Eastern	2

Learner Experiences in Global E-Learning: Sample of Learner Comments

The first objective of the present study was to identify learners' experiences in global e-learning. There were a total of 51 learners. Ten learners participated in the first phase, and 41 learners from three different UN agencies participated in the second phase

of the study. To protect the identity of the organization participating in the study, words or phrases that could potentially reveal the identity of the agency were removed from the results.

Participant responses were triangulated with the evaluation framework and the questionnaire. Content analysis, selected as the data analysis technique, aimed to capture the patterns in the data. The elements of interest for this study were the themes within the data. The content analysis of the interview data revealed consistent themes, and are presented below in order of importance, as determined by the ratio analysis. For each dimensions, the results from this study are compared against literature on *best practices design for e-learning*.

Accommodation of Individual Differences

For both the customized and off-the-shelf courses, all learners preferred a variety of learning methodologies and pedagogies to be integrated into the course. Also, learners mentioned preferences for blended-learning opportunities, different types of multimedia, content presentation, and opportunities to investigate other topics in the course.

Phase 1

While appreciating the simple, logical structure of the course, all learners wanted more than one method of learning the material. Sample comments:

> While the e-learning method is good, it is not always the best way to learn if you prefer group learning which I do. (UN02)
>
> I think for the course on _____, it would have been easier to read a book and then write an exam. (UN06)

> When I was working in Jordan, I decided to forget about taking language classes at a school, instead I preferred to study on my own with tapes. I understand they were trying to promote self-learning at_____, but just because e-learning is self-learning, it does not mean it should be the same for everyone. (UN010)

Phase 2

In the second phase, the focus was on the different types of preferences learners had in the course. Thirty-four learners appreciated the clear logical structure of the course, but wanted a more personalized approach to learning. They wanted the opportunity to have choices based on their own preferences. Sample comments:

> The material presented was clear and straight to the point and the content is an easy to follow format so that the learners could understand things clearly. However, would have preferred a workshop to go with it as well. (UN3)
>
> Although the screens were good, I prefer to have more audio. I do not want to keep reading more text. (UNB3)

Thirty participants felt that the e-learning courses needed to be supplemented by more meaningful examples and cases. Sample comments:

> While the course does an excellent job of presenting the material in an easy to follow manner, the material is devoid of rich, complex and real learning opportunities. (UN5)
>
> The content was too easy for me, and I think there should have been more than one version of the course an advanced and a beginner one! (UNC4)

Twenty learners expressed that using only one format for presenting the content did not meet their needs. Sample comments:

> There was too much text in the course and not enough video. Some of the concepts would have been better presented had we seen examples of staff members working on. (UNC2)
>
> While this course uses simple English, it may not be useful for learners who may have trouble in English. This is why I feel that reading too much might confuse some people. (UNC5)

The available literature on the best practices design in e-learning indicates that e-learning should be designed to meet the needs of learners with different needs(Edmundson, 2004, 2006; Sanchez & Gunawardena, 1996,).In addition, the literature on best practices design in Global e-learning found that program flexibility is essential for learner success in completing the programme (Mc Loughlin, 1996). In effect, the results mentioned above reveal that all learners regardless of cultural background felt the need to have materials and activities presented in a variety of ways so that they could utilize what most suits their preferences and ways of learning.

Epistemology

Data from the interviews in Phase One did not reveal patterns. It was difficult to analyze how learners experienced the epistemological approach in their respective courses in Phase One because the course design made it difficult to really determine whether the approach was constructivist or behaviorist. It was easier to explore multiple epistemologies in the second phase, because in this case both instructivism and constructivism were seen as valuable approaches by the learners.

Phase 1

Learners had completed a course that was comprehensive, structured and attainment of knowledge was measured through true/false questions and fill in the blanks tests. Beyond the course structure, learner responses did not reveal how they felt about the epistemological approach. Sample comments:

> I knew exactly what the course objectives were. The course makes logical sense to me. It was clear and quite easy to see where the course was going. The feedback and assessment items were straight to the point so you knew what you were getting in this course. (UN04)
>
> While I did feel that I learned the material really well, I also felt that there was something missing. There were more complex issues that surround_____. And this was just too basic for me. I think we are all really advanced enough to know what is going on etc. We need more than just the basics. (UN06)

Phase 2

All three courses in the second phase used different epistemological approaches. Unlike Phase One, learners in this phase did express how they felt about the epistemological approach; during the interviews I was able to probe them more about the different approaches. Sample comments:

> I prefer to have the opportunity to explore learning issues for myself without the need to have too strict and formal presentation of learning. (UN 7)
>
> I liked the way the course was set up because there was a clear learning guideline that allowed you to go through each section and get tested on your knowledge of each section. (UNB)

Learners in the same course had a number of different experiences and opinions. Sample comments:

> The ideal way to learn about _____ is through memorization. Without knowing the facts, it becomes difficult to apply our knowledge in _____. (UNC1)
>
> We need to be able to apply our knowledge about_____ in complex situations. Therefore there is a need to use more problem solving in the course. Just knowing when it happens is not sufficient. (UNC2)

In conclusion, evidence in this study indicates that the dimension of epistemology in Reeves model (a continuum between instructivism and constructivism) did not provide useful criteria to analyze learners' perceptions in Global e-learning environments. No trends in the data emerged.

In the case of the UN, where the target audience is not well defined, it might have been worthwhile to explore the use of multiple epistemologies as proposed by Turkle and Papert (1991). They emphasize the role of computers in supporting epistemological pluralism. That is, exploratory learning approaches that can be built on more traditional linear learning experiences.

Program Flexibility

In both phases over three quarters of the learners felt that the advantage of a self-paced course was that it allowed them to complete the course on their own time. The self-paced format accommodated their style and, more importantly, their busy schedules. In addition, learners felt that there was not enough flexibility in terms of choosing to work with other learners, the opportunity to work with coaches/mentors, to participate in discussion boards, and most importantly to personalize their learning path (see Collis et al. 1997).

Phase 1

The analysis of the course itself revealed that there was little or no program flexibility. Learners had no choice in completing types of exercises according to how they wanted to learn. For instance, all courses had specific types of assessment questions, and the learner did not have control over any of these questions. On the one hand, during the interviews and in analyzing the questionnaires, many learners felt that the course content allowed for flexibility in terms of choice of how to follow the course. This is reflected elsewhere (see McLoughlin, 1999). However, on the other hand, five learners felt that this flexibility caused confusion and that the content should have been presented in a more linear format. Sample comments:

> I jumped around from one module to another. The only problem is that the modules did not stand alone—this made the jumping around different. This caused some difficulties. (UN08)
>
> I would prefer to have some more choices in which topics I needed to cover. There was too much repetition. (UN04)

One of the best practices of Global e-learning design is to ensure that program flexibility is incorporated in the course environment. McLoughlin and Oliver (1996) advocated that instructional designers ensure flexibility and inclusivity by offering choice, multiple modes of delivery, and assessment. The findings indicate that when designing e-learning offerings, it is important to consider the fact that learners will look for program flexibility while others need a more structured design approach; the key is finding the right balance.

Phase 2

In Phase Two, possibly because of the larger number of participants and the fact that there were three different courses, the analysis revealed that learner experience with e-learning and the knowledge of the subject matter did influence their perceptions of program flexibility. Twenty-five learners who had participated in self-paced e-learning courses in the past and who were also familiar with the course content, appreciated that they could jump around from one module to another at their own pace, without the need to follow the modules linearly. Sample comment:

> I did the pre-quiz and messed up three areas. I was really surprised at that and thought I already pretty much knew most of the concepts anyways. So when I was able to login and register for the course and review those concepts in a little more detail I found that his helped me a lot. (UN7)

Ten learners were not aware that they could go through the courses nonlinearly. Sample comment:

> I accidentally found out you can jump around from one module to another. What happened is that I registered for the course and then I came back to it and accidentally went in to the last module. It was then that I realized you did not have to go through the course module by module, but rather at your own pace. (UNC11)

Four learners, who were new to this subject area, found that when they jumped around from module to module in the course in a nonlinear manner, it was confusing. These findings are also reflected elsewhere in the research (McLoughlin, 2001). Sample comment:

> I really believe that each module should be done in the proper order for us to get the right understanding how things move forward. (U3B3)

In conclusion, learners who were new to e-learning and those who had little knowledge of the subject matter, preferred to have the course determine their program of study. On the other hand, learners who had more experience with e-learning and/or the subject matter wanted to have more program flexibility in order to map their learning experience. This is reflected elsewhere (Dabbagh, 2003; Srother, 2006).

In the present study, of the twelve Asian learners, ten mentioned that there was too much flexibility in the course which confused them because they did not know how to move forward and backwards the course. In the literature on Global e-learning, there are studies (Zenaida, 2004) that found that learners from Asian learners prefer a

structured learning environment. The following two quotes demonstrate some of the frustrations faced by the East-Asian learners. Sample comments:

> The idea of being able to adjust your learning according to your needs is excellent. The_____ which was mandatory for all UN staff was some difficult to go through because I knew some of the topics really well and still had to go through it. Whereas in this course, I quite enjoyed the possibility of going back and forth and skipping the parts I already knew about. (UNC1)
>
> It is difficult to go through the course if you do not go module by module. While the course introduction clearly states that one can go through the entire course whatever way they feel comfortable with, it still becomes confusing (UNB13)

Goal Orientation

In Phase One, learners wanted more complex goals than those presented in the course. This was also the case for Phase Two. Learners described how personal motivation and curiosity influenced their goals for taking the course. This is found elsewhere (see Malone and Leaper, 1987)

Phase 1

The course goals were presented at the beginning of each new module, and each module had clear and well defined learning goals. At the end of each module there were specific summaries for each learning goal. First, learners felt that the goals in the course were made clear to them and that it was easy to proceed through the course having full knowledge of the goals in each module. Learners who felt that the objectives were clear indicated that (a) they knew what learning objectives would be covered in each module;

and (b) they had a clear idea of what material would be presented to them, and what material would not, because of the learning objectives. Sample comments:

> I did not know much about this topic area. So I enjoyed reviewing each module in detail knowing exactly what I wanted to learn. (UN08)

While learners did appreciate that the goals were clearly identified, the majority of learners felt that the course goals were too rigid, and that the goals did not meet the needs of different groups of staff members. Some learners proposed a course design that provided a personalized learning experience depending on the learners goals (see Dimitovoa et al 2003; IST Programme of the European Commission, 2003). Sample comment:

> I think when you first enter a course like this, you should have to choose between different paths. For instance, if the first question in the course is do you want to learn about_____ or do you want to learn about how _____works in the office. I would prefer something like this. With a course that is so broad in topic areas, you can customize to get people to choose different things. (UN09).

Phase 2

While 30 learners felt that having the course presented them with clear goals guided their learning, 18 learners felt that the goals were too simple and did not challenge them enough. Sample comment:

> Yes the objectives were clear but they were somewhat simplistic. They did not seem to be very sophisticated and challenging. For instance, the concept of _____ can be quite complex to understand especially if you are dealing with

people from different backgrounds and cultures etc. there is much more to learn about this issues than just theory. (UN9)

Ng and Bereiter (1991) distinguish between (a) task-completion goals, (b) instructional goals set by the system, and (d) personal knowledge-building goals set by the student. All the e-learning courses in this study focused on task-completion goals. Over half of the participants in the study felt that task-completion goals did not sufficiently meet their learning needs. Sample comment:

I needed to complete this course for work and my goal was purely professional. However, it might have been useful to have some more higher order and open goals instead of simplistic ones that were presented to us. (UN3)

The best practices literature on e-learning highlights the importance of an e-learning course that is designed with clear and tangible learning outcomes (Simonson, Smaldino, Albright, & Zvacek, 2006). In the courses reviewed in the present study, the course goals focused on task-completion goals (Ng & Bereiter, 1991). Learners' preference for personal knowledge building goals versus task completion goals depended on their experience with the subject matter and experience with e-learning. Because learners have different goals or a combination of different goals (i.e., career development, performance evaluation) for participating in a Global e-learning course, instructional designers should design activities that address different learners' goals.

Experiential Value

An important concern for instructional designers is the degree to which learning transfers to external situations in which the application of knowledge, skills, and attitudes

is appropriate. The findings differed between learners who completed custom-made courses and those who had completed off the shelf courses. Learners indicated that authentic cases and scenario learning are useful because it allows them to transfer what they have learned in the course back to their work environment.

Phase 1

In the first phase, the learners had completed an off the shelf course. Eight learners felt that the content they had learned was not directly relevant to their work environment. The concepts, case studies, and examples presented were far removed from the reality of the UN work environment. Learners felt that there was no significant change in their work habits immediately following the course because it was hard to apply/transfer what was learned to the UN work environment. This is found elsewhere (see Reeves et al. 2003). Sample comment:

> While the structure of the course was good, none of the examples really made sense to me. (UN05)

Phase 2

In the second phase, the learner experience with different types of courses became more evident. Including authentic examples and case studies was found to be crucial for meaningful learning.

All learners complained that the practical examples that were included in the off the shelf courses were irrelevant. Five learners who had previously worked in the corporate world felt that they could somehow relate to the learning material, but they felt that some of the concepts presented in the course were irrelevant for non-corporate work environments such as the UN. Sample comment:

> The case studies and examples did not reflect my work environment at all. It was difficult to fully understand how all these examples could somehow be related to what I was doing in my own work environment. I felt that the example, the pictures, the video scenarios were very American. I did not think that they really reflected the UN. Even when you see the office space, the examples of the boardrooms, etc. I understand that we have these courses from another company and that we did not really design the courses ourselves. But it would have been nice to see some pictures, some reference to our own work. (UN1)

Four participants offered solutions to increase the quality and number of authentic activities in the course. Sample comment:

> Have offline authentic learning activities that would require staff members to practice what they had learned in their work environment. (UN13)

Four learners felt that while there were no authentic learning activities, the skills taught in the course could be transferred to the present day environment. Sample comment:

> I can understand that some would think that a simple skill such as _____ would be universal for everyone regardless of where they work, and I agree with that. I think you take some of these concepts and easily apply them to your immediate work environment. (UNB3)

Two learners pointed out that it would be beneficial if there were case studies related to the UN working environment that could be included-embedded with off the shelf courses that would allow staff members to review cases that would be relevant to

the UN. This is reflected elsewhere (see IST Programme of the European Commission, 2003) Sample comment:

> I think that while the courses are pretty good, I would improve them by adding some case studies, examples, and perhaps interactive scenarios taken from our own workplace that would allow us to have a clearer understanding of how this really happens in the workplace. (UNB6)

Research findings from the best practices on e-learning design (Arya, Maagaryan & Collis, 2003; Jonassen, Peck & Wilson, 1999) suggested that the use of authentic learning settings can provide strong student support. Participants revealed the importance of having authentic learning activities that reflected the work culture. The importance of authentic activities or tasks in a learning environment was highlighted by Brown, Collins and Duguid (1989) who described them as "the ordinary practices of the culture" (p. 8). The culture that participants referred to in the interviews was the UN working environment. In the present situation, no differences between different cultural groups emerged.

Nineteen learners who participated in Gobal e-learning courses that included case studies, examples, and interactive scenarios related to the immediate work environment responded positively about their experience. Sample comment:

> I found that the theory and background to the concepts were really clear. The best part was I could relate to the example. We all have experience in knowing who has gone through these problems. (UN11)

The main difference between off the shelf and customized courses was that learners who participated in off the shelf courses learners did not find the content relevant

to their work environment, whereas with the customized courses, the content was considered relevant to the participant's work environment.

One learner described that their agency was exploring methods of including offline authentic assessment as an add on to off the shelf custom made courses. Sample comment:

> My agency is exploring methods that may allow us to take courses from _____, but at the same time there will be practical offline exercises given to us that are similar to our own work. (UNC7)

Learner feedback indicated that they were more likely to transfer what they had learned in the workplace back at the office if courses included authentic assessment. Sample comment:

> I felt that the case studies and the examples used were useful and beneficial. They really helped me grasp the various concepts and relate it to my work about_____. Some of the examples were quite complex and got me to think about my situation_____ .(UNC3)

Both off the shelf and customized e-learning lacked a key ingredient for effective learning; from the learner's perspective this was authentic learning activities and individualized feedback or coaching. Transfer research consistently concludes that a critical element to the transfer of learning includes opportunities to practice skills in varied contexts with monitoring and feedback to identify and correct misconceptions and faulty reasoning.

All assessment items in the courses were multiple choice, fill in the blanks, true or false etc. There was no errorless learning in the course. When the learner answered an

assessment item incorrectly, the learner was provided with the correct answer in feedback form and guided to a hyperlink to the area in the course where the correct answer was located.

Five learners offered their opinion about the types of assessment strategies that they completed. Sample comment:

> Yes right away I knew whether I had the right or wrong answer. This was fine as I knew what answer I was getting right or wrong. However, in some instances I disagreed with getting the wrong answer and therefore would have preferred to have a chance to rebut my findings or my belief as to why I got the answer wrong. (UN5)

One of the courses included errorless learning and a learning methodology that went beyond providing right or wrong answers to assessment items. Sample comment:

> For some of the questions, I appreciated that if I got the answer wrong, the system would tell me in what instance my answer would have been right. (UN13)

Two learners discussed the assessment strategies as it related to real work situations. Sample comment:

> The assessment items and the interactivity associated with them are somewhat unrealistic because in the real world that never really happens. In our UN work environment nothing is ever in black and white. (UNB3)

The findings mentioned above are supported by Grabinger (1996). He says that learners transfer learning with difficulty, needing both context and content learning. Skills and knowledge are best acquired within realistic contexts, and assessment should

be as realistic as possible. There is a strong demand from the learners in this study for more authentic learning opportunities.

Origin of Motivation

The results revealed that relevancy and curiosity is critical in creating motivating online learning environments. In addition, in a professional setting such as the UN, professional growth and recognition are also important motivators for completing a course .This is reflected elsewhere (see Barker, 2002; IST Programme of the European Commission, 2003)

Phase 1

Four learners were curious about the course topic, but were completing this course primarily for their performance evaluation or as a prerequisite to attend a workshop (i.e., extrinsic motivation). Sample comment:

> I was not really motivated to take in this course. But I wanted to get the credit for it so my supervisor would know that I was taking this course so that I could include this in my _____. (UN08)

One participant had a very different perspective which seemed to go against what other participants had to say. Sample comment:

> I did not want to take this course but I had to. Once I began the course, I realized that this was a fun way to learn. I thought e-learning was just switching one page to another page. Now I realize it is quite a unique way to learn! I would be more than willing to take more courses such as this one. I hope that the Learning Section can offer more courses such as this one. (UN05)

One participant compared her experience with another e-learning course she had completed. Sample comment:

> I liked the _____CD-ROM because it really caught my interest right away. It created an emotion of fear in me and that already was a motivation to want to take the course. This course did not elicit any form of motivation in me. (UN07)

Phase 2

In the second phase, I continued to look at the themes of curiosity and "compulsory courses" further. The theme on course relevancy emerged in this phase. Nineteen participants indicated that if the course was mandatory they were more inclined to complete it. Sample comment:

> I had to take this course and complete it because it was a prerequisite for another training program that I wanted to attend. So for me the motivation behind ensuring that I complete the course in a timely manner was to get to attend a workshop in _____. (UN14)

Eighteen of the participants mentioned above felt that making a course mandatory did not increase their motivation to want to take it, rather it created frustration and annoyance. Sample comment:

> I think it is wrong to make courses compulsory. Because of this I had no choice but to take the course. One day I get an e-mail saying if I don't complete the course in 2 months, I will not have access to ____ system. That is annoying. (UNC1)

Thirteen learners highlighted the need to learn specific skills and knowledge to complete their specific work duties, and were motivated to learn the concepts in the course because it was directly relevant to their work. Sample comment:

> I often find that in my day to day work, I lack the skills to....., so when I saw that my agency was offering courses in these particularly topics, I became really interested in registering for the courses. As soon as I had completed the first module, I came to realize that the many of the concepts, examples, and guidelines presented were exactly what I needed to become a better worker. (UNB13)

The link between relevance and motivation is highlighted in many studies (Moshinskie, 2001). They maintain that while there are other aspects of motivation that are important, and that relevancy is a core motivational principle that instructional designers should not ignore. Twenty participants who indicated that even if they were curious to learn more about the course topic, they could not complete the learning course. Various reasons were reported for this were (a) lack of time, (b) conflicting work priorities, (c) lack of interest, and (d) lack of meaningful content. Sample comment:

> I saw an e-mail message about participating in e-learning courses and I had never taken such type of course before, so I though why not. I wanted to learn a new skill and thought that this would be a good way to go at it. Unfortunately due to work conflicts, travel and family, I never really had much time to finish the courses that I had started. (UN8)

Fourteen learners felt that there was a direct link with curiosity and relevance (Hardre, 2001). Sample comment:

The course was not really relevant to my function as a_____, however because I heard so much about the course, I wanted to learn more about it. (UNC7)

The literature on best practices in e-learning design reveals that adults are motivated to complete a course when there are incentives for them to complete it (i.e., linking learning with performance). In the present study, the results did not reveal if incentives were present in the learners' work environment. Course relevance is by far the most frequent reported successful motivator as reported by the participants themselves. Bonk (2002), Hardre (2001), Moshinskie (2001), and Reeves (2001) all found that materials relevant to a learner in either a work capacity or as a personal interest were successful motivators for learning. Strategies used for increasing relevance for the learner includes e case studies and examples of relevant work experiences.

In addition to relevance, Bonk (2002), Hardre (2001), and Moshinskie (2001) list meaningful feedback as an important element in an e-learning experience. In the courses reviewed in the present study, there was no tutor involvement; learners did not receive meaningful feedback.

Cooperative Learning

Cooperative learning opportunities were not present in any of the stand alone e-learning courses in this study. However, over half the participants in both phases wanted the choice to participate in cooperative learning activities with other participants.

Phase 1

While there were no cooperative learning opportunities in this course, there was an opportunity for interaction with a tutor who was available via e-mail. A learner could send an e-mail to a course administrator within 24 hours. The purpose of having the online tutor was to allow learners to engage with an expert. A few learners felt that, due to the nature of the course, there was really no need to work with others. Learners all had busy schedules and simply completing the course represented a large time commitment.

A few learners felt that learning is an individual activity and did not want to feel pressured into finishing this course with the guidance of others. Sample comment:

> In Korea, we don't have group projects; we usually have to complete our learning in our own time which is why it is difficult for me to understand why we have to do it this way. (UN05)

Phase 2

Half of the learners in this phase found it difficult to study independently without any opportunity to collaborate with other learners. Fifteen learners who had little experience with online learning felt that the most difficult aspect of the virtual learning environment was learning independently without collaborating with other learners. Sample comments:

> I think e-learning is great. You have so much time and freedom on your own to grasp the concepts. However, it gets boring and lonely at times. I mean we all work in groups, so shouldn't learning be a reflection of that as well? (UN2)
>
> I think what I feel about this course is that it completely lacked opportunities for interaction and reflection with other learners. I am not used to that. (UNB3)

These findings are also echoed in other research studies (Dunbar, 1991; Murphy & Yum, 1998). However, what is not clear from the literature is why some learners are comfortable learning independently, while others are not. For instance, one participant said:

> At first it was hard for me to get used to learning on my own. But I have been able to adapt to it and now I prefer it to going to workshops. (UNC1)

At least 18 learners indicated that they missed interacting with other learners as they would do in workshops.

> While the idea of learning at your pace is quite excellent particularly for those of us who seem to have some hectic schedules, I feel that learning alone is quite lonely because there is no one there to review concepts with you, and you can't really talk to anyone when you don't understand something or when you disagree with someone. (UNB11)

Three participants who had never taken an online class felt frustrated in the online environment. Sample comment:

> I've read books on my own, watched movies and TV by myself, but learning alone, something quite new to me. I know at school, you have to read and do some work on your own outside the class, but a great deal of the learning is done with others in a social setting, in a social environment, so this type of learning was quite new and unique to me. It is weird to go through this entire process and come out with a certificate in the end that says you have passed this course without ever having to interact with another human being. (UNB2)

When analyzed from a cross-cultural perspective, there are notable differences with regard to learners' perceptions of cooperative learning. Sample comments:

> This idea of working on your own on the course is an excellent idea because most of us do not have the time to work with other colleagues. (UN3)
>
> I prefer the time to work on my own because I prefer it that way. (UN8)

Of the 25 learners who preferred cooperative learning the majority were European, Asian or Middle Eastern. Attitudes and beliefs toward individualised versus cooperative online learning may differ among cultures, especially attitudes toward computer-mediated communication. The findings mentioned in this study are similar to other studies in this area (Chen, Hsu, & Caropreso, 2006). These researchers argue that learners appreciate online learning for its self-paced approach, but the lack of interactivity with other learners may cause some to abandon e-learning.

Blended learning is referred to as distributed, hybrid, flexible, or multimodal learning (Duhaney, 2004; Gibson, 2006) and is described as the combination of classroom instruction with self-paced online materials (Cennamo & Kalk, 2005).While participants appreciated that they could go through the course without having to work with others, the majority (25) felt that they would have preferred to have the choice to have some form of blended or collaborative learning embedded in their learning environment, thus allowing the possibility of working with other learners.

Ten learners indicated that the use of e-mails, chat rooms, bulletin boards, peer projects, and other online technologies would have helped out with their learning during the time they spent in the self-paces course. Nine learners recommended that self-paced e-learning courses be supplemented by lectures or workshops. Cameron (2003) and

Dowling, Godfrey, and Gyles (2003) corroborate these findings; they discovered that learners preferred to learn in a blended environment, compared to stand alone self-paced, static e-learning classes.

Value of Errors

In this section, the main theme that emerged in both the questionnaires and in the interviews is that learners felt the assessment questions helped them grasp the learning objectives. As stated before, all assessment items were multiple choice, fill in the blank, and true or false: there was no errorless learning in the course. When learners answered the questions incorrectly, they were given the correct answer in a feedback box and guided via hyperlink to the area in the course where the correct answer had appeared.

However, in both phases, the learners felt that the assessment questions did not allow much time for reflection, or that they were too simplistic and not engaging enough. Again, learners felt that interaction with other learners would be useful even if the courses were meant to be stand-alone.

Phase 1

In Phase One, learners wanted the assessment item to go beyond simple testing. Sample comment:

> The questions used in the course to test my knowledge did not really do so. I felt that overall while testing my factual knowledge they did not go deeper into my understanding of the area. So I feel that I grasped the knowledge on a very superficial level. (UN08)

Phase 2

Similar to Phase One, learners indicated that there was a need for more authentic learning opportunities and simulated experiences. Five participants offered their opinion of the assessment strategies. Sample comment:

> Yes right away I knew whether I had the right or wrong answer. This was fine as I knew what answer I was getting right or wrong. However, in some instances I disagreed with getting the wrong answer and therefore would have preferred to have a chance to rebut my findings or my belief as to why I got the answer wrong. (UN5)

One of the courses included some examples of errorless learning, and also included some useful strategies that went beyond providing right or wrong answers to questions. Sample comment:

> For some of the questions, I appreciated that if I got the answer wrong, the system would tell me in what instance my answer would have been right. (UN13)

Two participants discussed the assessment strategies as it related to real work situations. Sample comments:

> The assessment items and the interactivity associated with them are somewhat unrealistic because in the real world that never really happens. In our UN work environment nothing is ever in black and white. (UNB3)

> These types of true/false and such right and wrong answers don't go far enough to teach one's knowledge of the subject matter because they are too removed from the reality of the situation we work in. (UNC5)

The findings mentioned above are similar to those found elsewhere (Grabinger, 1996). Context and content learning, skills and knowledge are best acquired within realistic contexts, and assessment should be as realistic as possible.

Pedagogical Philosophy

The analysis of this the dimension made it difficult to analyze how to differentiate between epistemology (objectivism- constructivism) and pedagogical philosophy (intructivist and constructivist).

Phase 1

In Phase One, after reviewing the course structure, it is evident that the instructional designer had applied an instructivist approach in the course design. The course has a tutorial structure in which the content is organized by the course designer and delivered or imparted to the learner. Knowledge is broken down and structured into a hierarchy, where learning typically consists of moving, sequentially, from the smaller, lower order blocks of material to the higher, more complicated aspects of the content.

While most learners felt that they were able to grasp the learning material, it was difficult for them to find deeper meaning in the learning environment. Sample comment:

> While I can understand why the learning environment needed to be structured that way, it was hard for me to fully grasp the content because it was presented in a manner that was really basic. My own experience in_____ is quite intense. I wish that I had been able to move beyond just the basic knowledge presentations to more in depth explorations of the material. (UN 09)

While learners did appreciate that the goals were clear and measurable, the majority of learners felt that the course goals were too rigid and that they did not meet the

needs of different groups of staff members. Some learners proposed a course based on the different goals of each learner. Sample comment:

> I think when you first enter a course like this, you should have to choose between different paths. For instance, if the first question in the course is' do you want to learn about_____ or do you want to learn about how _____works in the office. I would prefer something like this. With a course that is so broad in topic areas, you can customize to get people to choose different things. (UN09)

Phase 2

In Phase Two, while I did review the pedagogical approach in each course, it was difficult to analyze learners' responses because I would always confuse the dimensions of epistemology and pedagogical approach. Therefore, I did not include the dimension of pedagogical philosophy in the analysis of Phase Two.

User Activity

In both phases, learners did not comment extensively on user activity. In Phase One, all the learners felt that they brought with them some negative feeling toward the course about e-learning being boring and passive.

Phase 1

Learners commented that the exercises were well done and engaging. Sample comment:

> I thought it was a good idea to choose which modules you went through first. Although it made for a somewhat choppy learning experience, it was still worth it going though all the modules. (UNO8)

Phase 2

In this phase, learner preferences for user activity depended on two things: familiarity with the topic and comfort level with e-learning. Fifteen learners who were familiar and experienced with e-learning suggested that the use of simulations and construction of a model would have been more beneficial for their learning experience. Sample comment:

> In one e-learning course I took, you could view a scenario, then choose an option and see how the scenario turns out to see what it would like and if you were on the right track. This was really interesting and fun to do because you could really see how the scenario would work out. I wished we would have had something like this here. (UNC5)

Five learners who were relatively new to the subject matter felt relieved that the presentation of the content was simple and did not require them to manipulate content or concepts. Sample comment:

> I was nervous about having to deal with too many "bells and whistles" in the course. I've seen some virtual 3D simulations that look complicated. Therefore the concepts were new to me, I was thankful that they did not require input on my part to create simulations. (UNB11)

This preference for different types of activities is reflects in the literature when designers suggest flexible design and accommodating for individual differences (Edmundson, 2004, 2006; Gunawardena & Sanchez, 2006).

Teacher Role

In all four courses that we analyzed there were no facilitators or teachers because all the courses were stand alone. Learners differed in how they felt about the lack of a teacher or facilitator in the course. Almost one third of the participants felt they would have preferred to work with a subject matter expert or a teacher, particularly when they had a question about something they did not understand.

Phase 1

In Phase One the learners felt that they understood the course was meant to be done without a teacher, they would have preferred to have the chance to ask a question and receive a response. Sample comment:

> I don't think the assessment items really give you a glimpse of how much you are really getting the material. Therefore I think the questions should be harder. For instance you could ask harder questions, send your answers to a tutor and then find out if you got it or not. (UNO5)

One learner explained how she preferred a print based distance learning course over a stand alone e-learning course because she had access to a remote tutor via email. Sample comment:

> When I took course X at X I liked that I had to do the readings on my own and had to go to the library to do research. But the best part is that we had to send in

> our answers to the essays to a teacher for each module. The teacher would read these short essays and give us feedback. This way I knew how well I was doing and I felt more motivated in the course. UN06

Stand alone e-learning courses are designed to be completed without the need for a tutor or an instructor. The absence of this leads to the lack of motivation some learners feel in e-learning courses when there is no teacher presence (see Henderson, 1996).

Phase 2

Learner comments were similar to those in Phase One. When learners had difficulty with a concept, they wanted to know they could contact someone about it. Sample comment:

> What I also found a little difficult is that if you don't agree with something in the course- who can you ask about it? There was one concept I was sure was wrong in the course, but who could I email about it? When I contacted IT about it, they did not have a response! UN1

A few learners who were very experienced with the subject matter, would have preferred an online tutor for discussion and/or handling tough questions. Sample comments:

> I think if you are like with you have more experience and need more in-depth information , then a workshop would be more useful or at least have an online teacher or tutor available to tackle more complex issues. I have seen these types of courses and I think they are useful. UN 2

> We loose out on the networking and working with people-I would say that this is one of the drawbacks of the methodology. Also you miss out on being guided by a real expert. I think we should look into online discussion boards. I know in the

past they have not worked when we were working on X, but those board don't work well for projects. I think they would be useful for learning. UNB4

Henderson (1996) advocated courses that manage to allow multiple forms of teaching and learning simultaneously. She suggested that rather than imposing a predetermined style of engagement, courses should be flexible enough to cater for diverse approaches. This is definitely something that learners in this study wanted.

Cultural Aspects of the Course Structure

Phase 1

Learners reported problems with language, navigational structure, and icons. The problem related to language and global e-learning is reported in studies on global e-learning (e.g., Murphy, 2006). English is not the mother tongue of the majority of UN staff. While most understood the basic course content, there were some misunderstandings with course terminology. Participants suggested a glossary to help clarify some of these misunderstandings. Sample comment:

> While I am pretty good in English, there were some words in the course that could have multiple meanings in different languages. Therefore you need some explanation for these. I got a question wrong because in Italian_____ means _____, but in this course_____means something completely different. (UN04)

Two learners had problems with the navigational structure of the course. In their experience of using commercial Web sites, they had not seen some of the navigational aspects that were present in this course. Problems with navigation included not knowing how to get to the main page, moving back and forth and using the "print" and "help" functions.

In Western interfaces, there is a trend of designing Web sites and e-learning courses to a have directional flow of information presented on the screen (i.e., the prevalence of the left had menu). This contrasts to what one finds on many Asian Web site which use nonlinear arrangements for onscreen options (Harel, & Prabhu, 1999). Three participants pointed out that they were completely unfamiliar with some of icons in the course. This led to some confusion. Sample comment:

> I am not sure why the button was a _____sign. I was not sure what that meant. What would a _____have to do with getting an answer right? I had to play around with the system a little to realize what it was. (UN08)

This type of finding is also found in the Global e-learning literature. Nielson (2000) claims that learners have specific cultural preferences for icons on Web sites. The so-called *standard* icons that are often used in Western and European Web sites, are sometimes confusing to non Westerners (Kearsley, 1990).

Phase 2

The three themes that emerged that concerned cross-cultural preferences included: verbal tasks and oral traditions, text/video/audio combinations, and conformity to expectations and language.

Learners who were non-native English language speakers felt that the audio and subsequent text transcripts allowed them to understand the material more clearly. Sample comments:

> During the interactive dialogue and scenarios, I felt that it was important for me to review on the screen the printed out versions of the text so that I was able to understand what the dialogue was about. (UNC2)
>
> I particularly don't like to listen to audio scenarios with pictures. I prefer it much more when I see live video. So for me it was great to be able to just turn the audio off and continue just reading the text. (UNB1)

The findings above are similar to those in other studies in this area. Mayer (2001) reports that some learners will learn better with an animation and narration combination, while others prefer narration. Rieber (1994) points out that preference for animation and use of multimedia is dependent on culture. However, in this case there were no trends or preference by one cultural group for animation and use of multimedia.

A theme that emerged repeatedly concerned the issue surrounding learners' feelings that they had to learn independently. Sample comments:

> I am not very comfortable learning on my own and I think that is expected of me here. That is taking responsibility for my own learning. So overall, I think although I am not comfortable with this, I will most definitely learn to meet these expectations. (UN2)
>
> I think overall one sometimes feel pressured to take on the responsibility of learning on your own-and although this really goes against a lot of what I believe

> in and am used to. I still would prefer to be able to learn at my own pace the way that I am comfortable with. (UN4)

Online learners need self-regulated strategies and meta-cognitive strengths to monitor their learning pace (Ellis, Ford, & Wood, 1993)). They also need to discover answers and discover patterns on their own. While the findings mentioned above are reflected elsewhere in the global e-learning literature (Ziguras, 1999), it is difficult to pinpoint in this study if they are culturally based.

Almost all nonnative English speakers felt the issue of language competence was problematic. All learners would have preferred to study in their language of choice. Learner confusion with language was due to misunderstandings of words and the meaning attached to them. Learners would have liked a multilingual glossary attached to the course that would have allowed them to review the various concepts and terminology in their own language. Sample comments:

> English is not my first language and therefore I take my time reading the entire course. Some terminology does not make sense to me and therefore I would prefer some glossary for definitions. (UN13)
>
> Of course I prefer to learn in my native language. I think making such courses available only in English puts some staff at an unfair disadvantage. These courses are really geared towards staff whose first language is English. (UN6)

Cross-Cultural Differences between Learners

In the present study, two main differences emerged that were related to differences in culture. In the first instance, there was a notable differences between Asian

and non Asian learners. Asian learners were uncomfortable with flexibility in the programme design. The second way in which culture affected learner experience was with regard to cooperative learning. That is, most learners from non-Western countries preferred to have a more blended-learning experience with the opportunity to work with other colleagues.

Research suggests that cross-cultural learning differences related to learning style and preference should manifest themselves in Global e-learning environments. However, much of this research is based on synchronous e-learning environments where specific dimensions such as participation, motivation, computer supported collaborative learning are investigate usually from the perspective of two cultures. While there have been no specific cross-cultural studies of learners in stand -alone Global e-learning courses, I assumed that cultural background should have an impact on a learner's experiences. The information collected from learners does not show patterns or trends of similarities between members of the same cultural group in stand-alone global e-learning.

Additional Learner Experiences of Global E-Learning Implications for Human Resources and Organizational Development

The following themes, emerging from the findings, that could provide discussion in future studies or when reviewing HR practices within organizations that implement global e-learning.

Acceptance of E-learning

Thirty-eight participants felt the only learning option they had was to either choose e-learning, or no learning because of the lack of learning opportunities that exist in their respective agencies. They felt that due to lack of resources for learning, limited

time devoted to learning, and the nature of their duties, it was difficult to participate in traditional-learning methods such as workshops, conferences and external classes. There was, then, no anti-e-learning sentiments or rejection of this type of learning method. This confirms what previous studies (Bersin & Associates, 2004; Urdan & Weggen, 2000) found concerning e-learning acceptance in large organizations. Sample comment:

> We are lucky because we opened a new office and had to teach our staff _____, without Internet connection, trainers or facilitators, how were we to get the entire office team up-to-date with the new ____. Without CD-ROMs, we would never have had the opportunity to really learn so much about _____. UNB1

E-Learning in Emergency Situations

Two participants shared their experience working in an emergency situation (i.e., a man made emergency, such as war). Sample comment:

> A while back I found out that I had to travel to _____. I had to get up to speed on _____, _____, and _____. It had been a while, so I needed to get up to speed in a short time. Do you know how I did it? Reading and completing a couple of e-learning courses on the 16 hour plane ride. It was not the most perfect way-but I got off that plane a lot more knowledgeable and was more productive during my assignment. (UNB2)

Given that many UN agencies work in emergency situations, both natural (e.g., Tsunami) and man-made (e.g., war), it could prove very useful to explore ways to extend e-learning to staff providing "just in time" learning when they need it. This has yet to be done. It is also not easy to find studies that explore how e-learning may be useful for organization who work in such emergency situations.

Organizational Support

All participants felt that in order for any learning program to succeed, organizational support mechanisms needed to be in place to support them in their learning. This finding is echoed elsewhere (see Barker, 2002; IST Programme of the European Commission, 2003). The most important issue that emerged was staff needed learning time during work hours. Over 15 learners felt that although, in theory, managers and supervisors supported learning, in practice, they did not. Sample comment:

> I know that my boss really wants to give me the opportunity to take time and learn for my career development. But the problem is that learning is thrown aside when other more important issues come up in the offices that take immediate priority. I know it is not his fault, but I get frustrated sometimes. (UNB2)

Leadership Support for E-learning

Thirty participants argued that in order for them to be successful in e-learning, it was essential to have managerial support. This is found elsewhere (see Barker, 2002; IST Programme of the European Commission, 2003)

> Without our managers and chiefs of sections understanding and supporting these types of learning initiatives, it will be difficult for use to fully grasp on to this learning tool. (UNB9)

Indeed, five learners shared their experience of managers portraying e-learning as a waste of time. If a manager or supervisor does not support the learner, the learner may not see the value of the course. This is the case in many other situations outside the UN. While market-wide studies by Ellis (2004) for Learning Circuits found that 25% of managers are aware of what e-learning is and 51% support-staff learning through e-

learning, there is no data to indicate whether UN managers and supervisors have similar perceptions. It would be worthwhile for the UN to conduct a review of how many managers have, for instance, completed an e-learning course, and understood what e-learning is in order to determine how this is linked with leadership support for e-learning.

Confusion Surrounding E-Learning Terminology

Twenty-nine participants were confused by the term e-learning. Learners were confused between online learning, computer-based learning, Web-based learning, CD-ROMs, and learning management systems. Sample comments:

> What is e-learning? I am not sure what the difference is between online learning and e-learning and distance education. I think it would be useful to have some clarity. UNB8
>
> I would be interested in taking an online degree to obtain my MA. But I can't imagine that taking a bunch of CD-ROMs equates to a good MA degree. (UN5)

Thus, there seems to be a common misunderstanding about e-learning: participants are not entirely aware of what e-learning is. According to Forman, Nyatanga & Rich (2002), this problem exists in many other organizations. It would be helpful, perhaps, if an agreed upon terminology consistent across all agencies were introduced to ensure that those who are managing, supervising or administering learning are fully aware of the e-learning really is.

E-Learning Primer

Regardless of the type of course, 18 learners who had no prior experience with e-learning needed some guidance on how to begin an e-learning course. Participants new to e-learning environments felt confused and lacking knowledge and overall understandings

of the mechanisms involved in making the learning experience meaningful. Sample comment:

> What is e-learning? I did not know before taking this course. To be honest I thought it would be something like a virtual teacher, where one goes through all these concepts and it is like replacing a live classroom. I did not know that it was like that. (UN B6)

Although 24 participants argued that they were comfortable with technology in their day-to-day work activities, 20 felt that in order to be successful in e-learning one needed to have previous experience with technology. Sample comment:

> There was one minor glitch and that was that because this was an Internet based course, I had to use the pop blocker to be able to run the course from my computer. So there may be a certain level of technological knowledge that might be needed to complete these courses. (UN14)

Three participants discussed how strategies were implemented in their office to help students learn the necessary technical skills before they began courses. They attended a mandatory, standardized, face-to-face orientation with extensive hands-on practice.

E-Learning Global Accessibility

Thirty-six participants indicated that if e-learning was to be a truly accessible form of learning, then they should have been able to access the course material anytime, anywhere. This findings is highlighted elsewhere (see Barker, 2002; IST Programme of the European Commission ,2003) However, four participants found that they always had

access to online learning because they had computers at home and were in countries that had DSL connections. Sample comment:

> An important selling point of e-learning is that you should be able to access the course material, anytime, anyplace. Well, the way in which we do e-learning does not work that way. The CD-ROMs don't always work on home computers, the tracking features do not work. So if want to use it from home, this can be difficult. I would prefer to not learn at the office and learn on my own at home. (UN1)

Some participants in field offices complained that they did not have the same access as learners in headquarter locations. Sample comments:

> Our FTP and our online versions of e-learning courses are not very user friendly and we often wait hours and hours to download courses. My colleagues in offices with better connections such as NY don't have the same issues we face with access. So we are sometimes put at severe disadvantages as compared to other colleagues. (UN3)

> I have recently transferred from NY and I knew beforehand that there were going to be differences between NY and a country office, but with regards to e-learning, the field seems to need it more than HQs. There are very limited learning opportunities for language learning, but the connections in the offices are so poor that it makes it difficult for us to fully grasp on to these learning opportunities. (UNC4)

Unfortunately, it was not possible to locate studies from international organizations that compared and contrasted e-learning access and location. Many UN agencies have offices worldwide. Staff members are always rotating from one office to

another. The lack of equal access to e-learning opportunities in many sub offices is evident. And because technical standards can differ between offices, computer and home access, learners in many UN agencies can only access e-learning from their desktop computer at the office.

Findings for Research Objectives Two and Three: Provide Guidelines that may be Useful in the Assessment of Existing or Off-the-shelf-course and Draw on the Implications of Learners' Experiences and the Existing Literature for the Development of Better Practice Guidelines for the Design

The guidelines that emerged from this study are developed specifically for global organizations such as the United Nations, but could be adopted in a variety of other organizations. The results expose potentially important learning-related design concerns (from the learner's perspective) that risk being neglected by course designers or instructional designers. I presented the results of the two research objectives together because it would be useful for the reader. The guidelines proposed below are intended to help designers in developing new courses and/or in assessing current courses. They are meant to provide a structure for developing e-learning courses for global audiences. Clearly, no simple template or checklist can hope to predict and resolve the complex interactive processes involved in Global e-learning design. However, at the core of these guidelines is feedback from learners who participated in this study, either during an interview or by completing questionnaires. From these results emerged a number of guidelines for designers on key issues concerning the design and implementation of Global e-learning. This guidelines validate the importance of the existing literature from the field of distance education (particularly, best practices design in e-learning) in the design of Global e-learning.

At its simplest, these guidelines could be applied as a broad indicator of the presence or absence of specific features when designing stand alone courses for global organizations.

Table 14 summarizes findings for the second and third research objective. Sample comments from the participants are presented in the following section to validate the guidelines proposed.

Table 14
Guidelines for designing new courses or assessing existing course

Dimensions	Considerations for the design of stand alone Global E-learning for global organizations
Multiple Epistemology	▪ Multiple Epistemologies are presented in the course: a) instructivist, and b) constructivism embedded within the same program. ▪ These guidelines are reflected elsewhere in (McLoughlin & Oliver, 2000; Sanchez and Gunawardena, 1998; Turkle and Papert, 1991).
Goal Orientation/Motivation	▪ If specific skills and knowledge are needed, goals are concrete and tangible. ▪ If learning objective is broad or not well defined, goals requiring high levels of processing (e.g., heuristic problem solving, personal selection and monitoring of cognitive strategies is included). ▪ Motivational strategies embedded in the course include: a) attention, strategies that arouse curiosity and interest; b) variability (range of methods/media to meet learners varying needs and learning styles); c)relevance (strategies that link to learner's needs, goals, interests, and motives); and d)confidence (strategies that inform learners about learning and performance requirements and assessment criteria). ▪ These guidelines are reflected elsewhere (see Alexander & Judy, 1988; Barker, 1992; Cole, 1992; Edmundson, 1994, 1996; Simonson et al. 2006).
Self- regulation- Self-Efficacy *continued*	▪ Learning activities provide learners with the sense that they are in control of their own learning. ▪ Activities promote self-regulation included such as: a) feedback and reflection opportunities; b)

	contextualized learning; c) access to online subject matter experts and or facilitators, teachers; d) and e) collaborative learning opportunities. ▪ These guidelines are reflected elsewhere in (see Bonk, 2002;Collins, 1988, McLoughlin & Oliver,2000).
Experimental Value-Authentic Assessment	▪ Learning environment has relevance to learners across different levels and functional areas. These include: a) real work and problem based learning; b)a variety of different types of problem based tasks are available; and c) real world tools and resources are available ▪ Authentic assessment activities are included: a) learners perform, produce or demonstrate their knowledge and skills; b) involves complex thinking and problem solving skills; and c) meaningful activities with real world applications. ▪ These guidelines are reflected elsewhere (Garbinger, 1996;Reeves et al. 2002).
Accommodation of Individual Differences	▪ Variety of instructional learning preferences are present ▪ A learner can choose or express a liking for a particular instructional technique or a combination of techniques such as dependent, collaborative etc. ▪ Options exist for learners to access content through text, audio, illustration, animation, simulation, and video. ▪ Options are available for different types of content (i.e. objects, fact, concept, procedures and principles. ▪ These guidelines are reflected elsewhere (Baker, 2002, McLoughlin & Oliver, 2000; Sanchez & Gunawardena, 1998).
User Activity	▪ Learners new to e-learning or learners with limited knowledge of the subject matter need mathemagenic learning activities. ▪ Learners who were familiar with the course topic need more generative learning activities. ▪ These guidelines are reflected elsewhere (see Dabbagh, 2001;Hannafin,1992, Reeves, 1996)

continued

Cooperative Learning	▪ Learners can work independently of other learners, or learning is encouraged through cooperative activities amongst learners. ▪ These guidelines are reflected elsewhere (see Chase et al. 2002, Galdo, 1996,Tu,2001)
Cultural Issues	▪ Language- no slang's, glossary of technical terms in more than one language, active verbs, ▪ Various representations of content-audio, text, audio, illustration, animation, simulation, and video ▪ Opportunities/strategies to teach/reinforce self-regulation ▪ Opportunities to engage in group interaction, mentor, coaches ▪ Course is structured to meet different learning styles for the concrete experience--offer laboratories, field work, observations etc. ▪ These guidelines are reflected elsewhere (see Edmundson, 1994; 1996, Sanchez &Gunawardena, 1998).

Research Objectives Two and Three: Sample of Learner Comments

Epistemology

The research findings suggest that multiple epistemologies should be embedded within the same course to reflect instructivist and constructivist approaches. Sample comment:

> We all have difference preferences in how we want to learn. The ____ course was too simple. It was basically answering true and false questions throughout. However, with the _____ course, I felt that the basics were covered but there was opportunity to go beyond that even more. (UN B6)

Goal Orientation/Motivation

The findings showed that if specific skills and knowledge are needed, then goals

should be concrete and tangible. But if learning objectives are broad, and tasks demand higher levels of processing (e.g., heuristic problem solving) then personal selection, and monitoring of cognitive strategies should be included.

Sample comment:

> When we did the _____course, I was awe struck by the fact that if I did not learn the skills in this course, I could end up in a situation and get myself killed. That was enough motivation for me to want to get through the course meticulously. (UNC3)

Motivational strategies could include the following: (a) attention arousing curiosity and interest; (b) variability, providing a range of methods/media to meet learners varying needs and learning styles; (c) relevance-linking to learner's needs, goals, interests; and (d) confidence, informing learners about learning and performance requirements and assessment criteria.

Self-Regulation/Self-Efficacy

The findings also demonstrated that strategies that can increase self-regulation and self-efficacy include (a) learning activities to promote student control of their own learning, (b) personal learner characteristics reflected in the course, (c) problem based learning, (d) feedback and reflection opportunities, (e) contextualized learning, and (f) collaborative learning opportunities. Sample comment:

> I found it very difficult to not know how well I was doing in _____. The only way I knew how I was doing was by attempting the final course test, and that was not enough for me to feel I knew where my knowledge stood. (UNC5)

Experiential Value and Authentic Assessment

Other findings demonstrated that the learning environment needs to be relevant to learners across different levels and functional areas. This may be achieved through making available (a) real work and problem-based learning, (b) a variety of different types of problem based tasks, and (c) real world tools and resources. Equally, authentic assessment activities should have meaningful activities with real world applications. Sample comments:

> There were many examples that I found did not reflect our work environment and therefore it was almost impossible for me to have any clear idea of how this could be relevant to me. (UN1)
>
> I liked that in the_____programme, the application part we had to do after the e-learning component, was exactly what we have to do at the beginning of each ____ cycle. (UN 3)

Accommodation of Individual Differences

The course should allow a learner to choose or express a liking for a particular instructional technique, or a combination of styles. In addition, options should exist to access the learning content in a multiple ways such as text, audio, illustration, animation, simulation, and video combinations. Sample comments:

> My English is poor, and I feel that what would be useful to me is to have the opportunity to not hear what people are saying, but to actually read what they are saying (UNC6)
>
> If e-learning is supposed to be a more revolutionary type of learning, then we

> should have the opportunity to be able to have different options available to us. We know that during workshops this is not possible, so I am not sure why this is not done in e-learning course as well. UNC2

User Activity

Findings also indicated that learners new to e-learning or learners with limited knowledge of the subject matter needed mathemagenic learning activities, whereas learners who were familiar with the course topic needed more generative learning activities. Sample comment:

> I think for those of us who have more experience we need to have better assessments that go beyond the boring true and false. There should be more focus on more interactive assessments that really test our knowledge. UNB2

Cooperative Learning

While learners can work independently of others, many preferred to have the option to work with others. Sample comment:

> I enjoyed that in our office we worked with a learning partner (someone more experiences then us) to work on the offline assignments. (UNB3)

Cultural Issues

The cultural issues that emerged were similar to those found in the current literature base. Sample comment:

> I think in terms of cross cultural issues, one of the concerns I have is that most learning products in the UN are designed by Western companies. I am not saying that that is a negative thing; it is just a fact because they have the capacity to develop and design the products. However, with this we lose of the fact the

message comes from one cultural belief. I think this will eventually change and we will see differences in the upcoming years on how courses are designed by non Western countries.

I think we should start spending time designing our own courses and then it would be a lot more relevant to the needs of our staff if it was done this way. I would encourage more courses such as this but with UN feel to it. (UN6)

Phase Three: Implementation of Guidelines that emerged from Research Objectives Two and Three

It was hoped that further research could enhance and extend this study. Therefore, additional research was conducted to assess the validity of findings and conclusions. Phase Three was undertaken to test the validity of three recommendations (personalized learning paths, blended learning, and multiple modes of content presentation) that came out of the first and second phase. While the data were gathered by independent researchers, findings supported learners' positive reaction to the integration of all three of the recommendations. Data were collected through interviews and questionnaires.

The results in this study were presented to me by the research team "as is." There were limitations to the data as the team did not provide me with raw data only an analysis of their interpretations and analysis.

Course Description

This course was mandatory course for all staff in one UN agency. It focused on a technical area related to a software that the agency uses for budget and operations management. The target audience is extremely heterogeneous (i.e., staff who use it on a daily basis, staff who need to only verify transactions). The total learning time to

complete the course is between seven and ten hours. The modules are meant to be completed in separate sittings.

Table 15

Questionnaire Results from Phase 3

Question	1	2	3	4	5
1. Overall, I enjoyed this module					8
2. I felt that I learned a lot in this module.				2	6
3. I would be inclined to take the entire course if all the modules were similar to this module				2	6
4. I participated in the discussion board	6		2		
5a. I think the discussion board is useful	2	2			4
5b. I would participate in the discussion boards if it was mandatory				1	7
6. The personalized learning path was helpful					8
7. I would prefer all e-learning courses to be designed this way				2	7
8. The prequestionnaire was easy to complete					8
9. I prefer to have only one choice of media in an e-learning course	4	2	2		
10. I liked having the opportunity to choose which media I wanted					8

Personalized Learning Path

All the participants felt that a personalized learning path was useful and beneficial. Sample comments:

> The pre-questionnaire at the beginning of the course was extremely useful as it made me realize how much I already knew about _____. To test it out, I went back and did the same questionnaire without choosing any of the correct answers and it brought me to almost a completely different course. (UND1)
>
> I already know a lot about_____. For the first time in taking e-learning courses, I appreciated that I was given challenging questions at the end of each module. (UND2)

When asked how the use of personalized learning paths could be improved, one learner suggested the following:

> You get the feeling that you might be missing out on something depending on how you answer the questions. So I would suggest that you not tell the learner that there is more than one path in this course. Do it in such a way that no one will find out about it. (UND2)

Blended Learning

One learner said: "I think that because this course is mandatory, many people won't participate in the discussions boards if passing the course is not dependent on it." (UND3). Seven learners said they would participate in the discussion boards if it was mandatory. When asked why they would participate in the discussion boards, the three

learners participating in the interview said that they would, only if the topic was interesting or meaningful. Sample comment:

> I think discussion boards are useful only if you will get something out of it. (UND1)

When asked how the use of discussion boards could be improved, two learners offered the following suggestions:

> I would only suggest implementing discussion boards if there is a moderator available to guide and provide feedback to staff members who take the time to participate. (UND2)
>
> Discussion boards should only be used to pose a question. It should serve a purpose and not just be left to the learners to decide how and when to use it. In the past most of the discussion boards in _____ fail because they have no purpose.(UND3)

Text/Video/Audio Combinations

All learners preferred having a choice as to how they wanted the content to be presented in the e-learning course. Sample comment:

> I do not like the audio components in most e-learning courses as they are boring. Often in the past, you can finish reading the text on your own before someone decides to audio portion is even finished. So I just turn the audio portion off. (UND3)
>
> I would prefer just to have audio because I don't like reading on the computer screen. (UND1)

Overall Impressions

Overall, half of the participants would have been inclined to take this course had all the modules been similar to this module. Also, all participants enjoyed the learning experience after completing the first module of the course. Sample comment:

> This is different than other courses I have done in the past and I like the way the course is presented. (UND1)
>
> I would like to take more courses like this because they are personalized to my needs. (UND2)

Summary of Recommendations to Improve Learners Experience in Global E-Learning

The main question guiding this dissertation is: how should we design stand alone Global e-learning to tap into the cross-cultural commonalities among learners so that each learner acquires knowledge and skills and makes meaning effectively, regardless of his or her language, culture or location? In the e-learning literature there are guidelines and frameworks to describe, explain and develop 'best' practice in the design of Global e-learning. The study explored the extent to which existing guidelines and frameworks (see Edmundson, 1994) can help to develop our conceptualisations of Global e-learning design. The following points provide guidelines with regards to designing Global e-courses in global organizations such as the UN. These guidelines can be incorporated into future Global e-learning courses in organizations similar to the UN. Employing these design guidelines will hopefully make Global e-learning effective for everyone by minimizing the need to alter it for anyone.

1. Personalize the learning content according to learner preferences (e.g., type of multimedia, presentation of content (e.g., linear/nonlinear), interaction (e.g., self-paced or interaction with other learners) ;

2. Multiple epistemologies should be incorporated in the course to allow learners to experience the content in more than one way;

3. E -learning should be blended allowing learners to experience many different forms of e-learning, perhaps complemented with instructor-led training and other "live" formats such as online coaching or mentoring;

4. Mechanisms should be put in place for learners who enjoy interacting with other learners that allow learners to interact either in person, via e-mail, or in online bulletin boards either in real time interaction or asynchronously;

5. Examples, case studies and assessment should reflect real work examples;

6. Learners should not only be give immediate feedback automatically on their performance throughout the course, but also should have the opportunity to receive meaningful feedback as needed;

7. Courses in English should contain glossaries in different languages, specifically for technical terms and or words that may confuse learners whose mother tongue is not English.

Questions regarding "what is best?" for organizations such as the UN then become a matter of careful concern, research, and consideration. This will be discussed further in the next chapter.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

As an individual who works as a Learning Specialist in a global organization, my personal interest is to find ways to improve the design of Global e-learning. Global e-learning should not be viewed as a tool that is delivered to the learner, but should constitute a process of coproduction between the learner and those individuals who design the learning for them. Analyzing learner experiences in stand alone Global-learning is crucial, if we are to avoid making erroneous assumptions about learner experience in these types of courses. This study has resulted in the identification of guidelines that can inform the design of Global e-Learning in global organizations such as the UN. The guidelines proposed here can be used to assess the design of other stand alone Global e-learning courses .This dissertation contributes to both theory and practice in regards to stand-alone Global e-learning. The first section of this chapter will summarize the results in the context of the study objectives. The following section will discuss the limitations of the study, and the chapter concludes with directions for future research.

Synthesis of Research Objectives and their Findings

Table 16 provides a synthesis of the research objectives and their findings. In the following section, I will highlight how these findings add to our theoretical knowledge of adult learning and Global e-learning.

Table 16

Synthesis of Research Objectives and their Findings

Research Objective One Describe Learners Experiences	Research Objective Two Provide a guidelines that may be useful in the assessment of existing or off-the-shelf-courses	Research Objective Three Draw on the implications of learners' experiences and the existing literature for the development of better practice guidelines for the design of Global E-learning
▪ The learning content should be personalized according to learner preferences. ▪ Learners want to access the content in many ways (text, audio, video etc.); ▪ E -learning should be blended; ▪ Mechanisms should be in place that allow learners to interact either in person, via email, or in online bulletin boards, either in real time interaction or asynchronously; ▪ Examples, case studies and assessment should reflect real work examples;	▪ Multiple Epistemologies (Is there only one approach used or a combination of approaches?) ▪ Goal Orientation/Motivation (Do motivational strategies such as letting learners know why the course is relevant to them exist? ▪ Self Regulation/Self Efficacy (Are there mechanisms to guide/support learners to be responsible for their learning? Are there options to work with an online facilitator or teacher?) ▪ Experiential Value/Authentic Assessment (Do	▪ Multiple Epistemologies (i.e. include a combination of instructivist and constructivist approaches) ▪ Goal Orientation/Motivation (i.e. ensure that courses are relevant to the needs of learners) ▪ Self Regulation/Self Efficacy (i.e. include mechanisms such as immediate feedback or access to tutors) ▪ Experiential Value/Authentic Assessment (i.e. include relevant work related case studies and examples)

continued

▪ Learners should have immediate feedback on their progress in the course; and ▪ Navigation and icons should be culturally free of bias.	concrete-real work examples exist?) ▪ Accommodation of Individual Differences (Is this course designed to be one size fits all? Or are there options for learners to choose preferences?) ▪ User Activity (Is learning activity linked to the learning objective/s? Are there opportunities for more advanced learning for learners who have more experience with the subject matter?) ▪ Cooperative Learning (Are there opportunities to participate in cooperative learning activities?) ▪ Cultural Issues (Is the navigational easy to understand for all learners? Does the course offer flexibility for the learner in choosing the choice of content and media?)	▪ Accommodation of Individual Differences (i.e. have learners choose a learning path depending on their personal interests) ▪ User Activity (i.e. ensure that learner activities match with learner experience in the topic area). ▪ Cooperative Learning (i.e. incorporate opportunities to work with other learners) ▪ Cultural Issues (i.e. pay attention to issues such as language usage, navigation)

Implications for Theory and Practice

Implications for Theory

Learner Experience in Stand Alone Global E-learning

This study has the potential for theoretical contributions to the field of adult education, particularly regarding stand alone Global e-learning in the workplace. First, the results of this study expand the knowledge base concerning how learners experience stand alone Global e-learning. As shown in the literature review, the majority of studies on Global e-learning focused on cross cultural comparisons of learners in synchronous Global e-learning courses. This study provides adult and distance education scholars with empirical evidence on factors that influence how learners experience *stand alone* global e-learning. *One of the key findings from this dissertation is the empirical validation of the guidelines for e-learning design and Global e-learning design found in the current literature base.*

The results of the study reveal that learners would like stand alone e-learning to include: a) personalized learning paths; b) multiple epistemologies should guide the design, c) blended learning, d) examples, case studies and assessment should reflect real work examples, e) learners should be provided with immediate feedback, and f) a combination of text, audio and print should be used in the course.

Next, the results reveal cultural variables that potentially influence the learner in a stand alone Global e-learning course. These variables include- a) language problems with course terminology if English was not their first language, b) navigational structure of the

course design, c) the meaning and use of icons, d) the use of text and audio, and e) the isolation learners feel when they learn 'alone'.

The results also revealed cross cultural differences between learners. In the first instance, there was a notable difference between Asian and non Asian learners. Asian learners were uncomfortable with flexibility in the programme design. In the second instance, the majority of learners from non-Western countries preferred to have a more blended learning experience with the opportunity to work with other colleagues.

Global E-learning Framework for Stand Alone Course- Reeves

Finally, the results of this study contribute to further validation of Reeves's dimensions for analyzing online courseware. Reeves' encourages researchers that his dimensions should be applied to many different forms of online learning environments. In this study it was applied in a global organization. Using the framework throughout this study, has allowed for an in-depth analysis into important considerations for Global e-learning design.

The following are recommendations on how to adjust Reeve's dimension when reviewing stand alone Global e-learning courses in global organizations such as the UN:

Epistemology

- The evidence in this study indicates that Reeve's framework, which viewed epistemology as standing alone along a continuum between objectivism and constructivism, did not provide a sufficiently "good fit" to analyze learner experiences.

- The dimension should be further modified to include multiple epistemologies, if indeed the concept has significant value in and of itself.

Pedagogical Philosophy

- This dimension was difficult to use in practice, for the purpose of this study, the dimension of epistemology proved more useful in highlighting the need for a multi dimensional approach to meet the needs of the audience.
- The dimension of pedagogical approach should be dropped all together.

Goal Orientation

- Analyzing goal orientation was difficult because issues of motivation, self-efficacy and self-regulation had not been considered by Reeves.
- The dimension needs to be further developed to allow for these kinds of distinctions.
- It is perhaps faulty to think of goal orientation as a continuum of learning outcomes, but rather composed of distinct types of learning (facts, skills, values, attitudes).

Experiential Value

- Participants in the present study mentioned that the lack of authentic examples hindered their ability to fully grasp the learning content.
- With regard to this issue, the dimension was useful because it clearly helped uncover the importance of having authentic learning activities in the e-learning environment.

Accommodation of Individual Differences

- Participants felt the course should provide choices for the learner for (a) presentation of content, (b) choice of learning content, and c) preferences for different learning opportunities.
- This dimension of the model is useful in analyzing e-learning courses.

Value of Errors

- Value of errors should not be an isolated continuum but instead be integrated with experimental value.
- It was not possible to review the value of errors dimension without linking it to experimental value. This dimension of value of error and authentic assessment should be linked together.

Origin of Motivation

- Evidence from this study was inconclusive as no common pattern emerged.
- An important theme that did emerge from this study is that motivation cannot be looked at alone, without relating it to goal orientation.
- This dimension needs to be analyzed to include other components as well. As it stands now, it is missing some key components of goal orientation.

User Activity

- User activity depends on the learners' experience with the subject matter and their comfort with e-learning. For example, staff members who preferred mathemagenic environments seemed to do so because they were not familiar

enough with e-learning environments, and seemed uncomfortable with generative learning environments.

- This dimension was useful in analyzing learner differences.

Teacher Role

- "Stand alone" e-learning predominately is designed to be teacher proof.
- The dimension in the model should remain as is because in this study it highlighted the fact that some learners had difficulty learning in an environment where there was no teacher presence.

Cooperative Learning

- Not all learners want to work collaboratively with other learners in self-paced learning activities; however the majority of learners in this study wanted the option to participate in such activities, should they wish to.
- This dimension in Reeves' model helped shed light on how learners prefer to interact in an e-learning context.

Cultural Aspects of Course Structure

- The Reeves model does not elaborate how to identify variables that could be included in the dimension of cultural sensitivity.
- The following are cultural aspects of course design that research has suggested be taken into consideration (a) language and semantics (Collis, Parisi and Logorio, 1996); (b) the way in which content is presented (Collis 1997); (c) bias towards learners who are self-regulated (Dunbar, 1997); and (d) learning styles and preferences (Granger, 1994) and perhaps should be considered in Reeves's model.

Taking all this into account the Reeve's framework was nevertheless successfully used as a 'framework' for analyzing stand alone Global e-learning courses.

Practical Contributions

The second objective of this study was to provide some guidelines to instructional designers and project managers in the Global e-learning area on how to prepare and deliver learning to a virtual class of students who are characterized by a diversity of cultural and learning styles. The guidelines of Global e-learning design highlighted in this dissertation stem from a focus on learner experience. An important first step in implementing these guidelines for stand alone Global e-learning is identifying to what extent there is a similarity/difference with the organizational culture described in this study and that which the guidelines from this study may be applied.

In compiling the guidelines for the design of Global e-learning, it is evident that the design phase is very critical. The elements — epistemology/pedagogy, goal orientation/motivation, self-regulation/self-efficacy, experimental value/authentic assessment, accommodation of individual differences, user activity, cooperative learning and cultural issues provide foci for the educational designer, assisting in the navigation of the complexities and the often contradictory pressures that influence the development of an effective Global e-learning design.

When designing Global e-learning courses, instructional designers should take note of the following recommendations that could support and enrich the creation of e-learning for global audiences:

Epistemology/Pedagogy

- In e-learning courses it is possible in supporting epistemological pluralism—that is, exploratory learning approaches that can build on more traditional, linear learning experiences.
- The results from this study highlight the need to integrate a variety of epistemological approaches in the design of Global e-learning courses as proposed by Turkle and Papert (1991).

Goal Orientation/Motivation

- UN staff members often need specific skills to perform their jobs efficiently (such as how to conduct a country needs assessment). When this is so, it may be preferable that learners go through direct instruction with the e-learning programme, setting specific goals.
- When the learning objective is broader and less well-defined, goal orientation should be flexible enough to allow for individual variations, but at the same time be stringent enough to enable the incorporation of each component within the materials.
- Goals should also be relevant to the subject matter and to the "real world" in which the content may be applied.
- This study also demonstrated that motivational strategies such as (a) attention (strategies that arouse curiosity and interest), (b) variability (range of methods/media to meet learners' varying needs and learning styles); (c) relevance (strategies that link to learners' needs, goals, interests, and motives); and (d)

confidence (strategies that inform learners about learning and performance requirements and assessment criteria) should be included in the course.

Self-Regulation/Self-Efficacy

- In this study, a theme that emerged was that many learners did not feel comfortable learning independently because of lack of motivation.
- Nash (2004) recommends the following steps be considered when designing online learning environments in order to encourage self-regulation: (a) planning- learners should be able to identify their goals in taking the course; and b) monitoring- a learner can determine their progress through measurable outcomes.

Experiential Value/Authentic Assessment

- This study found that learning environments need to be relevant for the learner..
- Real work and problem-based learning should be included in order for the course to have experiential value.
- Authentic assessment activities should include learners working in meaningful activities with real world applications.
- What this study contributed is that because stand alone off the shelf courses lack meaningful authentic examples (because they are targeting for a wide audience), they are not always a useful learning tool because most learners cannot related to the examples found in these courses.

Accommodation of Individual Differences

- Learners should be able to choose or express a liking for a particular instructional technique, or a combination of different techniques.
- Options should exists for accessing content in more than one way, such as text, audio, illustration, animation, simulation, and video. Also, options should be available for different types of content objects—fact, concept, and procedure principles.

User Activity

- Learners new to e-learning, or learners with limited knowledge of the subject matter, prefer mathemagenic learning activities.
- Learners who are familiar with the course topic prefer more generative learning activities.
- It would be useful if the course was designed to allow learners to position their preference at the beginning of the course so that the course 'adapts' to the learners preferences.

Cooperative Learning

- This study adds to the previous literature on the effectiveness of cooperative learning in e-learning.
- Learners may prefer to work independently of others, but it can be useful if an option exists to allow learners the opportunity to work on cooperative activities.

Contribution to Human Resources and Organizational Development

The study provided a number of practical contributions to the field of human resources and organization development, as well as to adult education. Organizational support mechanisms such as manager support, e-learning primers, clear definition of e-learning, and blended-learning programmes, would provide easier access to e-learning, and should be seriously considered.

This study did not focus on the "organizational culture" of the research participants. At the more visible level, culture can represent the behaviour patterns or style of an organization that employees are automatically encouraged to follow by their fellow employees. *It would be useful at a later time to analyze the influence of organizational culture on learner experiences in Global e-learning.*

There is a lot of change occurring in the funding arena for global organizations. Unlike prior to 1994, where money was often given without due consideration to the impact of the donation, funders are now entering into contracts with recipients (i.e. UN) in which deliverables are clearly articulated and reporting requirements stipulated. The funding is ear marked for specific programmes and projects. Often, donors stipulate that funding is not to be spent on human resources (salaries, recruitment and learning and development). Recipients must use limited funding available through their core

operational budget for learning and development of their staff .If we want a knowledgeable and productive staff, then we need to convince our donors the importance of investing in human resources development. Good e-learning is expensive to develop (as is evident from the recommendations made in this chapter).

Limitations

.Criticism of the Theoretical Framework and Literature

A concern expressed in the literature review is that there are very few studies that explore stand alone Global e-learning. On a theoretical level, the nature of e-learning models and frameworks is so complex that no single theoretical model or framework, among those currently available, is sufficiently powerful or flexible in its application to real contexts. First, the area is not yet clearly defined and understood. There are numerous definitions of Global e-learning, and research to date tends to focus too much on comparing and contrasting learners from different cultures, etc. Second, there is criticism of much of the current research activity, as it is considered too anecdotal, and lacking theoretical underpinning. Because of these limitations, the specific research questions and overall study objectives proved difficult to address completely during the analysis of the results.

Methodological Limitations

This study adopted a case-study approach to Global e-learning courses developed through three different design methods. Since there are Global e-learning courses

developed by many different organizations, and since not all courses are designed in the same way as the courses in this study, it is recommended that stand alone Global e-learning courses developed by several methods are investigated to enhance the generalizability of the findings in this study.

The results of this study should be interpreted cautiously. Foremost, the study is constrained by a very small sample size. Therefore it is harder to find significant relationships from the data, as a larger sample size would be able to justify that the effect did not just happened by chance alone. Ideally, future similar studies should be conducted in other global organization, but there is have no reason to believe that the opinions expressed in this study are unrepresentative global learners.

In order to carry out replicate studies using the survey instrument developed by the researcher, the survey instrument should be refined through several replicated studies in numerous global organizations.

These potential limitations of the study do not, however, detract from the value of the study, namely, the importance of focusing on learners' accounts of their experiences as an important way of providing the "thick" descriptions necessary to effect local change.

Finally it is likely that the findings of this study might be limited to a particular type of online learning environment, that is, stand alone Global e-learning. Therefore, readers should be cautioned not to generalize the findings to other types of Global e-learning programmes (e.g., virtual universities), without further verification. The data were based exclusively on UN staff experiences and did not include international corporations, or nongovernmental organizations. These organizations may have different

administrative structures, or support systems, that are not present in the UN system. *The organizational context-culture may be the most important element that can help determine the success of an e-learning initiative*. An in-depth analysis of the context should be the departure point of future Global e-learning research efforts.

Directions for Future Research

As was demonstrated in this study, the goal of future research of this nature should be clearly focused on the improvement of stand alone Global e-learning systems. There are, however, two sides to the evaluation of such a system. One side seeks to identify factors that might inhibit the learning process, while the other side seeks to understand factors that will enable the learning process. While it is possible to study these two sides separately, it is recommended that future research expand towards identifying features of the stand alone Global e-learning that take both sides into consideration.

There are some questions that emerged from the results in the study that remain unanswered in the literature. They include the following:

1. What is the link between culture and e-learning acceptance? How does this influence learner experience when participating in e-learning courses?

2. Why can some learners learn independently, while others cannot? Is there a cultural link involved?

3. Are most online learners more self-regulated than traditional learners, or is it that some learners, because of their cultural background, cannot be self-regulated in an e-learning environment?

4. If e-learning's potential depends on the culture of the organization applying it, what makes one organization more effective than another?

5. How does the level of technology access affect the pedagogical process of e-learning?

6. More research is needed to determine how many of the requirements can be ignored or left out, before it will negatively impact the learning experience. In other words what is the minimum number of requirements to allow e-learning to benefit all learners?

7. Are there organizational differences in perceived e-learning barriers? (i.e., to what extent does organizational culture influence e-learning design?)

In addition, some important questions emerged from the literature review that were not answered in the present study:

1. How do we support learners who need structure in guidance, while at the same time providing learners with some flexibility as to how they want to learn?

2. How do we prepare and support instructional designers to create authentic and meaningful learning environments in diverse work environments and with diverse learner knowledge?

3. E-learning courses in organizations attract learners with a greater disparity of backgrounds and interests than traditional methods attract. How do we set course goals to accommodate these differences? Which methods work best in respect to individual learning goals across the range of desired outcomes for learning?

There will undoubtedly be debate over the extent to which models of e-learning can and should reflect elements of socio-cultural context. Researchers are continually

attempting to identify and clarify these elements. Generally speaking, apart from cultural elements, many other elements (e.g., age, education) undoubtedly influence how learners perform in global-learning environments. There is one fundamental question that has not been answered in this or in any other studies on global e-learning, and that is: how should we design e-learning for a culturally diverse group of learners who are professionally homogeneous?

Final Note

The more we acknowledge and understand the nature of diversity amongst online learners, the greater the opportunity to build effective, supportive learning environments for all. Given the almost limitless diversity between individuals (age, background, experience with e-learning) it is an impossible task to identify dimensions that may affect the online learning experience. The list of best practices is a practical set of guidelines for those teaching online culturally diverse students. It supports some of the principles for culturally inclusive and flexible instructional design that are found in the literature (see for example Ziguras 1999; McLoughlin & Oliver 2000; Ngeow & Kong 2002; Goodfellow & Hewling 2005; Hannon & D'Netto 2007).

Addressing cultural issues are important in instruction, regardless of whether one is teaching in a classroom, online, or through some sort of blended approach. So, finally, where do we go from here? A follow-up to this dissertation is intended in which the recommendations from this study will be implemented in the design of numerous Global e-learning course using the same instruments and tools to explore learner experiences. To form the basis for such a study, the research should be guided by the hypotheses that each

of the proposed guidelines that emerged in this study may shape the learners' experience in Global e-learning environments.

There is no comprehensive theory to inform how the various elements of e-learning environments, such as design, implementation and delivery can be understood and optimized. Reeves (1993), Henderson (1996) and others who have proposed models for Global e-learning design have identified key dimensions that should be considered in the design process. The basic tenets of education do not change when e-learning is applied, and e-learning practitioners must be careful to base their practice on identifiable learning theories.

There is no easy recipe for success in designing Global e-learning. In global organizations, it will remain a challenge to find ways to balance the need for creating culturally rich courses while still maintaining a common lingua franca. The findings in this study suggest that to maximize the effectiveness of global e-learning for learners of diverse cultural backgrounds and learning styles, we need to create learning environments that are, above all, flexible. Flexibility in format allows for multiple entry points into and out of the program increases learners' sense of control over their own learning.

The use of stand alone Global e-learning in global organizations has reached the stage where the question is not whether it is as good as classroom-based approaches; but which approach supports good learning.

CHAPTER 6 DESIGN GUIDELINES FOR GLOBAL E-LEARNING

More and more organizations are turning to e-learning solutions to meet their training and knowledge management challenges. This final chapter summarizes "best practices" that could serve as design guidelines for Global e-learning. These guidelines were derived from the analysis of the different case studies explored in this study.

Table 17

Summary of Design Guidelines for Global E-learning

Learning Strategy	**Organization and Process**	**Learning Content/Design**	**Learning Infrastructure**
Use eLearning as part of an overall learning strategy for the organization Policies must be in place that allow learners to spend time on learning during work hours Use e-learning to address competency gaps Ensure that e-learning is linked to professional development and performance Mandatory training can be launched	Hire learning specialists that have experience in cross cultural instructional design Create a centralized learning and development team. Create organization wide standards and benchmarks for eLearning development Share internal and external best practices (World Bank and non-governmental agencies)	Develop a mix of off-the-shelf content and custom content Learner should have control over the pacing of the course The learning content should be personalized according to learner preferences (consider a pre-test to assess current skills and knowledge) Create blended learning programmes including online and classroom activities. Provide learning	E-learning should be available anytime and anywhere (Web, CD-ROM, FTP) Integrate learning-management systems (LMS) with other enterprise systems (HR systems)

efficiently using eLearning. Work with e-learning vendors that have experience working with global organizations. Market courses Pilot test the course and survey participants about reaction to activities provided	Gain support from senior management for creating a culture of learning in the organization Foster a good partnership between the learning department and information technology department(in order to meet the needs of staff who have limited connectivity) Create learning objectives that are linked to learners needs and goals	guidance to guide learners throughout the course Within the structure of the learning environment ensure that opportunities are provided for students to build their own links between different types of information Supplement formal courses (i.e. workshops) with informal learning activities (mentoring/coaching). Learners should access the content in many ways (text, audio, video etc.) Learner should know what is expected from them in the course Course goals should be clear and concrete Examples, case studies and assessment should reflect real work examples Learners should have immediate feedback on their progress in the course Learners should have access to online tutors

	who are subject matter experts
	Create a discussion board to allow learners to collaborate with each other
	Use easy-to-use development tools to create low-cost custom content in-house (using the expertise of internal learning specialists)
	Navigation and icons should be culturally free of bias.
	Provide learners the opportunity to learn in the language they or most familiar with
	Include an online glossary for difficult terminology
	Use one writing style guide for all e-learning courses

In Chapter 5, I suggested a template on how one can assess/ design Global e-learning courses. In order to guide the reader, I have analyzed two stand alone Global e-learning courses available online to the public in order to demonstrate how to use the template in practice.

Table 18

UNICEF- Principled Approach towards Humanitarian Action (www.unicef.org/path/)

Dimension	Considerations for the design of stand alone Global E-learning for global organizations	Example from UNICEF
Multiple Epistemology	Multiple Epistemologies are presented in the course: a) instructivist, and b) constructivism embedded within the same program	A combination of different epistemologies is presented. For example, the learner is able to choose what optional modules they need to learn but the learners have to complete the first three modules.
Goal Orientation/Motivation	If specific skills and knowledge are needed, goals are concrete and tangible. If learning objective is broad or not well defined, goals requiring high levels of processing (e.g., heuristic problem solving, personal selection and monitoring of cognitive strategies is included). Motivational strategies embedded in the course include: a) attention, strategies that arouse curiosity and interest; b) variability (range of methods/media to meet learners varying needs and learning styles); c)relevance (strategies that link to learner's needs, goals, interests, and motives);	When the learning objective is concrete (i.e. define Humanitarian Law, the course goals are very specific. The game like approach keeps the learners attention. The game also allows learner to know how well they are doing in the course.

	and d)confidence (strategies that inform learners about learning and performance requirements and assessment criteria)	
Self- regulation- Self-Efficacy	Learning activities provide learners with the sense that they are in control of their own learning. Activities promote self-regulation included such as: a) feedback and reflection opportunities; b) contextualized learning; c) access to online subject matter experts and or facilitators, teachers; d) and e) collaborative learning opportunities.	Various reflective type activities allow learners to feel what it is like to be in an emergency.
Experimental Value-Authentic Assessment	Learning environment has relevance to learners across different levels and functional areas. These include: a) real work and problem based learning; b)a variety of different types of problem based tasks are available; and c) real world tools and resources are available Authentic assessment activities are included: a) learners perform, produce or demonstrate their knowledge and skills; b) involves complex thinking and problem solving skills; and c) meaningful activities with real world applications.	Examples are real life UNICEF examples. Stories and feedback from UNCIEF Emergency Officers allow to learners to gain first hand knowledge of how they should be doing their work in the field. Questions and examples allow learners to feel like they are in a real life emergency situation and must react accordingly.
Accommodation of Individual Differences	Variety of instructional learning preferences are present A learner can choose or express a liking for a particular instructional technique or a combination of techniques such	Optional modules exist for the learner. In some modules the content is presented in more than one form. For example, case study,

	as dependent, collaborative etc. Options exist for learners to access content through text, audio, illustration, animation, simulation, and video. Options are available for different types of content (i.e. objects, fact, concept, procedures and principles.	exercise and data from the field.
User Activity	Learners new to e-learning or learners with limited knowledge of the subject matter need mathemagenic learning activities. Learners who were familiar with the course topic need more generative learning activities.	Course did not have any learner specific pre-assessment. Course audience is so broad that it is difficult to assess how a learners with a lot of knowledge of the subject area would find the course useful.
Cooperative Learning	Learners can work independently of other learners, or learning is encouraged through cooperative activities amongst learners.	There is no opportunity to work with other learners. There is opportunity to email a course subject matter expert
Cultural Issues	Language- no slang's, glossary of technical terms in more than one language, active verbs, Various representations of content-audio, text, audio, illustration, animation, simulation, and video Opportunities/strategies to teach/reinforce self-regulation Opportunities to engage in group interaction, mentor, coaches Course is structured to meet different learning styles for the concrete experience--offer laboratories, field work, observations etc.	Although the course is quite rich in using different types of media-there is really no choice for the learner to choose one type or another (i.e.in Module 3 you need to watch the video-you don't have much choice is choice for anything else). Course is not structured to meet different learning styles.

Table 19

Monitoring and Evaluation of Programming Inter-American Development Bank

(http://www.iadb.org/int/rtc/ecourses/monitoringevaluation.htm)

Dimension	Considerations for the design of stand alone Global E-learning for global organizations	Example from IADB
Multiple Epistemology	Multiple Epistemologies are presented in the course: a) instructivist, and b) constructivism embedded within the same program	An instructivist approach is used in the course.
Goal Orientation/Motivation	If specific skills and knowledge are needed, goals are concrete and tangible. If learning objective is broad or not well defined, goals requiring high levels of processing (e.g., heuristic problem solving, personal selection and monitoring of cognitive strategies is included). Motivational strategies embedded in the course include: a) attention, strategies that arouse curiosity and interest; b) variability (range of methods/media to meet learners varying needs and learning styles); c)relevance (strategies that link to learner's needs, goals, interests, and motives); and	Learning objectives are concrete (i.e. identify the steps/processes in the programme evaluation process) Because the target audience is not well defined it is difficult to find relevance in the course. Learners are provided with feedback as they go through each module.

	d)confidence (strategies that inform learners about learning and performance requirements and assessment criteria)	
Self- regulation- Self-Efficacy	Learning activities provide learners with the sense that they are in control of their own learning. Activities promote self-regulation included such as: a) feedback and reflection opportunities; b) contextualized learning; c) access to online subject matter experts and or facilitators, teachers; d) and e) collaborative learning opportunities.	Various reflective type activities allow learners to think about their own experiences in M/E. No access to online teachers and facilitators.
Experimental Value-Authentic Assessment	Learning environment has relevance to learners across different levels and functional areas. These include: a) real work and problem based learning; b)a variety of different types of problem based tasks are available; and c) real world tools and resources are available Authentic assessment activities are included: a) learners perform, produce or demonstrate their knowledge and skills; b) involves complex thinking and problem solving skills; and c) meaningful activities with real world applications.	Examples are generic (not IADB specific) but useful to non-governmental organizations and UN organizations). Questions and examples try to encourage learners to reflect back to their own work. Assessment activities focus on attainment of certain skills- no complex thinking and problem solving.
Accommodation of	Variety of instructional	Limited use of

Individual Differences	learning preferences are present A learner can choose or express a liking for a particular instructional technique or a combination of techniques such as dependent, collaborative etc. Options exist for learners to access content through text, audio, illustration, animation, simulation, and video. Options are available for different types of content (i.e. objects, fact, concept, procedures and principles.	instructional activities (only print and one video). No opportunity to choose preference.
User Activity	Learners new to e-learning or learners with limited knowledge of the subject matter need mathemagenic learning activities. Learners who were familiar with the course topic need more generative learning activities.	Course did not have a learner specific pre-assessment. Course audience is so broad that it is difficult to assess how a learner with a lot of knowledge of the subject area would benefit from the course.
Cooperative Learning	Learners can work independently of other learners, or learning is encouraged through cooperative activities amongst learners.	There are no opportunities to work with other learners. There is no opportunity to email a course subject matter expert.
Cultural Issues	Language- no slang's, glossary of technical terms in more than one language, active verbs, Various representations of content-audio, text, audio, illustration, animation, simulation, and video Opportunities/strategies to teach/reinforce self-	Course is not structured to meet different learning styles.

	regulation Opportunities to engage in group interaction, mentor, coaches Course is structured to meet different learning styles for the concrete experience-- offer laboratories, field work, observations etc.

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APPENDIXES

APPENDIX A: CONSENT FORM

Mariam Kakkar
Ph.D. Candidate
Department of Education
Concordia Université
1455 de Maisonneuve, LB 581
H3G 1M8

Dear Professor_____

I am a Ph.D. Candidate in Educational Technology at Concordia University in Montreal, Canada. I am also an Assistant Learning Officer at the United Nations Children's Fund. My area of interest is global e-learning. I would be very much interested in having staff members in your organization participate in my dissertation study.

The main question guiding my dissertation is: how do we design global e-learning to enable each learner to acquire knowledge and skills, effectively, whatever his or her language, culture or location?

Participating in this study will not take much of your time nor will it disrupt your staff members daily work activities.
Should you wish to participate in this study, I would need to have access to one e-learning course that your staff members have completed. Should some of your staff members wish to participate, they will be asked to either to participate in a one-on-one interview or complete a short online survey about their experience in that e-learning course.

In the long run, I hope that findings from my study will serve administrators and faculty members in higher education institutions and international organizations who develop programs, design courses and create learning environments for global learning.

I would like to know if your organization would be interested in participating in this **study.** If you are interested, would you please forward the attached letter to your staff members? Please note that I am also including an Ethical Protocol Form for research with Human Subjects. This research has been approved by the Department of Education at Concordia University. Should your university require that I fill out their form, please let me know as soon as possible?

Should you wish to speak to me concerning this study, please do not hesitate to contact me via e-mail: mariam@education.concordia.ca or by phone 212-824-6178 (collect call). I hope to hear from you. You may contact my supervisors should you wish, Dr A Cleghorn at ailie@education.concordia.ca and Dr. B Bernard bob@education.concordia.ca.

Thank you for your time.

Mariam Kakkar

Letter to Staff Member and Consent Form

My name is Mariam Kakkar and I am a Doctoral Candidate in the Department of Education at Concordia University and an Assistant Learning Officer at the United Nation's Children's Fund. I am conducting a research study entitled: *Designing for Difference: Experiencing Global E-learning.*

My dissertation topic will explore how do we design global e-learning to enable each learner to acquire knowledge and skills, effectively, whatever his or her language, culture or location? I am therefore inviting you to participate in this study. Participation in this study will require one of the following from you:

The results of this study will be useful for your organization in developing global e-learning course. In the long run, educators in higher education institutions and organizations who develop programs, design courses and create learning environments in Web-based international distance education will better serve your needs.

Participation is voluntary. If you choose to take part you may do so in French, English or Spanish. Your participation is confidential and no one in your organization will be aware of your involvement and/or responses. If you sign this consent form and then choose to withdraw from the study, you may do so at any time. You may either inform me of your wish to withdraw during the interview, through e-mail (mariam@education.concordia.ca) , or by fax (514-848-4236), You may also choose not

to answer any of the questions asked. If you would like a copy of the results, they will be made available to you at the end of the study prior to any publication of them.

If you have any questions about this research project, please call me at collect at 917-912-8164 (collect) or e-mail me at mariam@education.concordia.ca. Should you wish to participate, you will be asked to sign a consent form (I have attached a consent form for you to review). Should you wish to participate in this study, you may either send me the consent from with your signature via airmail. Or you may wish to provide an electronic signature and send it via e-mail.

Thank you for considering this project, and I hope you will decide to participate.

Sincerely,

Mariam Kakkar

Consent Form

I _____ (print name) agree to allow Mariam Kakkar from Concordia University to interview me for a research study titled: *Designing for Difference: Experiencing Global E-learning.*

1. I am voluntarily participating in this study;
2. The interview/s will be tape-recorded. I may choose not to have the interview tape-recorded. The interview will take one hour.
3. I can chose to terminate my participation in this study at any time; there are no consequences to this action;
4. My answers to questions during the interview, on the online survey and learning log will remain confidential;
5. No physical, psychological or other harm will come to me by participating in this interview;
6. I can request a copy of the report once it has been completed.

I understand that:

- any information gathered (as noted above) will be used only for educational purposes and that this information will be shared with the instructor after all course grades have been submitted. All information that could possibly identify me will be removed from the data.

- all information gathered is to be kept strictly confidential and to be, used only for the purposes stated.

- I may withdraw my consent from this study at any time I wish.

- I have the right to revoke my permission at any time; there are no consequences to this action. If you sign this consent form and choose to withdraw from the study, you may do so at any time. You may either tell me during the interview, through e-mail (mariam@education.concordia.ca), or by fax (212-824-6178).You may also choose not to answer any of the questions asked.

I_____ give my consent to participate in this study.

APPENDIX B: ORIGINAL INTERVIEW GUIDE

1.
a) What is your mother tongue?
b) In what country did you complete most of your schooling?
c) Where do you live now? What languages do speak?
d) Where have your worked? What type/s of job?
e) Is this your first experience with DE? Please explain.
f) Is this your first experience with WIDE? Please explain

2. Please tell me why you are taking this course.

3. How did you react when you first saw the course Web site?
Probe:
a) interface design
comfort with type of picture, graphics, colours, fonts etc,
b) familiarity with type of web design used,
c) ability to navigate through the Web site,
d) clear headings-subheadings, etc.

4. Issues related to language
Probe:
a. What is your first language?
b) Is there a course glossary in more than one language?
c) Comfort level with reading and writing?
d) Ease of understanding of the course material etc.
Adapting to the language
Types of problems with language i.e., reading, writing, interaction etc.
Strategies used to make the language more comprehensible etc.

5. Issues related to course content
a) Relevance of course content to students needs
b) Expectations of student
c) integration of content to current educational ideology
d) Usefulness of content
e) Appropriateness of content
f) Strategies used to make content more meaningful
theoretical/practical presentation of the course content,
examples to illustrate points, manner in which content is presented, difficulty in understanding content.

6. Pedagogical Issues: Teacher Role
Probe:

a) Teacher's role versus student expectations (i.e., facilitator, instructor, informal-formal etc.)
b) Ability to interact comfortably with teacher, be truthful and honest etc.
Approachability
c) How the teacher deals with student problems
Teachers' approach towards sealing with diversity issues

7. Issues with Student Role
Probe
a) Acceptance of his/her role
b) How do you interact with other students in the class? Do you enjoy the interaction, why or why not?
c) Did you want to interact with other students?
d) How did you approach students?
e) What is your comfort level with the other students?
f) What do you like/dislike about interacting with other students, what motivates you to communicate with other students in your class etc?

8. Issues with Instructional Activities
Probe
a) Types of instructional activities you enjoy/ don't enjoy (why)
b) Comfort level with instructional activities
Strategies to overcome problems with dealing with instructional activities

9. Issues with Assessment/Evaluation
Probe:
a) To what extent does the assessment format of the course meet your needs?
Past experience with different types of assessment/evaluation
b) Does the assessment accurately reflect your knowledge, etc?
Conflicts with Assessment/Evaluation

10. Issues with Learning Styles
Probe:
a) Learning strategies, i.e., problem solving, case based etc.
b) Learning styles preferences
Past experiences with global-learning environments.

10. Do you think other students from your country would be interested in participating in this course, why or why not?

APPENDIX C: EVALUATION TEMPLATE (VERSION 1)

Epistemology	-structured learning environment -linear presentation of material -environment guides the learning	- flexible and open learning environment - student is actively creating the learning environment
Pedagogical Philosophy	-structured learning environment -linear presentation of material -environment guides the learning	-learner environment is unstructured and open -course content is related to learners' environment - learning is presented holistically
Goal Orientation	-goal set by the learning system - task completion goals - goals focused and static - concrete and measurable goals	- personal knowledge building goals set up by the system - goals tailored for the needs of different learners
Experiential Value	-abstract concepts are presented to the learner -learner must attempt to make the connections to his or her world	-concrete examples are given to the learner -action based problem solving
Program Flexibility	- learner is required to perform all tasks and navigational paths as set forth by the course environment	- learner can chose how and when to perform tasks - learning program allows for multiple ways of learning

	- all task and assignments are completed in the e-environment	
Value of Errors	-errorless learning - learning through trial and error - only correct answers are allowed in the learning system	-multiple right answers -learners given coaching and feedback on answers
Motivation	-extrinsic	intrinsic
Accommodation of Individual Differences	- all learners learn the same material	- all learners must take the same path to complete the course - no choice for language - no glossary - fonts, style same for everyone
User Activity	- primarily intended to enable learners to access various representations of content	-engage learners in the process of creating, elaborating or representing knowledge
Cooperative Learning	- no opportunity to interact with and learn with other learners	- learners work with one or more individuals to
Cultural Sensitivity	- Course content is created fro a very homogenous-Western audience - The course does no meet the needs of diverse learners	- Course content is respective of cross cultural issues - The needs of diverse learners are met

APPENDIX D: COMPLETED EVALUATION TOOL (VERSION 1)

Epistemology	- e-environment controls the learner -course is linear - structured learning environment
Pedagogical Philosophy	- course content is general and not specific to different groups of learners (i.e., staff in Headquarter offices versus field staff - learning is presented in small segments - each learning segment can be presented on its own
Goal Orientation	- prior background knowledge is not taken into consideration- some learners have -extensive experience in this area while others are new - everybody's goal is different in taking this course
Experiential Value	-examples and case study questions are not relevant and do not reflect real world experiences that the learner would face
Program Flexibility	- program is inflexible - difficult to jump around from concepts and ideas - learning experience can be frustrating if you know the concepts and just want to finish the module quiz - also there is no opportunity to work outside the course environment so you are restricted in what you can do
Value of Errors	- after completing the assessment questions you find out right away if your answer is correct or incorrect
Motivation	- difficult to tell as this depends on what you want to get out of the course
Accommodation of Individual Differences	- all learners must take the same path to complete the course- - no choice for language - no glossary - fonts, style same for everyone
User Activity	- difficult to analyze
Cooperative Learning	- learners have the opportunity ask an expert a question via e-mail if they have a question about the course content
Cultural Aspects	-course has a Western slant to it (i.e., all actors are Caucasian and there is no diversity).

APPENDIX E: REVISED INTERVIEW GUIDE

Questionnaire
1) Agency?

2) Course title?

3) Why did you take this course?
Probe:
- mandatory
- part of my development plan
- for my performance evaluation
- because I lacked competency in this areas
- prerequisite for a workshop

4) To what extent were your learning objectives met in this course?
- not really met
- they were met

5) How did your proceed in the course? Did you complete the course module by module or did you randomly complete various modules? Why did you do this? Probe. If learner had to go through each module in a linear format-probe did you find this met your learning needs? If learner was able to go through each module in a nonlinear format-probe was this what the learner wanted?

6) Were the objectives in each module clear to you? Probe further-how clearly were the objectives stated, how clearly were the objectives highlighted in the way the content was presented? If the objectives were unclear-how did you decide what was important to learn?

7) Was the content presented in such a manner that your were able to meet the learning objectives in each module? Probe- multiple ways of presenting the information, various use of multimedia etc. How did you feel at the end of each module? Motivated? A sense of accomplishment?

8) Were the case studies and tasks gives to you reflective of your work environment? If so, please explain how. If not, what was lacking in the case studies? How were the examples different than your own work environment?

9) Were you given enough practice/feedback in each module to sufficiently learn the material? Probe-Were the practice exercises clear and concise? Did you have a choice? If so, did this make it easier or harder? learn the material? Did they require you to work outside of the e-environment? Did you have to consult with other coworkers?

10) What was your main goal in taking this course? Probe-Performance review, grade increment etc. Was your goal met in taking this course? How? Why? Or why not? Did your goals change as you continued with the course?

11) Do you think that other staff member would have similar or different goals than yourself? Probe-difference in your section/division/ field office

12) Can you think of one instance were you applied what you learned in this course in your work environment? How was has this course influenced your work? Probe- why was there no change? Why was there a change?

13) Were there practice exercises and feedback in the course? If so, did you receive feedback immediately? Did you want this? What type of feedback did you receive? If you did not get an answer right, what type of feedback did you receive? Did this help or hinder your learning? Probe- did you receive the same type of feedback? Probe-

14) Who would benefit form taking this course benefit? Why? Who should take this course? Probe- is this course for all staff members? New? Old? Field offices? National officers????

15) Do you feel that the course was designed in such a way that different learners could go through the course? Why or why not??

16) How comfortable were you learning in a self-paced learning environment? Would you have preferred a synchronous format? Did you want to learn with other staff members? Probe: e-mail and tutors, mentors and offline exercise.

16) Do you feel that the course was biased in any way? I.e. were there some examples, questions, etc that could cause misunderstandings because of cultural and linguistic differences of our staff?

APPENDIX F: REVISED EVALUATION TOOL (VERSION 2)

Dimension	Left Side	Right Side
Epistemology	-Structured learning environment -Linear presentation of material - Learning environment guides the learning - Clear learning categories - Learning is sequential. - Learning is easily measured - Instruction shapes desirable behaviour through the arrangement of stimuli, responses, feedback, and reinforcement; behaviour is observable.	- Flexible and open learning environment - Student is actively creating the learning environment - Content presented holistically, hypermedia learning environment - Learning is difficult to measure - Variety of learning strategies are required depending upon the type of knowledge to be constructed by the learner.
Pedagogical Philosophy	- Well defined objectives - Learning content is removed from the learners' environment -Learning is presented into small chunks -Objectives exist apart from the learner -Learners viewed as passive recipients of instruction - Little attempt is made to individualize the learning needs of each learner.	-Learner environment is unstructured and open. -Course content is related to learners' environment. - Learning is presented holistically. - Learning environment is rich and diverse. - Learning can be estimated only through observation and dialogue. - Pace and sequence in of the learning and additional resources is determined by the learner
Goal Orientation	-Goal set by the learning system - Task competition goals	- Personal knowledge building goals set up by the

	- Goals focused and static - Concrete and measurable goals. - Completing traditional assessment exercises. (True/False, Fill in the blanks, Multiple choices).	system. - Goals tailored for the needs of different learners. - The environment nourishes and encourages pursuit of personal knowledge building goals.
Experiential Value	-Abstract concepts are presented to the learner knowledge is presented and learner must attempt to make the connections to his or her world - Completing traditional assessment exercises (True/False, Fill in the blanks, Multiple choice).	-Concrete examples are given to the learner. -Action based problem solving. - Situating practice and feedback within realistic scenarios. - Ranging from activities based on real situations to models that focus on applying conceptual knowledge or skills, such as critical thinking or problem solving. - Authentic activities provide the opportunity for students to examine the task from different perspectives, using a variety of resources.
Program Flexibility	- Learner is required to perform all tasks and navigational paths as set forth by the course environment. - All task and assignments are completed in the e-environment	- Learner can choose how and when to perform tasks - Learning program allows for multiple ways of learning - Gives learners a choice of assignment topics and modes of communication
Value of Errors	-Errorless learning.	-multiple right

	- only correct answers are allowed by the learning system	answers -Learners provided with coaching and feedback on answers.
Origin of Motivation	- Externally rewarded learning. - When a learner is motivated by rewards and incentives external to the learner's interest and satisfaction,	-Intrinsically motivating (motivation that is integral to the learning environment), -Relevance; materials relevant to a learner in either a work capacity or in personal interests.
Accommodation of Individual Differences	- All learners learn the same material - No choice in assignments, path flow and learning strategies and learning styles (for example, visual, verbal, global, sequential, inductive or deductive)?	-Different paths available for learners -Different chose of content, visuals multimedia, feedback -Access to varied resources - Support novice users through online help features - Allow the user to access other resources at the click of a button
User Activity	- Learners have the opportunity to access the same content, but in different ways - Facilitates shallow and passive learning	Is a process of generating ideas using static information as a starting point and re organizing this into more flexible knowledge structures
Teacher Role	- No teacher involvement - Limited or no access to tutors, subject matter experts etc.	-Facilitator or teacher plays an visible role in the course
Cooperative Learning	-Web site does not integrate collaborative learning; learners do not work in pairs or small	- Web sites integrate collaborative learning; learners work in pairs or

	groups to accomplish shared goals. - Learning is completed in the e-environment.	small groups to accomplish shared goals. -New and wider avenues for contact and collaboration. - Create tasks where learners can share ideas and work together on projects.
Cultural Aspects	-Cultural differences are completely ignored (even if unintentionally). - The course may have a 'western' slant to it? - and learning styles (for example, visual, verbal, global, sequential, inductive or deductive)?	- Broadening the learning experience - Strategic use of cultural content and resources - The instructor or designer of the Web based course attempts to keep images and examples free from stereo types and uses internationally recognized symbols. Global vs. local issues the appropriateness of material developed nationally versus materials produced or adapted for local contexts. Adaptation vs. generalized approaches Learning materials that can be used in any context, versus materials produced in ways which encourage and even facilitate local adaptation.

APPENDIX G: REVISED EVALUATION TOOL (VERSION 3)

Dimension	Left Hand	Right Hand	Notes
Epistemology	-Structured learning environment -Linear presentation of material - Learning environment guides the learning. - Clear learning categories - Learning is sequential. - Learning is easily measured - Instruction shapes desirable behaviour through the arrangement of stimuli, responses, feedback, and reinforcement; behaviour is observable	- Flexible and open learning environment - Student is actively creating the learning environment - Content presented holistically, hypermedia learning environment - Learning is difficult to measure - Variety of learning strategies are required depending upon the type of knowledge to be constructed by the learner	-Learning environment is structured -Learner is guided to follow a specific sequence. -Learner must go through course in a specific sequence in order to successfully complete the course
Pedagogical Philosophy	- Well defined objectives - Learning content is removed from the learners' environment. -Learning is presented into small chunks. -Objectives exist apart from the learner -Learners viewed as passive recipients of instruction - Little attempt is made to individualize the learning needs of each learner	-Learner environment is unstructured and open -Course content is related to learners' environment - Learning is presented holistically - Learning environment is rich and diverse - Learning can be estimated only through observation and dialogue - Pace and sequence in which one study's the resources is determined by the learner	-Course objectives are made clear from the beginning of the course and then in each subsequent module course objective is mentioned again -Because the course map is with the learner during the

			entire course, learner is always aware where they are at. -There are many modules in the course and the learning in each module and submodule is presented in small chunks of informatio n. -Learning environme nt is simple and basic. -Learner controls pace and sequence of the course.
Goal Orientation	- Goal set by the learning system - Task completion goals - Goals focused and static - Concrete and measurable goals. - Completing traditional assessment exercises. (True/False, Fill in the blanks, Multiple choice)	- Personal knowledge building goals set up by the system - Goals tailored for the needs of different learners - The environment nourishes and encourages pursuit of personal knowledge building goals	-Learning goals are made evident at the start of the course. - At the end of each module there are some additional exercises

			for those who may want to learn more- if learner has more sophisticated goals than the system there is room to learn more. While there is room to learn more, learner is not assessed on this learning any further
Experiential Value	Abstract concepts are presented to the learner knowledge is presented and learner must attempt to make the connections to his or her world	-Concrete examples are given to the learner -Action based problem solving - Situating practice and feedback within realistic scenarios - Ranging from activities based on real situations to models that focus on applying conceptual knowledge or skills, such as critical thinking or problem solving - Authentic activities provide the opportunity for students to examine the task from different perspectives, using a variety of resources	-The course content does not appear to be relevant to someone working in a UN environment. -This course meets the needs of someone working in corporate America. -A learner would have

			to extract concepts from the course and to make connections back to the UN environment
Program Flexibility	- Learner is required to perform all tasks and navigational paths as set forth by the course environment - All task and assignments are completed in the e-environment	- Learner can choose how and when to perform tasks - Learning program allows for multiple ways of learning - Gives learners a choice of assignment topics and modes of communication	No program flexibility- all learners must complete all modules in the same way, including all the mandatory exercise. There is no pretest that would allow learners to skip some content and more to content they are not familiar with.
Value of Errors	-Errorless learning. - Learning through trial and error.	- Multiple right answers -Learners provided with coaching and feedback on answers.	In each module the learner is given quizzes, the learner goes through the quiz, if the answer is

			wrong, the right answer is shown. In the final course exam, if the learner does not do well, then they must retake the course again, they must redo the same questions until they get them right.
Origin of Motivation	- Externally rewarded learning - When a learner is motivated by rewards and incentives external to the learner's interest and satisfaction	-Intrinsically motivating (motivation that is integral to the learning environment) -Relevance-materials relevant to a learner in either a work capacity or in personal interests	Learner is given a quiz at the end of this course; therefore there is a level of intrinsic motivation involved. Because no relevance is evident- it is hard to see how the learner can really benefit from the course.
Accommodation of Individual Differences	- All learners learn the same material. - No choice in assignments, path flow and learning strategies and learning	-Different paths available for learners -Different chose of content, visuals. multimedia, feedback -Access to varied resources	-All learners learn the same material.

	styles (for example, visual, verbal, global, sequential, inductive or deductive)?	- Support novice users through online help features - Allow the user to access other resources at the click of a button	-However, learners are given the choice to learn more material at the end of each module if they want to
Teacher Role	- No teacher involvement - Limited or no access to tutors, subject matter experts etc.	-Facilitator or teacher plays an visible role in the course	Nothing- stand alone here.
User Activity	- Learners have the opportunity to access the same content, but in different ways - Facilitates shallow and passive learning	- Is a process of generating ideas using static information as a starting point and re organizing this into more flexible knowledge structures	-Learners are given informatio n and they must absorb it. There is no re-organizing of knowledge
Cooperative Learning	-Web site does not integrate collaborative learning; learners do not work in pairs or small groups to accomplish shared goals. - Learning is completed in the e-environment	- Web sites integrate collaborative learning; learners work in pairs or small groups to accomplish shared goals -New and wider avenues for contact and collaboration. - Create tasks where learners can share ideas and work together on projects	Learner has access to an online tutor- they can send an e-mail and receive a response. All learning is completed in the online environme nt, there is no learning offline.
Cultural Aspects	-Cultural differences are completely ignored (even if	- Broadening the learning experience	While there is no

	unintentionally) - The course may have a 'western' slant to it? - and learning styles (for example, visual, verbal, global, sequential, inductive or deductive)?	- Strategic use of cultural content and resources - The instructor or designer of the Web based course attempts to keep images and examples free from stereo types and uses internationally recognized symbols -Global vs. local issues the appropriateness of material developed nationally versus materials produced or adapted for local contexts.	real cultural violation, the overall look and feel is North-American (pictures of people in board rooms, icons and graphics). Some examples were worded oddly. For instance, some terminolog y may mean different things to different people (measurem ent).

APPENDIX H: COMPLETED EVALUATION TOOL USING STAND ALONE COURSE

Dimension	Left Hand	Right Hand	Notes
Epistemology	-Structured learning environment -Linear presentation of material - Learning environment guides the learning. - Clear learning categories - Learning is sequential. - Learning is easily measured - Instruction shapes desirable behaviour through the arrangement of stimuli, responses, feedback, and reinforcement; behaviour is observable	- Flexible and open learning environment. - Student is actively creating the learning environment. - Content presented holistically, hypermedia learning environment, - Learning is difficult to measure. - Variety of learning strategies are required depending upon the type of knowledge to be constructed by the learner	-Learning environment is structured -Learner is guided to follow a specific sequence -Learner must go through course in a specific sequence in order to successfully complete the course (they can jump around but if they had not completed the end of the modules quizzes then they cannot write the final test)
Pedagogical Philosophy	- Well defined objectives - Learning content is removed from the learners' environment. -Learning is presented in small chunks -Objectives exist apart from the learner. -Learners viewed as passive recipients of instruction - Little attempt is made to individualize the learning needs of each	-Learning is presented holistically - Learning environment is rich and diverse - Learning can be estimated only through observation and dialogue - Pace and sequence in which one study's the resources is determined by the learner	-Course objectives are made clear from the beginning of the course and then in each subsequent module course objective is mentioned again

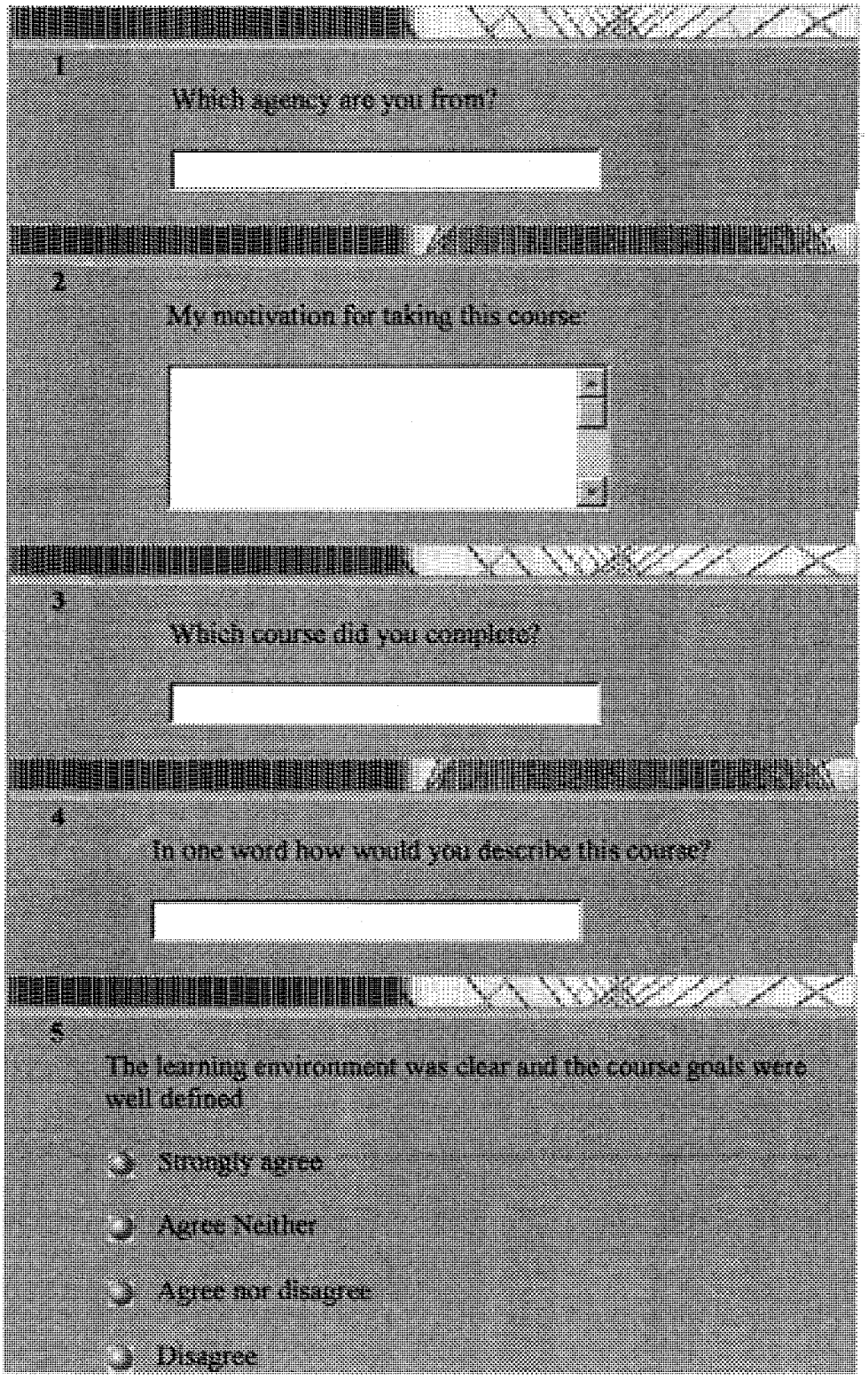
	learner		-Simple content is presented with definitions and then later on the learner is presented with case studies -Learning environment is simple and basic -Learner controls pace and sequence of the course.
Goal Orientation	-Goal set by the learning system - Task competition goals - Goals focused and static - Concrete and measurable goals - Completing traditional assessment exercises. (True/False, Fill in the blanks, Multiple choice)	-Personal knowledge building goals set up by the system. - Goals tailored for the needs of different learners - The environment nourishes and encourage pursuit of personal knowledge building goals	-The goals are presented to the learners at the beginning of each section -The learner is reminded of the goals at the end of each module -The goals are for a specific audience and geared towards someone who has no real knowledge in the subject area
Experiential Value	-Abstract concepts are presented to the learner knowledge is presented	-Concrete examples are given to the learner -Action based problem	-The examples and case studies

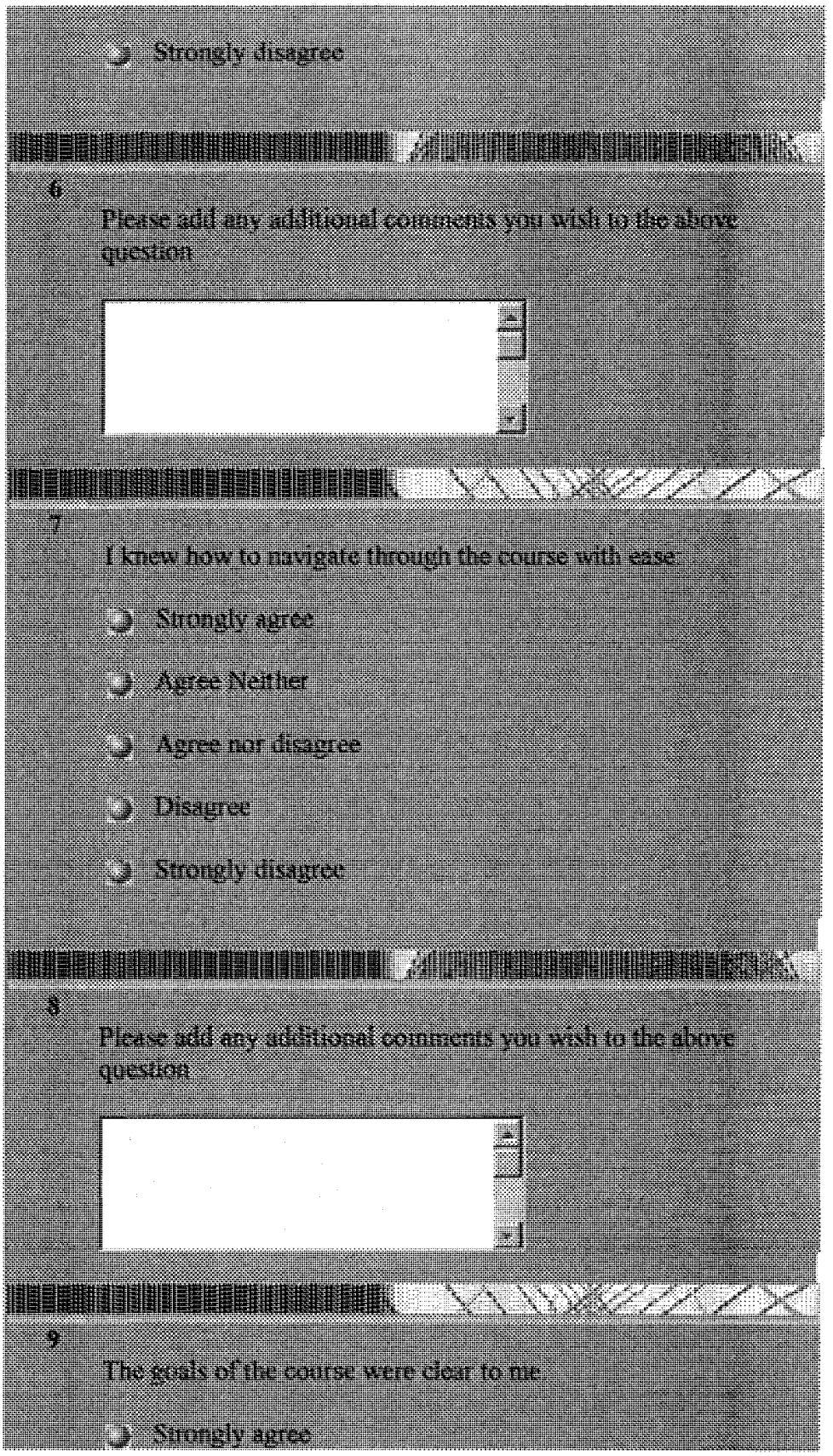
	and learner must attempt to make the connections to his or her world - Completing traditional assessment exercises (True/False, Fill in the blanks, Multiple choice).	solving - Situating practice and feedback within realistic scenarios - Ranging from activities based on real situations to models that focus on applying conceptual knowledge or skills, such as critical thinking or problem solving. - Authentic activities provide the opportunity for students to examine the task from different perspectives, using a variety of resources.	are not relevant for someone working in the UN environment -There is too much focus on profits and return on investments which is not relevant to the needs of staff.
Program Flexibility	- Learner is required to perform all tasks and navigational paths as set forth by the course environment - All task and assignments are completed in the e-environment	- Learner can choose how and when to perform tasks. - Learning program allows for multiple ways of learning. - Gives learners a choice of assignment topics and modes of communication,	-No program flexibility-all learner must complete all modules in the same way, all exercises -There is no pretest that would allow learners to skip some content and more to content they are not familiar with
Value of Errors	-Errorless learning. - Learning through trial and error.	- Multiple right answers -Learners provided with coaching and feedback on answers.	-The quizzes at the end of each module are to assess the learners' knowledge -There is too much focus on right and wrong answers and

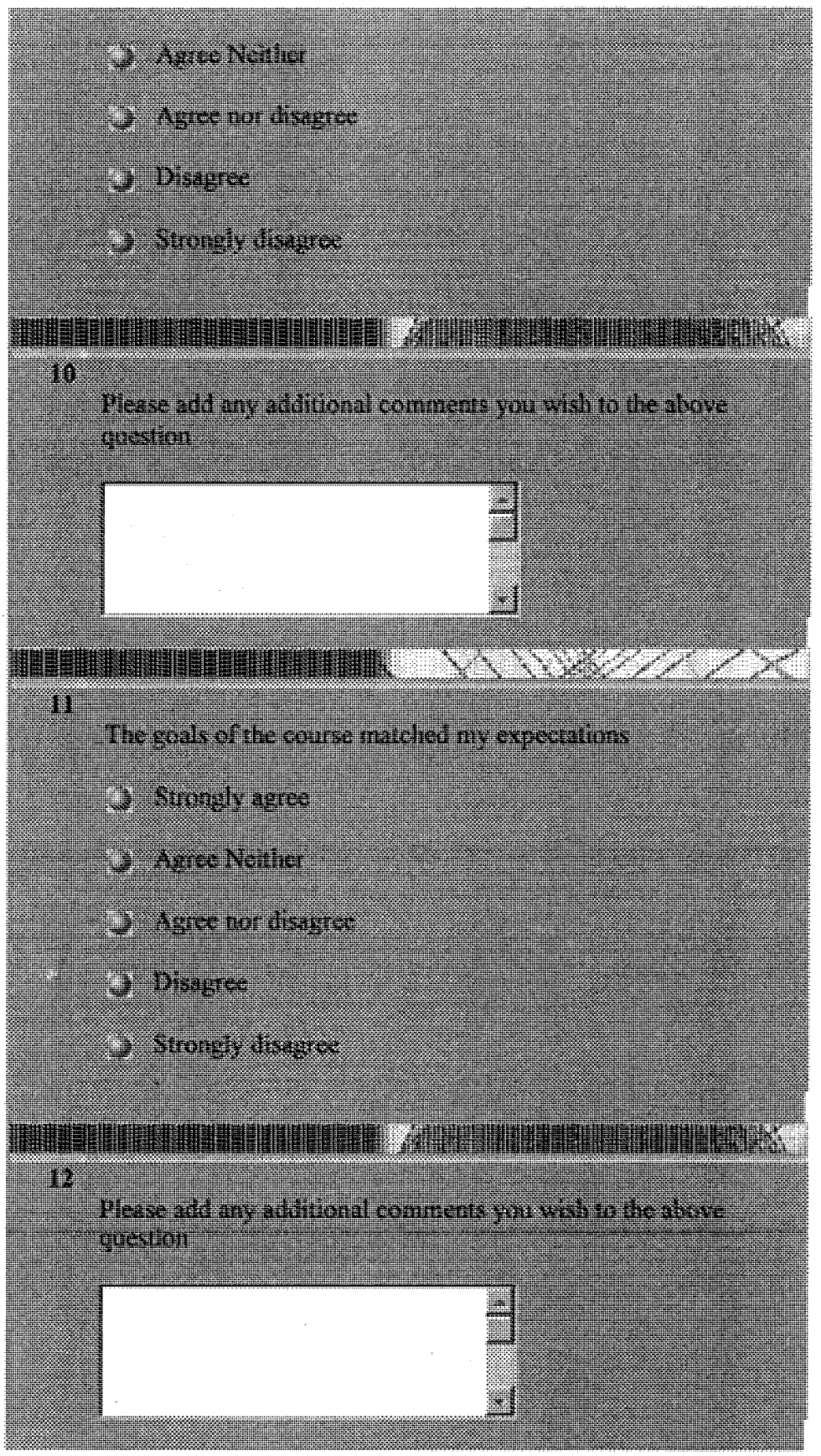
			there are no grey areas or questions that try to make the learner think about concepts that may no correct answer
Origin of Motivation	- Externally rewarded learning. - When a learner is motivated by rewards and incentives external to the learner's interest and satisfaction, - All learners learn the same material. - No choice in assignments, path flow and learning strategies and learning styles (for example, visual, verbal, global, sequential, inductive or deductive)? - Learners have the opportunity to access the same content, but in different ways - Facilitates shallow and passive learning	- Is a process of generating ideas using static information as a starting point and re organizing this into more flexible knowledge structures	-Learners are given information and they must absorb it - There is no re-organizing of knowledge or anything at the beginning that would directly show to the learner how this course is relevant for them.
User Activity	- Learners have the opportunity to access the same content, but in different ways - Facilitates shallow and passive learning	- Is a process of generating ideas using static information as a starting point and re organizing this into more flexible knowledge structures	-The learner cannot manipulate the content. It is presented to the learners. The learner must click of different boxes or icons to

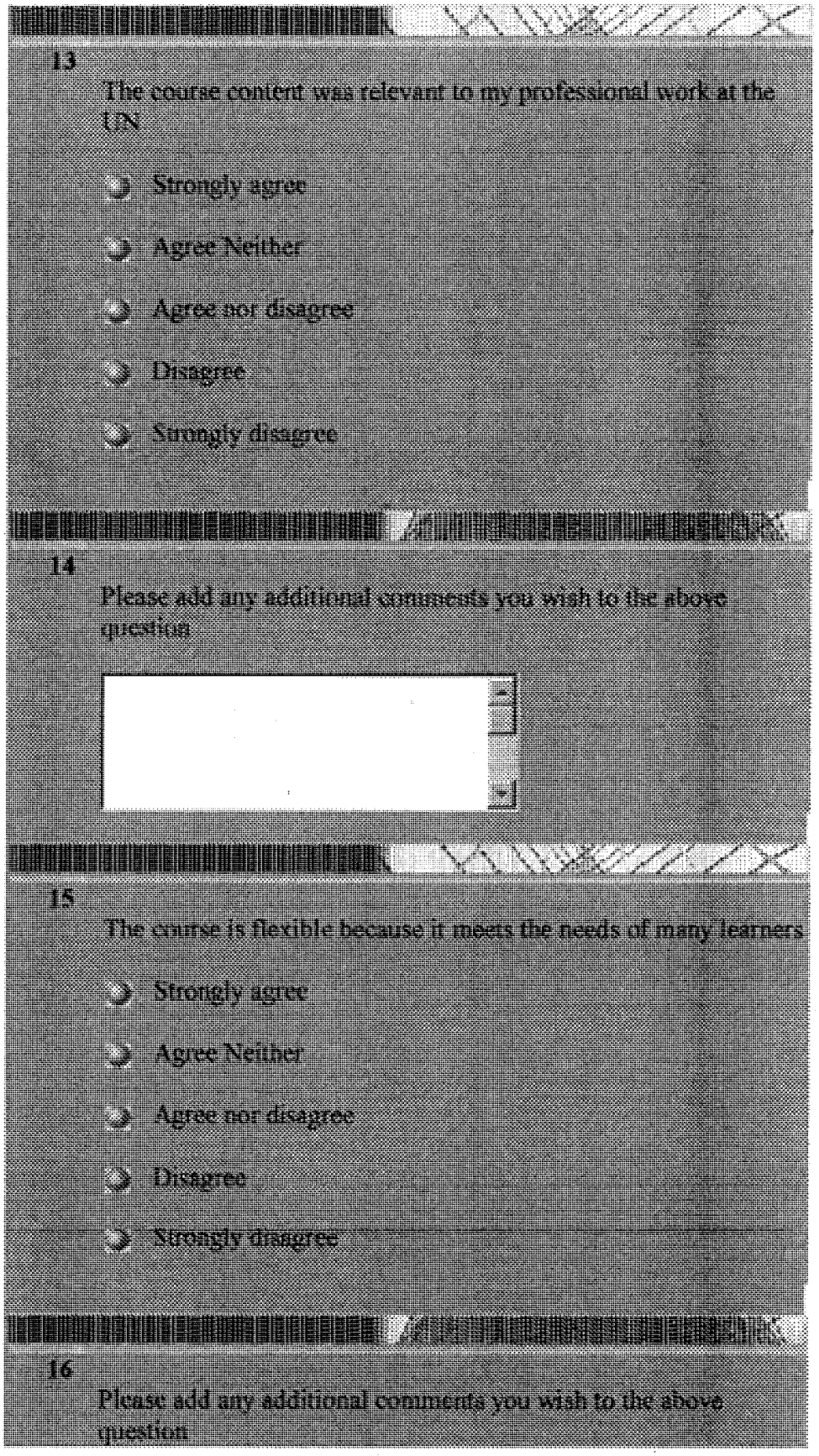
			move from one screen to the next
Teacher Role	- No teacher involvement - Limited or no access to tutors, subject matter experts etc.	-Facilitator or teacher plays an visible role in the course	None
Cooperative Learning	Course does not integrate collaborative learning; learners do not work in pairs or small groups to accomplish shared goals. - Learning is completed in the e-environment.	- Web sites integrate collaborative learning; learners work in pairs or small groups to accomplish shared goals -New and wider avenues for contact and collaboration. - Create tasks where learners can share ideas and work together on projects	-Learner has access to an online tutor- they can send an e-mail and receive a response -All learning is completed in the online environment, there is no learning offline
Cultural Aspects	Cultural differences are completely ignored (even if unintentionally) - The course may have a 'western' slant to it	- Strategic use of cultural content and resources - The instructor or designer of the Web based course attempts to keep images and examples free from stereotypes and uses internationally recognized symbols. Global vs. local issues the appropriateness of material developed nationally versus materials produced or adapted for local contexts.	Some examples were worded oddly. For instance, the word "beat me up Scotty" may not mean anything to non Western learners. The course had a very Western approach to it.

APPENDIX I: QUESTIONNAIRE VERSION 1




Strongly disagree
6
Please add any additional comments you wish to the above question
7
I knew how to navigate through the course with ease
Strongly agree
Agree Neither
Agree nor disagree
Disagree
Strongly disagree
8
Please add any additional comments you wish to the above question
9
The goals of the course were clear to me
Strongly agree


Agree Neither
Agree nor disagree
Disagree
Strongly disagree
10
Please add any additional comments you wish to the above question
11
The goals of the course matched my expectations
Strongly agree
Agree Neither
Agree nor disagree
Disagree
Strongly disagree
12
Please add any additional comments you wish to the above question



13

The course content was relevant to my professional work at the UN

- Strongly agree
- Agree Neither
- Agree nor disagree
- Disagree
- Strongly disagree

14

Please add any additional comments you wish to the above question

15

The course is flexible because it meets the needs of many learners

- Strongly agree
- Agree Neither
- Agree nor disagree
- Disagree
- Strongly disagree

16

Please add any additional comments you wish to the above question

17

The assessment exercises in the course helped me grasp the learning objectives

- Strongly agree
- Agree Neither
- Agree nor disagree
- Disagree
- Strongly disagree

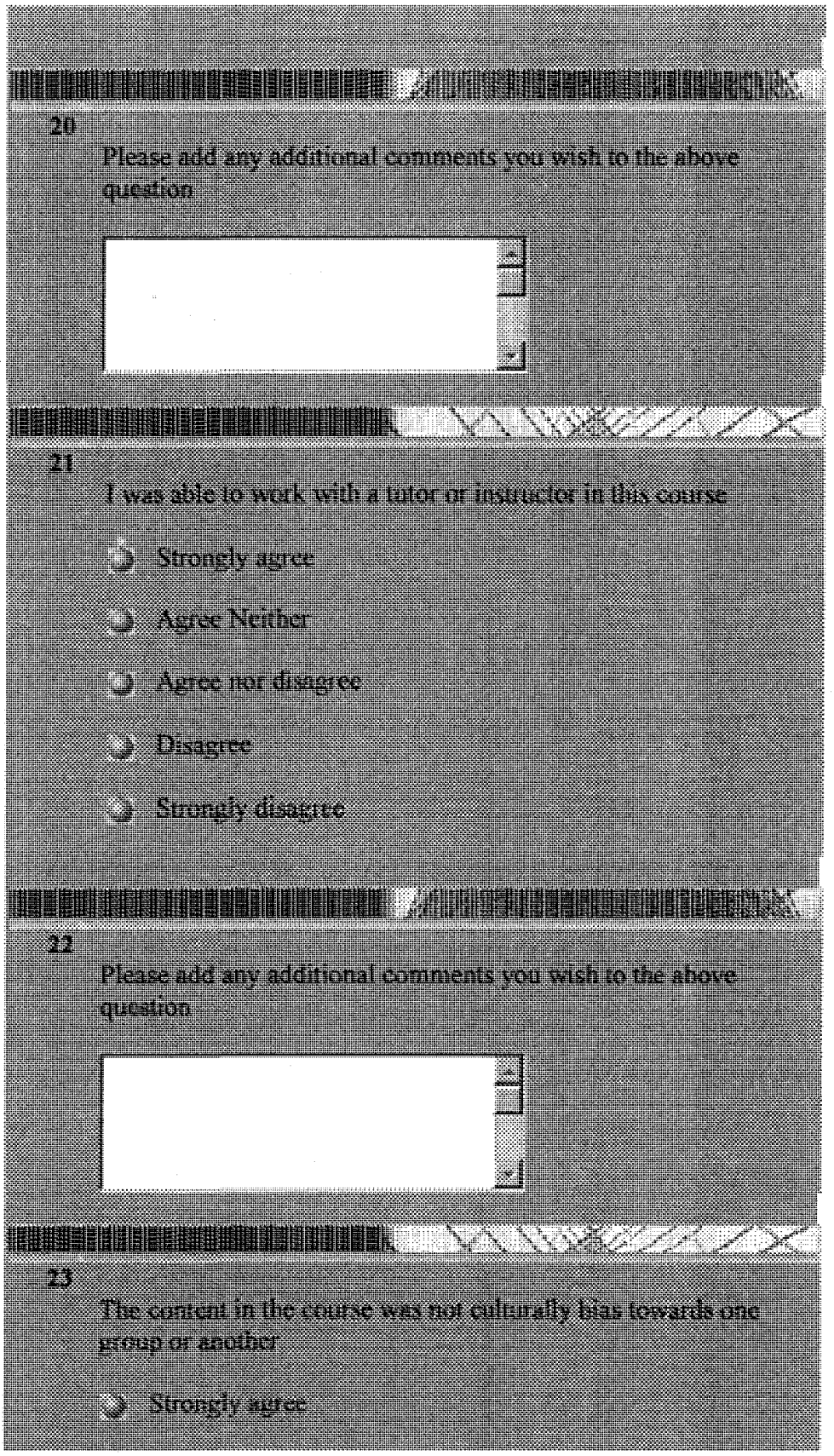
18

Please add any additional comments you wish to the above question

19

I was able to work with other learners in this course

- Strongly agree
- Agree Neither
- Agree nor disagree
- Disagree
- Strongly disagree



20

Please add any additional comments you wish to the above question

21

I was able to work with a tutor or instructor in this course

- Strongly agree
- Agree Neither
- Agree nor disagree
- Disagree
- Strongly disagree

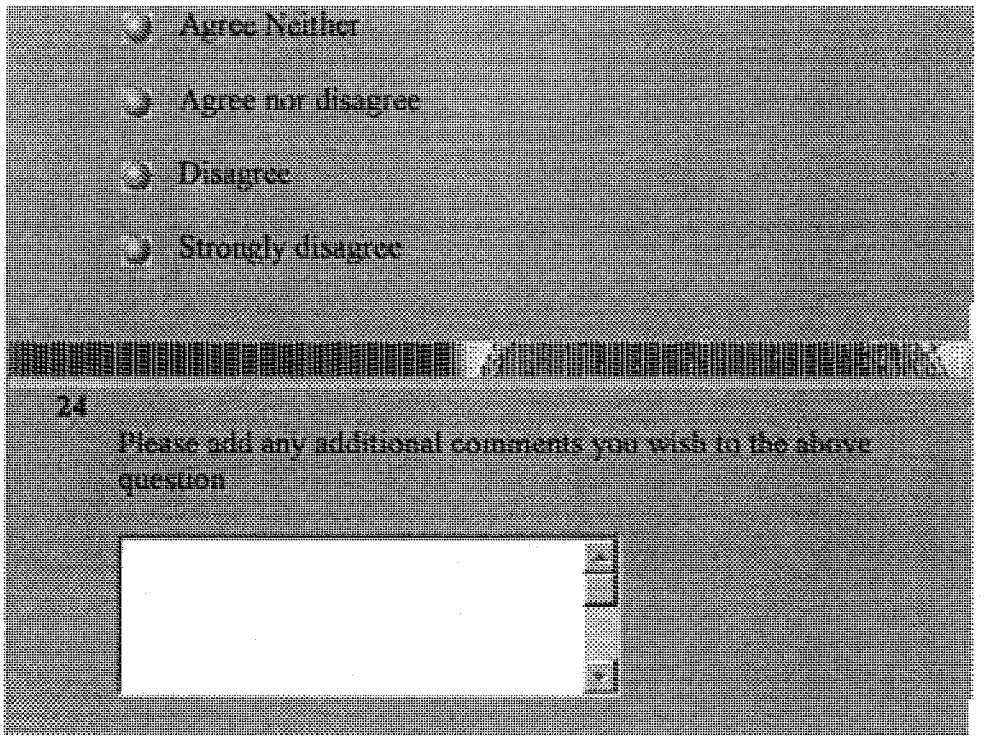
22

Please add any additional comments you wish to the above question

23

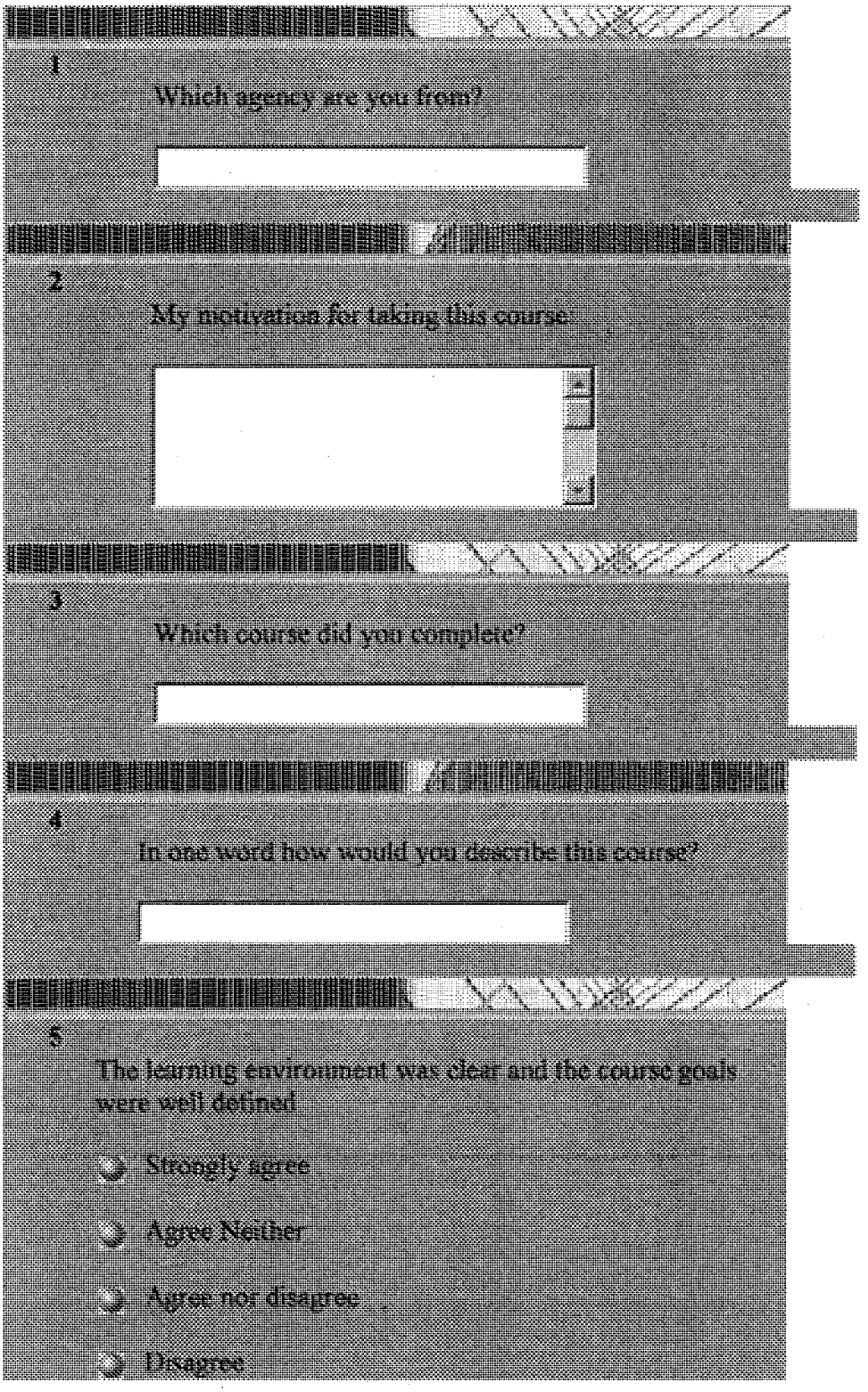
The content in the course was not culturally bias towards one group or another

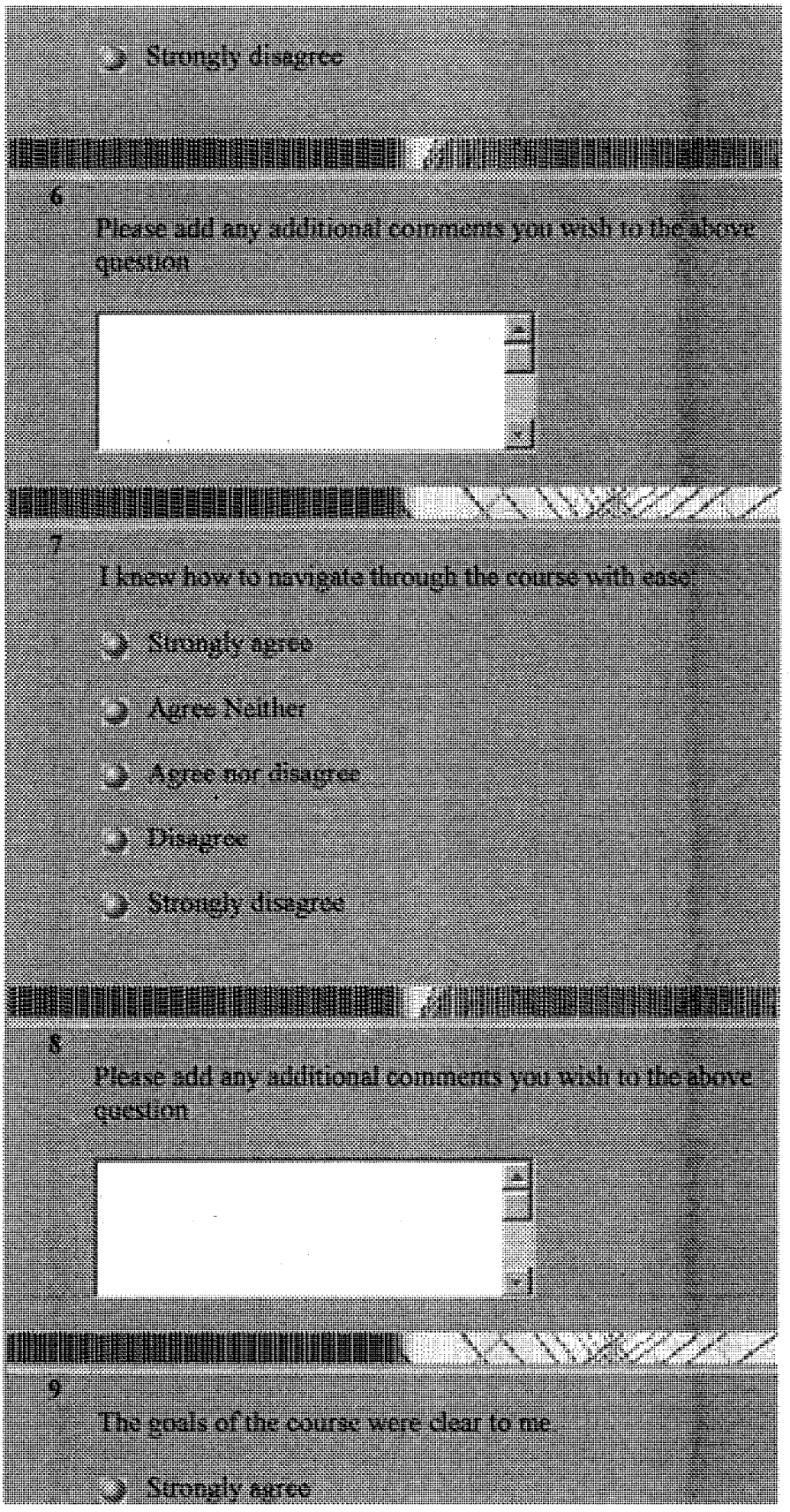
- Strongly agree


Agree Neither
Agree nor disagree
Disagree
Strongly disagree
24
Please add any additional comments you wish to the above question


SUBMIT

APPENDIX J: FINAL QUESTIONNAIRE





Strongly disagree

6

Please add any additional comments you wish to the above question

7

I knew how to navigate through the course with ease:

Strongly agree

Agree Neither

Agree nor disagree

Disagree

Strongly disagree

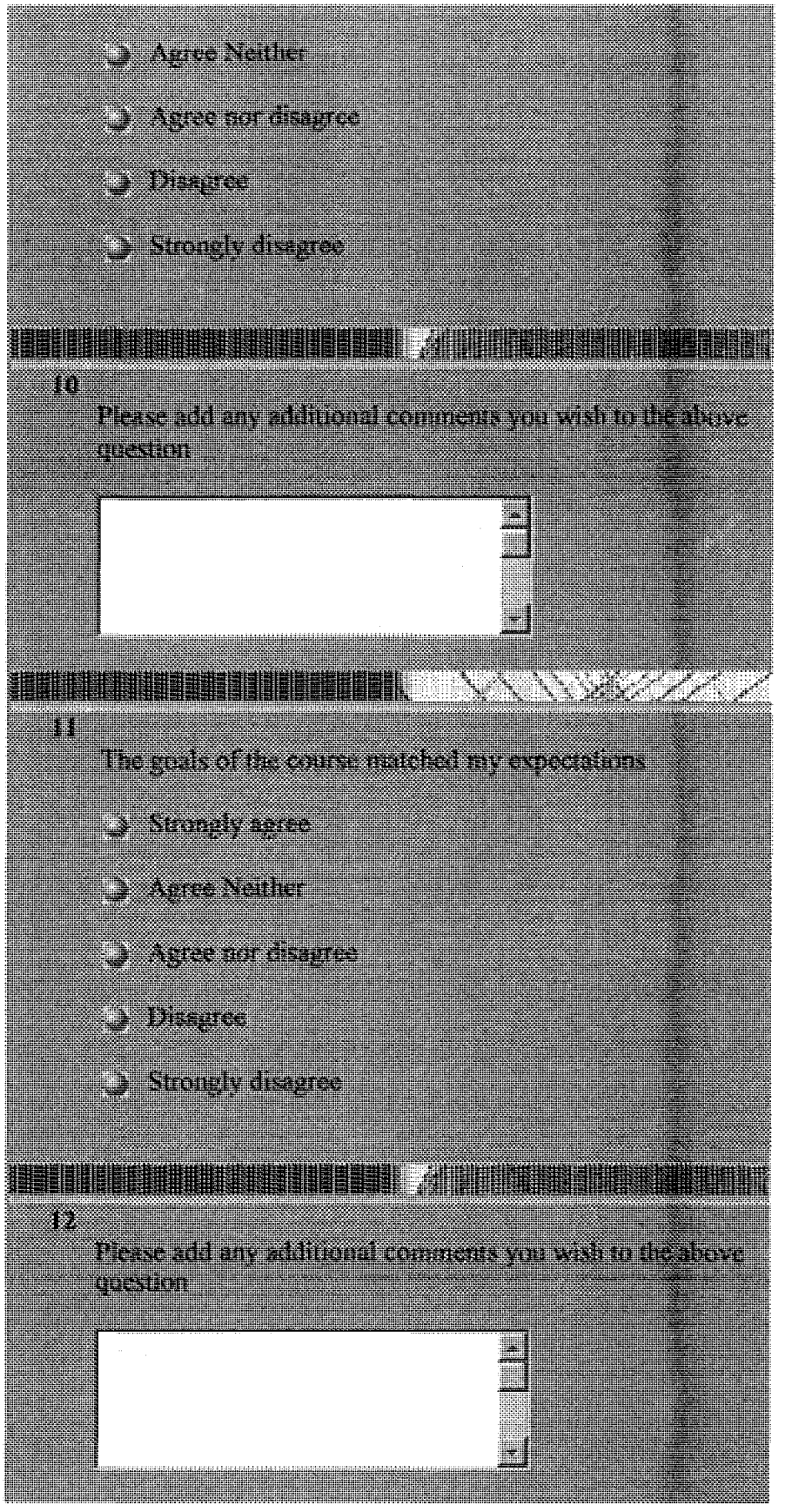
8

Please add any additional comments you wish to the above question

9

The goals of the course were clear to me.

Strongly agree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Agree nor disagree
Disagree
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Please add any additional comments you wish to the above question
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Strongly agree
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Agree nor disagree
Disagree
Strongly disagree
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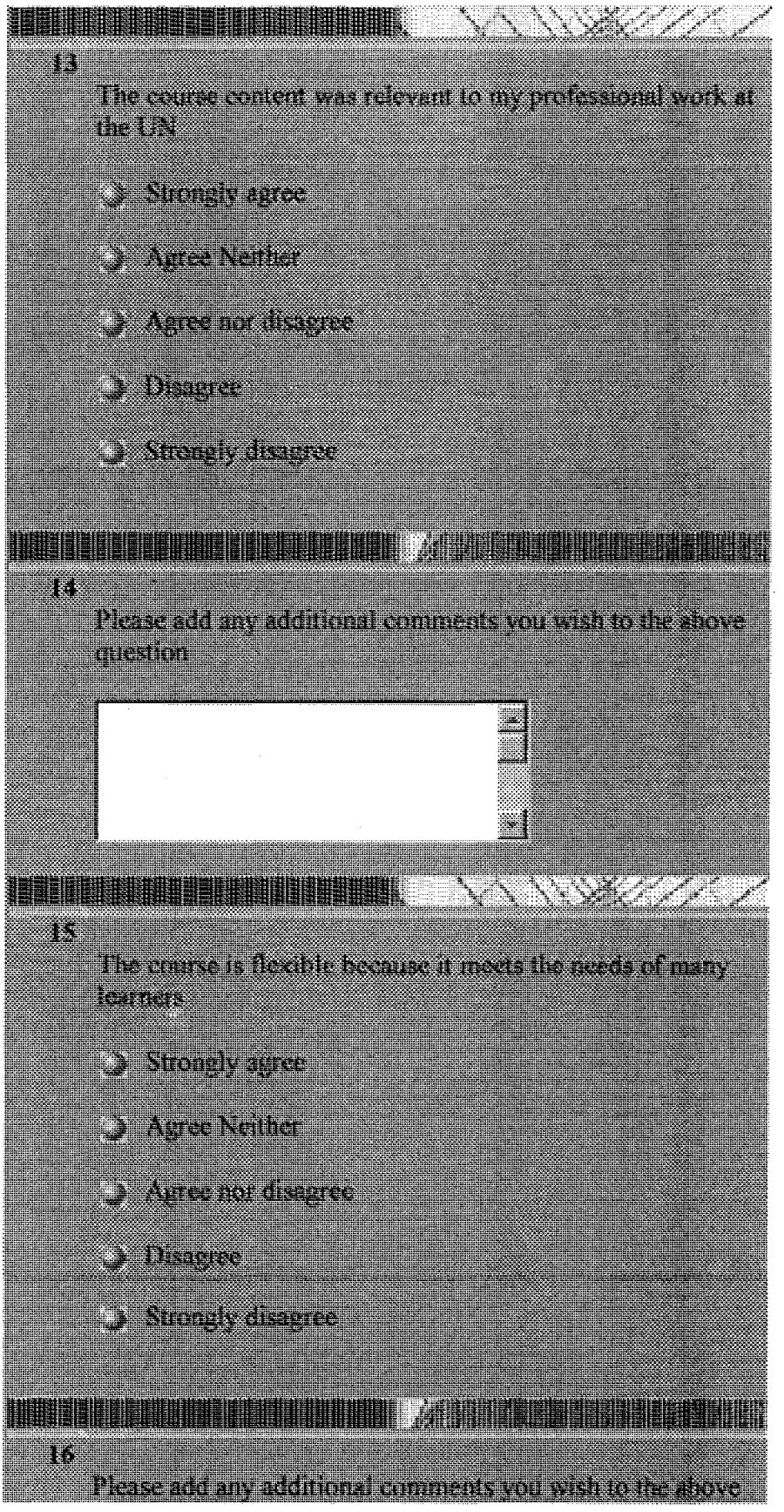
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The course is flexible because it meets the needs of many learners
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Agree Neither
Agree nor disagree
Disagree
Strongly disagree
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Please add any additional comments you wish to the above

question

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The assessment exercises in the course helped me grasp the learning objectives

- Strongly agree
- Agree Neither
- Agree nor disagree
- Disagree
- Strongly disagree

18

Please add any additional comments you wish to the above question

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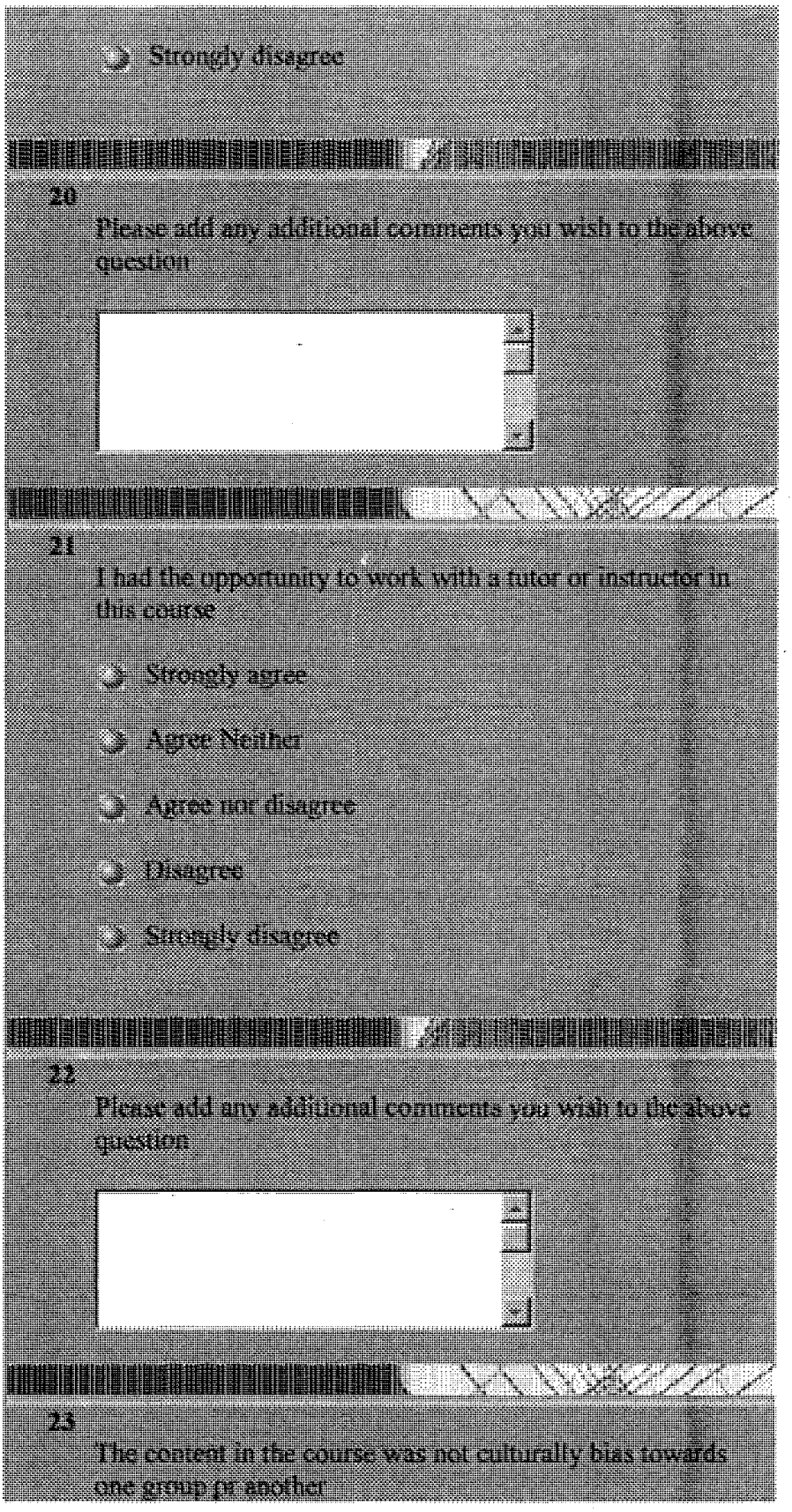
I had the opportunity to work with other learners in this course

- Strongly agree
- Agree Neither
- Agree nor disagree
- Disagree



Strongly disagree

20

Please add any additional comments you wish to the above question

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I had the opportunity to work with a tutor or instructor in this course

Strongly agree

Agree Neither

Agree nor disagree

Disagree

Strongly disagree

22

Please add any additional comments you wish to the above question

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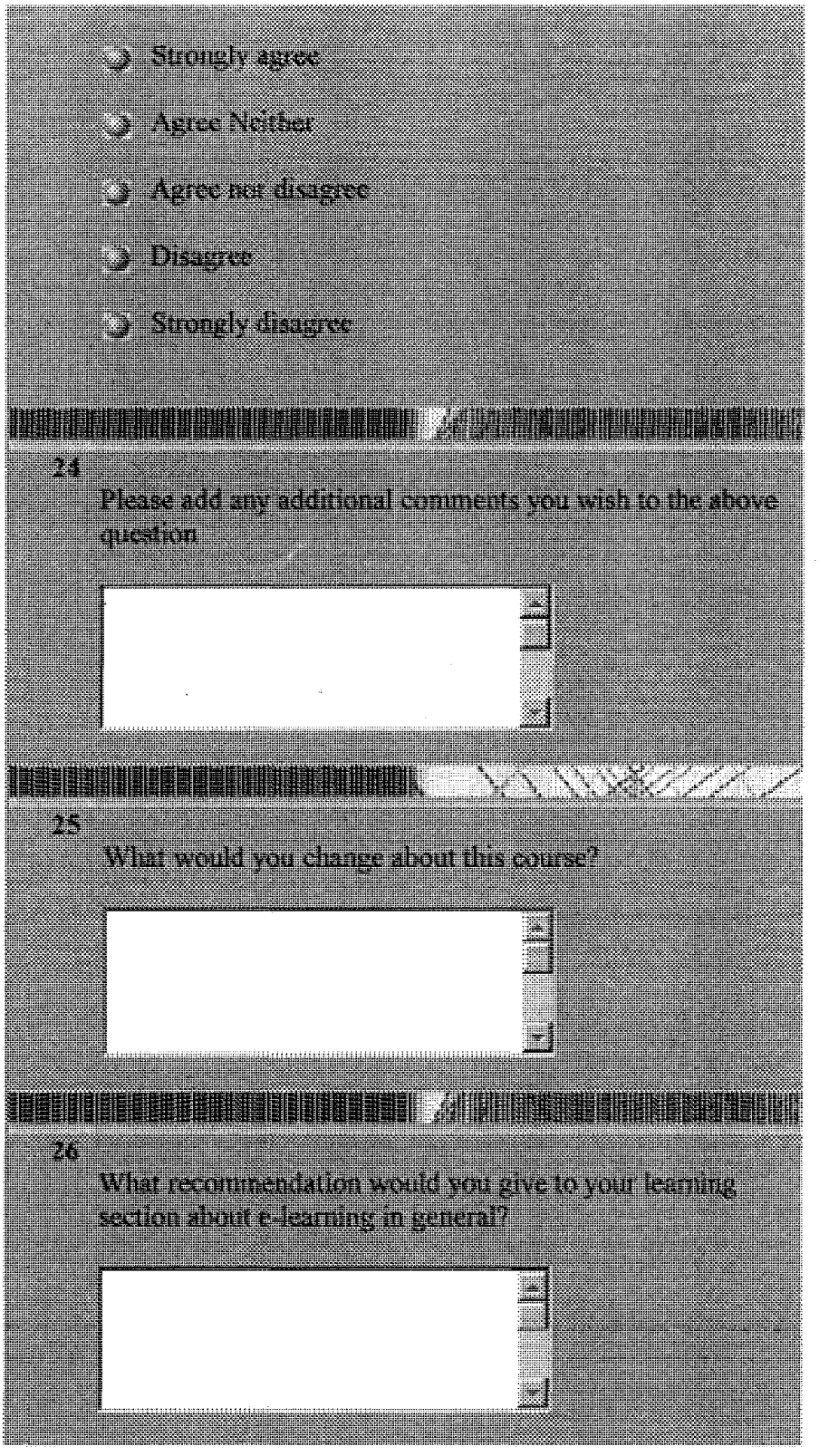
Strongly agree
Agree Neither
Agree nor disagree
Disagree
Strongly disagree
24
Please add any additional comments you wish to the above question
25
What would you change about this course?
26
What recommendation would you give to your learning section about e-learning in general?
SUBMIT