

The Inclusion of an Online Wellness Resource Center  
Within an Instructional Design Model for Distance Education

Stephanie B. Scheer

Dissertation submitted to the Faculty of the  
Virginia Polytechnic Institute and State University  
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy  
in  
Curriculum and Instruction  
(Instructional Technology)

Barbara B. Lockee, Chair  
Susan G. Magliaro  
David M. Moore  
Cathy G. Turrentine  
Thomas W. Wilkinson

November 29, 2001  
Blacksburg, VA

Keywords: Distance Education, Instructional Design, Wellness

Copyright 2001, Stephanie B. Scheer

The Inclusion of an Online Wellness Resource Center  
Within an Instructional Design Model for Distance Education

Stephanie B. Scheer

Abstract

The purpose of this study was (a) to determine which student support service resources should be included in an Online Wellness Resource Center (OWRC) available within an online course and (b) to create a paper-based schematic for such a prototype. To address these research questions, a needs assessment was conducted to determine whether learners perceived a need for access to wellness resources. Finding that they did express such an interest, the assessment then identified the specific wellness resources to include in the OWRC. A schematic was then created for OWRC development, incorporating the results of the needs assessment. The specific contribution of this study is its ability to provide a model that other institutions can follow to establish their own OWRC.

## Acknowledgements

My committee contributed greatly to my growth as a scholar and I thank each member. Dr. Lockee provided valuable guidance and support. I appreciate her dedication, commitment, and feedback. Dr. Magliaro provided thoughtful suggestions and wonderful advice. Dr. Moore was a very thorough editor and offered insightful ideas. Dr. Turrentine was an invaluable source of information and encouragement. Dr. Wilkinson graciously shared his time and experience and was an incredible mentor.

Steven Clark and Emet LaBoone assisted me immensely with the data collection phase of my research. Their input was very valuable and greatly appreciated.

My friends provided a support system that enabled me to see this project through to completion. I treasure their companionship and humor. I dearly thank them all.

My deepest thanks go to my family. My mother and father gave inspiring pep talks over the phone and always made me feel loved. Christina shared her beautiful spirit and brilliant wit; she is my hero. Keith sent care packages and called often to help keep me going. Sherri, Peter, Danny, Stephanie and David always found time to send their love and support.

Finally, I would like to thank Jim for believing in me and always being in my corner. His love is a core part of my strength.

## Table of Contents

Abstract	ii
Acknowledgements	iii
Table of Contents	iv
List of Tables	x
List of Figures	xi
List of Appendices	xiii
Chapter 1	2
Introduction	2
Purpose of Study	7
Research Questions	7
Significance of Study	8
Limitations of Study	8
Organization of Study	9
Literature Review	9
Defining Distance Education	10
Characteristics of Distance Learners	15
Characteristics of Historically “Typical” Distance Learners	16
Characteristics of the “New” Distance Learners	18
Characteristics for Success	19
Adult Learner and Distance Education	22
Transactional and Psychological Distance	27
Instructional Strategies	34

Instructional Strategy defined	34
Instructional strategy classification schemes	35
Instructional method	36
Instructional materials	37
Importance of Interaction	38
Types of Interaction	39
Interaction and Transactional and Psychological Distance	41
Pedagogical Universality of Interaction	48
Instructional Design Models	49
Instructional Design Defined	49
Instructional Design Models Defined	50
Instructional design model: Dick and Carey	51
Instructional design model: Smith and Ragan	53
Strengths and limitations	55
Instructional design model: Kemp, Morrison and Ross	56
Strengths and limitations	57
Considering context in the Instructional Design Process	58
Instructional Design & Distance Learning Environments	60
Addressing Distance Learner Needs Through Support	61
Instructional Design Model for Distance Education	62
Student Support Services and Wellness	63

Student Support s Services for Distance Learners	63
Wellness	66
Wellness defined	67
Wellness in Education	70
Wellness as a component of an instructional design model	71
Chapter 2	74
Methods	74
Purpose of Study	74
Research Questions	74
Overview	75
Stage One: Needs Assessment	77
Needs Assessment Phase I: Planning	79
Target Audience and Participants	80
Strategy	80
Analysis	88
Needs Assessment Phase II: Collecting Data	90
Sample Size	90
Scheduling	90
Needs Assessment Phase III: Data Analysis	91
Analysis	91
Prioritization	91
Needs Assessment Phase IV: Compiling a Report	91

Stage Two: Schematic	92
Chapter 3	94
Results	94
Data Results for the Needs Assessment	94
Questionnaire I	95
Questionnaire II	97
Qualitative comment themes	99
Final Section	100
Concluding qualitative comment themes	100
Wellness Resource List	101
Chapter 4	103
Stage Two: Online Wellness Resource Center Schematic	103
Overview	103
Schematic Organizational Guidelines	103
Analysis	108
Development	111
Evaluation	117
Chapter 5	119
Summary and Conclusion	119
Summary	119
Review of the Literature	119
Needs Assessment	121
Specific Contributions of Study	122

Significance of Study	123
Limitations of the Study	124
Conclusions and Implications for Future Research and Development	125
References	128
Appendices	
Appendix A	143
Appendix B	147
Appendix C	152
Appendix D	154
Appendix E	155
Appendix F	159
Appendix G	160
Appendix H	161
Appendix I	165
Appendix J	166
Appendix K	167
Appendix L	168
Appendix M	170
Appendix N	173
Appendix O	174
Appendix P	177
Appendix Q	182

Appendix R	185
Appendix S	187
Appendix T	189
Appendix U	191
Appendix V	192
Appendix W	195
Appendix X	196
Appendix Y	197
Appendix Z	198
Appendix AA	199
Appendix BB	200
Appendix CC	201
Appendix DD	202
Appendix EE	203
Appendix FF	204
Appendix GG	205
Appendix HH	206
Appendix II	208
Vita	221

## List of Tables

Table 1:	The Four Categories of Instructional Methods Including Examples of Each	37
Table 2:	Repman and Logan's (1996) Four Categories of Interactions with Appropriate Instructional Strategies	46
Table 3:	Wellness Satisfaction Percentages	96

## List of Figures

Figure 1:	A model of the general characteristics of the Instructional Design Process	51
Figure 2:	The Instructional Design Model of Dick and Carey (1996)	52
Figure 3:	The Instructional Design Model of Smith and Ragan (1999)	54
Figure 4:	The Instructional Design Model of Kemp, Morrison, and Ross (1996)	57
Figure 5:	The six dimensions of wellness according to Hettler (1980)	68
Figure 6:	The study's research design stages with a description of each	77
Figure 7:	The needs assessment process depicted by Kemp et al (1996)	79

## List of Appendices

Appendix A	Potential Wellness Resources	143
Appendix B	IRB Form	147
Appendix C	Needs Assessment Questionnaire 1-original	152
Appendix D	Needs Assessment Expert Review Panel Letter 1	154
Appendix E	Needs Assessment Questionnaire 1-revised	155
Appendix F:	Needs Assessment Pilot Test Group Letter 1	159
Appendix G	Needs Assessment Participant Group Letter 1	160
Appendix H	Needs Assessment Questionnaire 2	161
Appendix I	Needs Assessment Exert Review Panel Letter 2	165
Appendix J	Needs Assessment Pilot Group Letter 2	166
Appendix K:	Needs Assessment Participant Group Letter 2	167
Appendix L	Needs Assessment Timeline	168
Appendix M	Responses to Questionnaire One Individual Wellness Items	170
Appendix N	Distance Learner Characteristics	173
Appendix O	Responses to Questionnaire Two wellness resource items-brief	174
Appendix P	Responses to Questionnaire Two wellness resource items-detailed	177
Appendix Q	Open ended comments per wellness section	182
Appendix R	Respondent concluding comments	185
Appendix S	Final Prioritized Wellness Resource List	187
Appendix T	OWRC at L-GU Budget Outline	189
Appendix U	OWRC Minimum Requirements Budget	191

Appendix V	Wellness Resource Availability	192
Appendix W	OWRC Navigational Map	195
Appendix X	Directions for Accessing OWRC	196
Appendix Y	Explanation of OWRC	197
Appendix Z	Entry Page of OWRC-Blackboard	198
Appendix AA	Entry Page of OWRC-storyboard	199
Appendix BB	Occupational Wellness Storyboard	200
Appendix CC	Intellectual Wellness Storyboard	201
Appendix DD	Spiritual Wellness Storyboard	202
Appendix EE	Social Wellness Storyboard	203
Appendix FF	Physical Wellness Storyboard	204
Appendix GG	Emotional Wellness Storyboard	205
Appendix HH	Tentative OWRC Project Timeline	206
Appendix II	OWRC Project Design Document	207

The Inclusion of an Online Wellness Resource Center  
Within an Instructional Design Model for Distance Education

## Chapter 1

### Introduction

Born out of the development of communication technology during the Industrial Revolution (Keegan, 1993), distance education, as a field, has evolved considerably during the last two decades benefiting from the advances in electronic telecommunications (Holmberg, 1989). With more than seventy percent of colleges and universities offering distance delivered courses or programs, distance education has become a major form of learning and teaching within the United States (Connick, 1999).

As more opportunities for taking college courses and enrolling in university programs at a distance become available, ensuring the quality of such educational experiences will continue to increase in importance. This quality is determined by many factors centering around both the distance learner and the successful acquisition of the knowledge, skill, or attitude that he or she is to gain as a result of the instruction provided by the educational experience.

One factor determining quality concerns the student support services available to distance learners. Mills and Ross (1993) state that, to ensure that the quality of a distance learning environment is maintained, student support for learners must be provided. Student support services encompass an entire range of institutional programs and resources that support student learning and personal development (Kovel-Jarboe, 1997). These services are recognized as being essential to any institution of higher education (Beede & Burnett, 1999). All learners benefit from the availability of quality support services; due to

their geographic separation from the host institution, distance learners especially need access to these services (Chute, Thompson, & Handcock, 1999). Nunan (1992) states that “the totality of efforts to support students can be appraised in terms of the quality of the resulting education at a distance” (p. 3).

Accreditation committees also support the incorporation of support services within the context of a distance learning environment (Commission on Colleges of the Southern Association of Colleges and Schools [SACS], 1998). As part of their efforts to determine what constitutes quality in distance education programs, these committees are examining institutional efforts to provide student support services to distance learners (Krauth, 1999). Regional accrediting associations throughout the United States have agreed upon a set of guiding principles that must be adhered to by all institutions engaging in distance education. SACS requires that institutions engaging in distance education activities provide students at a distance with learning resources and services, including support services. These support services should include the “areas of admission, skills assessment, course registration, records maintenance, academic advising, counseling, etc.” (SACS, 1998, pp. 42-43).

The Council for the Assessment of Standards (CAS) has developed Standards and Guidelines for Educational Services for Distance Learners (CAS, 2001). These guidelines require that an institution engaging in distance education must provide appropriate student services for all enrolled students. The needs of these students should be carefully analyzed. “Programs and services to aid these students should be carefully designed to meet their

particular needs” (CAS, 2001, p. 16). Thus, a clear component of quality distance education is the quality of the student support services offered to the learners.

Unfortunately, student support services are an often underdeveloped, or entirely overlooked, component of a distance learning environment (Peters, 1998). These services are often overlooked because they are “taken for granted” (Hardy, 1999, p. 50) in traditional university environments. However, Krauth (1999) maintains that,

students enrolled in distance education programs need the same kinds of student services as on-campus students, but they expect these services to meet their needs for flexibility and convenience. Some special needs also arise based on their isolation and the fact that they depend heavily on technology for learning and accessing resources. (p. 13)

One element that is rarely addressed directly in the literature discussing student support services for distance learners concerns the “extracurricular needs” of distance learners. These needs relate to a variety of issues such as employment, job stability, work-load, family responsibilities, health, and social interests and obligations (Moore & Kearsly, 1996). Moore and Kearsely state that acknowledging these roles and extracurricular needs of distance learners is essential for assuring learners’ success in a distance learning environment. Gibson (1993) explains that learning within distance education is the result of many overlapping spheres of influence. Distance learners play a variety of roles

other than “student,” each with its own set of responsibilities and all of which directly impact learning at a distance. Sewart (1992) stresses the need for student support services to meet these various needs, stating that “the greater the input to the provision of student support services, the greater the success rate” (p. 9) of the learners.

Krauth (1999) stresses that this diverse combination of distance learner needs necessitates the development and delivery of specifically conceived approaches to student support services. She asserts that such approaches are critical to learners’ success. However, determining the specific combination of student support services and the means by which to make these services available to learners is challenging. One approach that attempts to meet this challenge of addressing the extra curricular needs of distance learners, is the inclusion of wellness resources within the instructional design of a course being delivered at a distance.

Mens sans in corpore sano (a sound mind in a sound body) has long been an underpinning philosophy of liberal education (Johnson & Wernig, 1986). This Latin phrase embodies the perspective of student affairs in higher education whose goal has been the development of the student as a whole person (American Council on Education, 1949; Leafgren & Elsenrath, 1986). This philosophy is consistent with the concept of wellness and has been adopted by student affairs personnel in higher education. “Interest and enthusiasm for campus recreation and wellness programs pervade the college scene today” (Leafgren & Elsenrath, 1986, p. 3). Hermon and Hazler (1999) state that “the

increasing creation of wellness programs in higher education are evidence of institutional efforts to improve the quality of life, psychological well-being and holistic development of students” (p. 339).

The university environment provides a setting in which attitudes and beliefs held by students upon entering can be challenged and modified. The introduction of a total wellness program has the potential to influence “positive lifestyle choices, making possible the achievement and maintenance of optimal wellness” (Johnson & Wernig, 1986). Viable wellness resources developed for such programs include, but are not limited to, such services as study skills advice, test-taking strategies, stress management, time management, nutritional information, weight management, and avenues for spiritual growth.

In the context of a distance-learning environment, the instructional design of a course provides a means by which learners may conveniently gain access to these wellness resources. Access to student support services has been shown to be a critical factor in learner success (Tinto, 1989). Krauth (1999) asserts that it is important to consider learner access when designing student support services “so as not to disenfranchise the very students intended to be served through distance education.... Distance learners want to be as connected to campus as possible and to feel that their needs are being considered” (p. 14). Such an approach has been recognized by Kemp, Morrison and Ross (1996), who have incorporated student services directly into their instructional design model.

However, while the inclusion of wellness resources within the instructional design of a course taught at a distance could potentially serve as a

means for bringing student support services to distance learners, no wellness component, or prototype, has been developed to house these resources.

Exploring this issue has, therefore, become necessary.

### Purpose of Study

The purpose of this study is (a) to determine which student support service resources should be included in an online wellness resource prototype and (b) to create a paper-based schematic, or blueprint, for this prototype. The literature has identified an instructional design gap, indicating that readily accessible student support services are a necessary but underdeveloped component of distance education. The literature also recognizes the concept of wellness as having potential value in association with student support services. This study will explore whether distance learners indicate a need for access to online wellness resources from within their online course.

Many delivery technologies are utilized in distance education. Due to the prevalence of online learning within distance education, an online course environment will provide the context for this study.

### Research Questions

This study will be guided by the following research questions:

1. Which student support services constitute a wellness component in online distance education as determined through a needs assessment of online distance learners?

2. How could such a wellness component be organized in the form of a schematic, or blueprint, that is developed in preparation for implementing such a component within an online learning environment?

### Significance of Study

The significance of this study is to expand the distance education literature by adding to the discussion of student support services for distance learners. This study identifies those wellness services and resources most requested by distance learners. Second, this study enhances the literature of the field of student affairs by addressing distance learners in the context of their student support services needs. Student affairs administrators have traditionally been concerned with the needs of on-campus learners. However, the ever-increasing number of enrolled distance learners has led administrators to recognize the need for expanding student support services beyond the proximal campus. Finally, this study will provide a detailed schematic for meeting the wellness needs of distance learners within an online learning environment through an online resource center accessible from their online course.

### Limitations of Study

As with all research, the present study has limitations. The scope of this study is limited to one institution. While three Master's level programs in three separate disciplines make up the sample for this study, no doctoral or undergraduate programs have been included in this study's data sample. It also does not specifically address the needs of distance learners with disabilities.

Despite the limitations of this study, this initial exploration is necessary. This research will benefit both distance educators and student affairs professionals in their efforts to identify those student support services that are useful to distance learners. This study will also serve as the foundation from which future studies may be launched to develop a prototype based on the schematic presented in this study. Further studies will also be able to address additional issues that were beyond the scope of this study, such as meeting the wellness needs of distance learners with disabilities.

### Organization of Study

This study is organized around five chapters. Chapter One contains an introduction and a review of the relevant literature. Chapter Two describes the methods employed in the study. Chapter Three reports the results of the study. Chapter Four contains a schematic, or blueprint, for an online wellness resource center based on the study results. The final chapter summarizes the conclusions and contributions of this study, the study's limitations and the implications of this study for future practice and research.

### Literature Review

To appreciate the significance of the inclusion of a wellness prototype within the instructional design of an online course, several related topics must be examined. These topics are (a) the evolving definition of distance education, (b) the characteristics of distance learners, (c) the impact of transactional and psychological distance on learners at a distance, (d) instructional strategies addressing transactional and psychological distance, (e) instructional design that

addresses the extracurricular needs of distance learners through support services, and (f) wellness and how it functions as a student support service component of an instructional design model. An examination of these topics traces how each one influences the other; how these elements collectively reveal a need, as well as a strategy for meeting the wellness needs of distance learners.

### Defining Distance Education

Defining distance education has proven to be a challenging task. Although this term has become widely accepted and utilized, defining its meaning and scope is inherently problematic (Garrison, 1989). The following sampling of definitions, drawn from experienced practitioners and theorists in the field, will elucidate the complexities of conceptualizing distance education.

The 1970s brought about a significant increase in the scholarly activities contributing to an understanding of distance education (Garrison, 1989). Therefore, the first definition considered here is that of Moore (1973). He states that

distance teaching may be defined as the family of instructional methods in which the teaching behaviors are executed apart from the learning behaviors, including those that in a contiguous situation would be performed in the learner's presence, so that communication between the teacher and the learners must be facilitated by print, electronic, mechanical or other devices.

(p. 664)

Moore's definition focuses on three main elements, the separation of teaching behaviors and learning behaviors, the use of technical media, and the possibility of two-way communication.

In contrast, while still focusing on the separation of teacher and learner, Holmberg's (1977) definition emphasizes the delivering organization as a defining characteristic of distance education. Holmberg defines distance education as covering

the various forms of study at all levels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises but which, nevertheless, benefit from the planning, guidance and teaching of a supporting organization. (p. 9)

As may be observed from the examination of these two definitions, capturing the essence of the field of distance education is not a simple task. Keegan (1986, 1988, 1996), after reviewing several definitions, including the definitions of Moore (1973) and Holmberg (1977), attempted to synthesize what he believed to be the fundamental elements of distance education. He proposed the following six elements to be the field's defining characteristics: (a) the separation of teacher and learner, which distinguishes it from face-to-face lecturing; (b) the influence of an educational organization, which distinguishes it from private study; (c) the use of technical media, usually print, to unite the teacher and learner and carry the educational content; (d) the provision of two-way communication so that the student may benefit from or even initiate

dialogue; (e) the possibility of occasional meetings for both didactic and socialization purposes; and (f) the participation in an industrialized form of education which, if accepted, contains the genus of radical separation of distance education from other forms (Keegan, 1996, p. 44).

After identifying these six main elements, Keegan (1996) conducted further analyses and case studies of existing institutions. This research led him to highlight the following considerations: (a) the separation of teacher and learner, (b) the role of the educational organization, (c) the place of the technological medium (media), (d) two-way communication, (e) the separation of the learner and the learning group, (f) industrialization, (g) privatization, and (h) eye-to-eye contact.

As a result of the examination of these considerations, in combination with his previously assimilated defining characteristics, or elements, of distance education imbibed from other definitions, Keegan developed the following formalized five-part definition of distance education: (a) the quasi-permanent separation of teacher and learner throughout the length of the learning process (this distinguishes it from conventional face-to-face education); (b) the influence of an educational organization both in the planning and preparation of learning materials and in the provision of student support services (this distinguishes it from private study and teach-yourself programs); (c) the use of technical media, print, audio, video, or computer to unite teacher and learner and carry the content of the course; (d) the provision of two-way communication so that the student may benefit from or even initiate dialogue (this distinguishes

it from other uses of technology in education); and (e) the quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals rather than in groups, with the possibility of occasional meetings, either face-to-face or by electronic means, for both didactic and socialization purposes.

Garrison and Shale (1987) reviewed Keegan's (1986) definition and concluded that "the basic difficulty with Keegan's definition is that in his enthusiasm to show that distance education is a unique and distinct field of practice he views it largely as a private, print based form of study" (p. 9). It should be noted that Garrison and Shale reviewed the Keegan definition that first appeared in the 2<sup>nd</sup> edition of Foundations of Distance Education published in 1986; however, this definition did not differ significantly from the above listed definition cited from the 3<sup>rd</sup> edition of Foundations of Distance Education published in 1996. Garrison and Shale argue that, as a result of the advances in distance education delivery technologies' capabilities, Keegan's definition is too narrow and does not encompass the breadth of the field. His definition does not "correspond to the existing reality as well as to the future possibilities" (p. 13) of distance education. Garrison and Shale suggest using only a minimum set of criteria to define distance education.

Therefore, while declining to offer a formalized definition of distance education, Garrison and Shale (1987) outline the following three essential criteria of distance education:

1. Distance education implies the majority of educational communication between (among) teacher and student(s) occurs non-contiguously.
2. Distance education must involve two-way communication between (among) teacher and student(s) for the purpose of facilitating and supporting the educational process.
3. Distance education uses technology to mediate the necessary two-way communication (p. 11).

As Garrison (1989) later explains, the boundaries of distance education are not and cannot be clearly and precisely defined and, therefore, some vagueness must be expected if we are not to restrict activities and processes that might reasonably fall under the rubric of distance education. (p. 5)

Thirteen years after Garrison and Shale (1987) presented their criteria for defining distance education, one revision that must be addressed regards the statement that the majority of educational communication between (among) teacher and student(s) occurs non-contiguously” (p. 11). The ever-evolving capabilities of distance education delivery technologies now allow for distance learning to take place contiguously, albeit at a distance. The term distance education should not denote a specific degree of separation. The “distance” between teacher and student may be as close as across campus or may stretch thousands of miles. Students are connected to each other by various delivery technologies such as voice, video, and computer (Connick, 1999).

Moore and Kearsley (1996) also offer some more recent insights into defining distance education. They state that

distance education is planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements. (p. 2)

In summary, all of the sampled definitions have made important contributions to defining the field of distance education. For the purpose of this study, the following amalgamation is proposed: Distance education is a dynamic field that is continuously evolving and, therefore, the boundaries cannot be precisely defined. Distance education is characterized by learning that occurs in a different place from teaching and includes both contiguous and non-contiguous two-way communication between learner/learner and learner/instructor. The distance between learner/learner and learner/instructor does not imply a particular degree of physical separation. This separation, regardless of distance, utilizes technology and necessitates the inclusion of context-specific instructional techniques, learner support, and organizational and administrative arrangements.

#### Characteristics of Distance Learners

Moore and Kearsley (1996) state that for anyone designing or teaching a course at a distance, awareness of the characteristics of distance learners is

essential. Focusing on these learner characteristics provides insights into the needs of these learners. These characteristics and needs influence the design, structure and operation of a distance learning system (Chute et al., 1999).

However, as with the process of defining distance education, characterizing a distance learner is becoming increasingly difficult. Garrison (1989) in his discussion concerning the challenging task of defining the field of distance education, asserts that the boundaries of distance education are blurring and therefore this term cannot be precisely defined. As the boundaries of what constitutes distance education blur, so do the distinct sets of characteristics that once defined the “typical” distance learner. A review of the literature provides characteristics of distance learners that roughly divide into three broad categories: (a) general characteristics describing the historically “typical” distance learner; (b) general characteristics of the “new” distance learner, which are still evolving as more learners fall under the umbrella of distance education; and (c) characteristics of distance learners which affect their success in a distance learning environment.

#### Characteristics of the Historically “Typical” Distance Learner

In the context of distance education, one historically thinks of adult learners (Garrison, 1989). Garrison and Shale (1990) state that adults are the primary audience that distance educators serve. Distance education literature confirms this view of students as adult learners. Distance learners typically are substantially older than the traditional college-age student, with a mean age between 30 and 35 years; a majority have taken some previous college courses

(Feasley, 1983). Wilkinson (1989) states that various data on distance learners indicate that “these students are older, more mature, are employed, have taken college classes before and are more self-motivated and directed” (p. 11). Biner, Bink, Huffman, and Dean (1995) describe distance learners as typically older, married, and having multiple roles and responsibilities. Gibson (1996), in her study exploring the nature of distance learners’ self-concept, found that most students were employed outside of the home at least 50% of the time and had dependents. These students balanced their studies with many other commitments, functioning in a variety of roles. Kember (1989) states that distance learners are normally employed full-time and have family commitments. Addressing the percentage of female versus male learners enrolled in distance education courses or programs, Faith (1988) summarizes that “based on distance education literature, conference attendance and informal observations...student enrollments in distance learning vary, but females constitute the majority in many programmes” (p. 7).

Enrollment in a distance program or course has primarily revolved around accessibility. The initial purpose of distance education was to provide instruction to learners who were unable to attend traditional classes (Moore & Kearsley, 1996). Learners enrolled in a distance education program because it was either the only or most viable option for advancing their education (Faith, 1988). Feasley (1983) found that distance learners had ongoing obligations and/or lived in geographically isolated areas, which prevented regular class attendance.

## Characteristics of the “New” Distance Learner

Even though a plethora of research indicates that distance learners are adult learners, this does not necessarily mean that they can easily be categorized into a single group. Holmberg (1989) believes that there is no evidence to indicate that these learners should be defined as a homogeneous entity. Holmberg further states that results of numerous studies reveal the only common factors concerning distance learner characteristics are that students are adult, ages 25-35, employed and/or have dependents. Sewart, Keegan, and Holmberg (1988) found that “the variation in the personal circumstances, domestic, social and work situation, as well as their individual objectives and motivation cannot be computed” (p. 165).

More recently, however, a picture of a “younger” adult is emerging as a part of the distance learner population. The National Education Association (NEA) (2000), reports that 38% of distance courses offered at NEA institutions have an equal number of students over and under 25 years of age.

The NEA (2000) also found that, in addition to the presence of a younger contingency of learners, distance learners were also geographically closer. Learners lived within one hour of their campus. This finding is not isolated. Wang and Newlin (1999) found that at the State University of New York’s Learning Network, about 80% of the “distance” learners were also taking on-campus courses. They also found that, at the University of Colorado at Denver, 500 out of 609 distance students registered in the Spring of 1998 were also registered for on-campus courses.

Geographic distance from educational institutions is no longer the only motivating factor for choosing a distance learning program or course (Faith, 1988). Instruction via distance is becoming a medium of choice for those students close enough geographically also to attend on-campus classes. The scheduling flexibility afforded in a distance education environment is generally very appealing (Taylor & Burnkrant, 1999). Holmberg (1989) states that distance learners base their choice of learning environment “primarily [on] the convenience, flexibility and adaptability of this mode of education to suit the individual student’s needs” (p. 24).

Another factor drawing students to distance education is the prestige that it has only recently acquired (Garrison, 1989; Holmberg, 1986). Faith (1988) explains,

developments in recent decades of high-quality study materials, access to external library services, increasing sophistication in tutorial methods and myriad uses of technology have significantly advanced both the quality, we believe, and the reputation, certainly, of distance learning. (p. 6)

### Characteristics for Success

In addition to a distance learner’s general demographic profile, the literature reveals that additional attributes play an important role in influencing a learner’s success in a distance learning environment. Many studies have been conducted to explain and predict a student’s success in a distance learning environment (Gibson, 1996). Gibson (1990) states that demographics play a very

small role, 10%, in terms of predicting a distance learner's successful completion of a course. Factors such as intrinsic motivation, work commitment, learner integration (with family, social, and work commitments), and benefits of instruction contribute strongly to learner success in a distance environment (Kember, 1989). However, Dille and Mezack (1991) found demographics, in addition to other personality factors, play a significant role in the overall success of a distance learner.

Dille and Mezack (1991) conducted a study at a southwestern community college "to relate selected aspects of retention and academic success in telecourses to locus of control, ... learning style, ... and selected demographic variables" (p. 24). Their goal was to identify predictors of academic success in a distance learning environment. They found that the more academically successful student had a higher internal locus of control and an abstract learning style. They also found demographic data "including grade point average, credit college hours completed, age and marital status" (p. 29) to be significant predictors of academic success.

In another study examining personality factors in relation to academic achievement, Biner et al. (1995) addressed the role of personality as a predictor of achievement in televised courses. The Biner et al. study was conducted at a large midwestern university. Participants were 449 undergraduate and graduate students enrolled in 18 courses during the 1993-1994 academic year. Class meetings for the courses were conducted via one-way video, two-way audio from one of two campus classrooms to 68 remote sites across the state. The

primary goal of the study was “to improve on the Dille and Mezack (1991) study by providing a more comprehensive exploratory study of distance learner personality and achievement” (p. 47).

To accomplish this goal, the Biner et al. (1995) study focused on the objectives of determining the extent to which personality traits of students enrolled in the televised courses differed from the traits of students attending campus-based courses and identifying the specific personality traits that were predictive of success in the televised course environment. “In line with these aims, the Sixteen Personality Factor Questionnaire (16PF), a widely used personality assessment instrument with well-documented psychometric properties (see Cattell, Eber, and Tatsouka, 1970),” was utilized (Biner et al., p. 47). Biner et al. found that several personality characteristics were related to learner success in a distance environment, stating,

taken together, the data of the present investigation indicate that the most successful telecourse students are those individuals who are resourceful and prefer to make their own decisions.... They are not overly concerned about following social rules or conventions and may actually disregard them altogether in some circumstances. Finally, these students are introverted, self-indulgent (probably with regard to the variety of activities they have chosen to engage in on a daily basis) and tend to meet their responsibilities in an efficient, expedient manner, i.e., without being overly compulsive about completing tasks. (p. 57)

In a later article discussing the findings of their study, Biner and Dean (1997) stated that although several previous investigations have implicated age, gender and occupation as predictors of success, “this was clearly not the case in our research” (p. 1). These demographic variables were not statistically significant in their relation to the students’ success in the telecourse learning environment. They further stated that due to the conflicting data found in the literature, “extreme caution should be exercised in embracing any results showing the impact of such demographic characteristics on student performance” (p. 3).

#### Adult Learner and Distance Education

In addition to describing the characteristics of distance learners, a brief discussion of adult education and learning theory is necessary so that one may effectively understand the correlation between the characteristics of a successful distance learner and those of a successful adult learner. Drawing from the extensive literature base of adult education provides further insights into the characteristics of a distance learner, the attributes that affect his or her success and the educational practices that can maximize this success (Hayes, 1990).

Knowles (1980a) states that

the most visible characteristic of the system of adult education is its expansiveness and flexibility.... Adult education has a history of adapting to new social needs and serving elements of the population previously unreached; it has spread to an ever-wider spectrum of institutions; it has developed new techniques and media; and it

recruits and trains large numbers of new personnel to deliver its services. (p. 39)

Adult education could readily be supplanted with distance education in this statement. Distance educators must acknowledge the relationship between their instructional methods and the needs of the adult learner (Garrison, 1989). Adult learning theory specialists, such as Knowles, provide a very helpful basis for the design and teaching of distance education courses (Moore & Kearsly, 1996). Burge (1988) agrees, stating that

the general learning processes and life conditions of adult distance learners are similar to those of adult classroom learners. The observations of such classroom based writers as Malcom Knowles should not be discounted as irrelevant on the grounds that distance learning contexts create different types of learners or that distance learners are denied any form of classroom type activity. (p. 6)

At the root of adult education is the definition of an adult. Knowles (1990) discusses at length the various aspects of this characterization, specifically the biological, legal, sociological, and psychological definitions of adulthood. He states that the most significant of these four aspects, in terms of how it impacts learning, concerns the psychological element, which indicates that one becomes an adult psychologically when one arrives at a self-concept of being responsible for one's own life. The sociological element, which describes an adult in terms of the roles and responsibilities that the adult has assumed, is also significant. Garrison (1989) states that "because of the primacy of these

roles and responsibilities in adult life, participation in adult education activities is secondary to this productive role” (pp. 104-105). Thus, the psychological and social elements of adulthood influence the way in which adults approach education.

In addition to extensively defining the adult, Knowles (1984) has also written extensively about andragogy, the art and science of helping adults learn. Andragogy provides a set of assumptions regarding adult learners that describe the factors that influence their learning. The adult learner is described as being self-directed, bringing a variety of experiences to the learning situation, being centered and seeking the immediate application of new knowledge and skills (Knowles, 1980b, 1984).

Andragogy is widely recognized in adult education and training (Brookfield, 1986); however, Jarvis (1984) writes that the theory of andragogy has “acquired the status of an established doctrine in adult education, but without being grounded in sufficient empirical research to justify its dominant position” (p. 32). The criticisms raised by Elias (1979), Day and Baskett (1982), Jarvis (1984), Houle (1972), Pratt (1984) and Hartree (1984) raise doubts as to the usefulness of the theory of andragogy. Brookfield (1986) states that at the core of the theory of andragogy is the assertion that adults perceive themselves as self-directing individuals. However, while self-directedness is “a desirable condition of human existence it is seldom found in abundance” (Brookfield, 1986, pp. 94-95). Brookfield advises that self-directedness should not be considered an innate characteristic of adulthood, “since many adults pursue

lives in which self-directed behaviors are noticeably absent.... However, to describe those adults who do exhibit such behaviors, we would use the word mature. Adult education would then become education devoted to the nurturing of...mature behaviors” (p. 93).

Constructive developmental theorists such as Kegan (1994) and Baxter Magolda (1999) have also discussed adult learners and adult learning theory. Kegan indicates that adult learners: (a) exercise critical thinking; (b) examine themselves and their culture in order to separate what they feel from what they should feel, what they value from what they should value, and what they want from what they should want; (c) are self directed (take initiative, set their own goals and take responsibility for their learning; (d) are not only shaped by their culture but, are co-creators of culture; (e) read actively with their own purposes in mind; (f) write to themselves and bring their instructors into their self-reflection; and (g) take charge of the concepts and theories of a course or discipline, focusing on its internal procedures for formulating and validating knowledge. Baxter Magolda stresses that arriving at adulthood is a developing process along a continuum. She conducted a 12-year longitudinal study, following 39 adults, beginning when they entered college. The study found that young adults moved from an external sense of self to an internal sense of self-definition and self-authorship and began to define their relationships internally instead of based on others’ wishes. The participants also moved from an absolute knowing, where external views are accepted as absolute truth, to

contextual knowing, which recognizes that knowledge in many areas is uncertain.

Other factors affecting adult learning include “the diversity of adult learning needs, attitudes, and abilities, as well as the varied demands of different educational settings” (Hayes, 1990, p. 32). All of these factors, reflective of the characteristics of both distance and adult learners, collectively influence the instructional strategies that will be the most effective in achieving learner success at a distance.

In summary, the integral nature of the distance education/adult education relationship helps to complete the overall picture of a distance learner. Regardless of their age, gender, and proximity to campus, the characteristics that distance learners must possess to ensure their success in a distance learning environment are synonymous with those of the successful adult learner. These characteristics include intrinsic motivation, work commitment, perceived benefit of instruction, resourcefulness, independence, efficiency, and expediency. Garrison (1989), in his explanation of the relevance of including a discussion of adult education in the context of distance learning, states that “this discussion of adult education... represents a re-affirmation and is consistent with education as a transaction between an interdependent teacher and student based upon respect and understanding of each participant’s needs and educational role” (p. 104).

Chute et al. (1999) emphasize that the characteristics of distance learners and their needs influence the design, structure and operation of a distance learning system. These characteristics guide the instructional strategies that are chosen, they influence the overall instructional design that is developed, and they will help to

determine which student support services are needed. Essential considerations affecting this process include the challenges of transactional and psychological distance that learners face within distance learning environments.

#### Transactional and Psychological Distance

Transactional and psychological distance considerably affect a distance learner's experience within the distance learning environment. Defining these two variables and examining how they impact the learner provides insight into and awareness of the challenges faced by distance learners. Awareness of these challenges will, in turn, help to identify the needs of distance learners concerning the issues of transactional and psychological distance. Recognizing these learner needs is important because the needs influence the instructional strategies that are chosen. They are considered in the overall instructional design that is developed and they help to determine which student support services are needed.

The formalized definition of transactional distance is attributed to Michael G. Moore. In what can be considered the seminal article pertaining to transactional distance, Moore (1993) formally defines transactional distance stating that

the concept of transaction is derived from Dewey (Dewey & Bentley, 1949). As explained by Boyd and Apps (1980:5) it “connotes the interplay among the environment, the individuals and the patterns of behaviors in a situation.” The transaction that we call distance education occurs between teachers and learners in an environment having the special characteristic of separation of teachers from learners. This separation leads to special patterns of

learner and teacher behaviors. It is the separation of learners and teachers that profoundly affects both teaching and learning. With separation there is a psychological and communications space to be crossed, a space of potential misunderstanding between the inputs of the instructor and those of the learner. It is this psychological and communications space that is the transactional distance. (p. 22)

Identifying this communications space is challenging. As Moore emphasizes, “psychological and communications spaces between any one learner and that person’s instructor are never exactly the same” (p. 22).

Transactional distance, however, exists in all educational relationships, distance and proximal. The distance is determined by the amount of dialogue that occurs between learner and instructor and the amount of structure that exists in the course (McIsaac & Gunawardena, 1996; Moore, 1990; Rumble, 1986). Moore (1993) defines the variable of dialogue as follows:

Dialogue is developed by teachers and learners in the course of the interactions that occur when one gives instruction and the others respond. The concepts of dialogue and interaction are very similar, and indeed are sometimes used synonymously. However, an important distinction can be made. The term “dialogue” is used to describe an interaction or series of interactions having positive qualities that other interactions might not have.... The direction of the dialogue in an educational relationship is towards the improved understanding of the student. (pp. 23-24)

Moore (1991, 1993) describes structure as the elements in the course design or instruction that are arranged so that the course or program can be delivered through various media. This structure determines the extent to which the course or program will successfully accommodate or be responsive to each learner's individual needs delivered through various communications media. Structure expresses the rigidity or flexibility of the course's or program's educational objectives. Moore (1991) indicates that a highly structured course may not be capable of providing a significant amount of dialogue for the varied needs of individual learners.

However, Moore (1993) emphasizes that both dialogue and structure are qualitative variables, with the amount of these variables functioning as a determinant of the media being used, the characteristics of the instructors and the learners, as well as the imposed institutional restraints.

Peters (1998) concurs, stating that “everything depends on the correct dosage of dialogue and structure” (pp. 28-29). Peters indicates that, in addition to dialogue and structure, a third variable is present within transactional distance, that of autonomy. He states that, while it may actually increase the amount of transactional distance, independent learning is highly valued in distance learning. Therefore, the extent to which learners may determine their own learning is a significant factor and must be considered as a variable influencing transactional distance.

Moore (1993) also addresses learner autonomy in his seminal article discussing transactional distance. He emphasizes that although students with

competence as autonomous learners appear to be at ease with less dialogue and mixed amounts of structure, “far more testing of this is required before it can be said to have been proved beyond a doubt” (p. 32). This indication may offer some explanation to the limited discussion of this third variable of autonomy in the literature.

Saba and Shearer (1994) elaborated on Moore’s concept of transactional distance, proposing a system dynamics model to examine the relationship between dialogue and structure. They concluded that as learner control and dialogue increase, transactional distance decreases. The quality of the instruction is directly related to the degree of dialogue between student and instructor (Saba & Shearer).

However, no single empirical formula exists to measure the appropriate “degree” of dialogue and structure to be incorporated into a course (Bischoff, Bisconer, Kooker, & Woods, 1996; Moore, 1991). Bischoff et al. initiated the development of a single instrument for measuring transactional distance and its components of structure and dialogue. They developed a questionnaire regarding elements of dialogue, structure, and transactional distance that was administered at a North American university to over 200 student volunteers enrolled in 13 public health and nursing graduate courses. The sampled courses consisted of either single-section traditional format courses or distance-format courses taught via two-way, interactive television. While they found that the level of transactional distance experienced by the learners in the study was a function of dialogue and course structure, they concluded that the study was limited by the

low generalizability to other students and course formats. Bischoff et al. recommended a qualitative assessment of transactional distance, “to more fully explicate the construct and thus, to discover the role of transactional distance in [the] learning process and content” (p. 17). Thus, Moore’s (1993) tenet that “It cannot be emphasized too strongly that transactional distance is a relative rather than an absolute variable” (p. 23) remains valid.

Transactional distance, although a recent theoretical construct in the field of distance education, has been substantially discussed in the literature (see McIsaac & Gunawardena, 1996). Peters (1998) emphasizes the importance of transactional distance stating that the

concept of transactional distance is a significant contribution to distance–education pedagogies. It characterizes the special structure of distance education exactly.... It describes not only the opportunities already existing in distance education for reducing mental and communicative distances, but also interprets their pedagogical relevance. (p. 29)

The concept of psychological distance, however, while displaying congruencies with transactional distance, has not received the same level of organized analysis. Wolcott (1996) urges that “it is time we shift our attention ... to how to keep from further distancing learners in a psychological and social sense” (p. 23). In her foundational article discussing psychological distance, Wolcott defines this construct stating that

psychological distance refers to the psychological effects of physical separation; that is, how real physical distance functions psychologically. On another level, psychological distance also refers to the mental dimension of separateness or dissimilarity between people. Often used synonymously with social distance, this aspect of psychological distance connotes the extent to which members of different groups or classes within a society stay apart from one another, or to the internal sense of separateness an individual feels with respect to a particular segment of society. (p. 23)

Wolcott (1996) further discusses the importance of rapport, explaining that physical separation can hinder rapport-building among learners and instructor. This absence of rapport can, in turn, lead to feelings of isolation for students. “Separated from the teacher and other students, and the locus of instruction, a student may feel isolated from the learning community” (p. 24).

As previously stated, an examination of these two constructs reveals certain congruencies between them. What Wolcott (1996) refers to as rapport, “creating a relationship between persons that is characterized by harmonious, mutually acceptable interaction ... achieving a certain level of comfort in a learning experience, exhibiting mutual respect” (pp. 23-24), resembles in meaning the variable which Moore (1993) defines as dialogue. Indeed, Moore’s discussion of the relationship between dialogue and the perceived sense of

transactional distance mirrors Wolcott's (1996) description of rapport in relation to a learner's feelings of psychological distance.

Parallels between these two constructs can also be made from an examination of the second transactional distance variable of structure. Moore (1993) discusses the element of program/course structure, indicating that how a course or program is structured greatly affects the transactional distance experienced by learners. Wolcott (1996) states that the psychological distance experienced by learners can be affected by the instructional strategies that are utilized to structure the learning environment.

The significance of the congruency found between these two constructs is related to the impact that both transactional and psychological distance have in terms of distance education courses and program design considerations. Moore (1993) asserts that successful distance education depends on the provision for appropriate opportunities for dialogue between the instructor and the learner as well as the appropriate structuring of learning materials. Wolcott (1996) states that "we have yet to fully realize the psychological and social consequences of learning at a distance, and what we as teachers, instructional designers, and program administrators can do to accommodate them" (p. 25). She emphasizes that the incorporation of methods and strategies to build rapport and enhance interaction between learners and instructor, thus decreasing learner isolation. Therefore, when designing instruction and support services to be delivered at a distance, in addition to considering the characteristics of distance learners, it is

essential to also consider the constructs of transactional and psychological distance and how these constructs challenge learners, affecting their experience.

### Instructional Strategies

Instructional strategies are an essential component of instruction. An examination of various instructional strategies is needed to determine which strategies are relevant to the needs of distance learners. Specifically, which strategies address transactional and psychological distance experienced by many distance learners. These instructional strategies must consider the need for dialogue, structure, and rapport development between learners, their instructors, and their learning environments. The components of these strategies will also be a consideration when developing student support services for these learners.

### Instructional Strategy Defined

Dick and Carey (1996) define an instructional strategy as “the general components of a set of instructional materials and the procedures that will be used with those materials to elicit particular learning outcomes from students” (p. 183). They list five major components that must be present if an instructional strategy is to be pedagogically effective. These components are: (a) pre-instructional activities, these activities motivate learners, inform them of what they will learn and ensure them of their prerequisite knowledge; (b) information presentation, this component explains the instructional content; (c) learner participation, this segment allows learners to practice what they are learning and receive instructor feedback; (d) testing, this component must include both formative and summative assessment opportunities; and (e) follow-

through, this element provides learners with information regarding the meaning behind their final assessment. Dick and Carey (1996) emphasize that the “basic components of an instructional strategy are the same regardless of whether you are designing instruction for an intellectual skill, verbal information, a motor skill, or an attitude. Thus, they can be used as an organizing structure for your design” (p. 191). This definition of instructional strategies allows for varying perspectives relative to the formation of instructional strategies and the subsequent usage of them.

### Instructional Strategy Classification Schemes

The Joyce and Weil (1996) approach to instructional strategies is based on a learning theoretic perspective, where strategies are founded upon the tenets of learning theories such as information processing or behaviorism. Eggen and Kauhak (2001) view instructional strategies from the standpoint of the content to be taught, where strategies selection is dependent upon the specific instructional content. Finally, Weston and Cranton (1986) address instructional strategies from a communication or mediated perspective. The mediated perspective focuses on the communication between instructor and learner. While all three approaches are valid and have merit, the Weston and Cranton emphasis on mediated communication appears readily applicable to a distance learning environment and, therefore, will be examined more thoroughly.

Weston and Cranton (1986) describe the term instructional strategy as referring to the teaching method and materials used in the teaching process. In

their comprehensive article discussing instructional strategies, they review an extensive list of instructional methods and materials (see Table 1).

Instructional method. Weston and Cranton (1986) define method as “the vehicle or technique for instructor-student communication” (p. 260). Weston and Cranton categorize method into four types: (a) instructor-centered, where the teacher is primarily responsible for conveying information to a group of students with communication remaining predominately one-way, instructor to learner; (b) interactive, characterized by communication among students as well as between the instructor and students, with active student participation and discussion; (c) individualized, which includes techniques based on the assumptions that students learn at different speeds and that regular feedback facilitates the learning process; and (d) experiential, where the student performs in a real or simulated setting. Weston and Cranton (1986) emphasize that “the selection of a method requires the consideration of several variables; educators cannot unilaterally state that one method is superior to another” (p. 264). Table 1 displays examples of each of the four categories of instructional methods.

Table 1

The Four Categories of Instructional Methods Including Examples of Each

Instructor-Centered	Interactive	Individualized	Experiential
1. Lecture	1. Class	1. Programmed	1. Clinical
2. Questioning	Discussion	Instruction	2. Laboratory
3. Demonstration	2. Discussion	2. Modularized	3. Role Playing
	Groups	Instruction	4. Simulation
	3. Peer Teaching	3. Computerized	5. Drill
	4. Group Projects	Instruction	

Instructional Materials. Essential to the discussion of instructional strategies is a closer examination of the materials needed during instruction. Defined by Weston and Cranton (1986) as the resources used to communicate information, materials have three central components: (a) a delivery system, the physical form of the materials and the hardware which are used to present stimuli to the learner; (b) a message, the content which is communicated; and (c) a condition of abstractness, the form the instructional message embodies ranging along a continuum from concrete, or real, to abstract, or symbolic.

The decision about which methods and materials to use in a particular instructional context is a complex process. Weston and Cranton (1986)

emphasize that “in different subject areas, at different levels of instruction, and with different instructors, any one method may or may not be effective, and even within one class students will respond in varying ways to the same teaching method” (p. 260). The process of choosing the most appropriate instructional strategies is a function of the instructional objectives, the characteristics of the learners, and the constraints of the instructional situation (Weston & Cranton, 1986).

### Importance of Interaction

Reviewing the discussion of instructional strategies presented by Weston and Cranton (1986) and Dick and Carey (1996) reveals that an inherent, core component of all strategies, to varying degrees, is the element of interaction. Garrison and Shale (1990) state that, fundamentally, education is an interaction among teacher, student, and subject content. The concept of interaction is intrinsic to the effectiveness of both distance education and traditional education. Its importance in education is practically a “given” (McIsaac & Gunawardena, 1996). Interactions “lie at the heart of any learning situation” (Repman & Logan, 1996, p. 35). Vrasidas and McIsaac (1999) concur, stating that interaction is “one of the most important components in any learning experience” (p. 23). Keegan (1996) believes that interaction is an important element for effective learning and exchanging information.

Interaction has been identified as one of the major constructs in distance education research (McIsaac & Gundawardena, 1996). However, defining interaction has proven to be a challenging task. Wagner (1994) asserts that one

of the difficulties surrounding discussions of interaction and interactivity is that these terms, while frequently used “have not been clearly or functionally defined” (p. 6). In her article detailing a functional definition of interaction, Wagner defines interactions as

reciprocal events that require at least two objects and two actions.

Interactions occur when these objects and events mutually influence one another. An instructional interaction takes place between a learner and the learner’s environment. Its purpose is to respond to the learner in a way intended to change his or her behavior toward an educational goal.... Instructional interactions have two purposes: to change learners and to move them toward an action state of goal attainment. (p. 8)

Wagner (1994, 1997) also discusses the nuances that differentiate interaction from interactivity. Interaction functions as an attribute of effective instruction, describing behaviors of individuals and groups that directly affect one another. Interactivity functions as an attribute of contemporary instructional delivery systems, focusing on the capabilities and characteristics of the technologies employed in distance learning environments.

### Types of Interaction

Moore (1989) also emphasizes this enigmatic quality veiling the perception of interaction, stating that the term interaction “carries so many meanings as to be almost useless unless specific sub-meanings can be identified and generally agreed upon” (p. 1). Moore is credited with identifying three of

these “sub-meanings” or main types of interaction (McIsaac & Gunwardena, 1996). Moore categorizes these types of interaction as (a) learner-content interaction, considered to be a defining characteristic of education, interacting with the content results in a change in the learner’s understanding and cognitive structures; (b) learner-instructor interaction, occurs between the learner and the expert who prepared the material, this interaction also provides motivation, feedback and dialogue between the learner and instructor; and (c) learner-learner interaction, or inter-learner interaction, the exchange of information and dialogue between students in both structured and non-structured settings.

Due to the content delivery considerations within the context of distance education, a fourth type of interaction has recently evolved. Kozma (1991) stresses the importance of considering the relationship between the learner and the medium. Hillman, Willis, and Gunwardena (1994) expand this concept, proposing the inclusion of a learner-interface interaction, as an additional interaction category or “sub-meaning.” They assert the legitimacy of this inclusion, stating that the

extent to which a learner is proficient with a specific medium correlates positively with the success the learner has in extracting the desired information.... Successful interaction in the mediated educational transaction is highly dependent upon how comfortable the learner feels in working with the delivery medium. (Hillman et al., 1994, p. 32)

Wiesenberg (1999) concurs, stating that learners new to distance learning environments often experience a great deal of initial frustration. “The learning curve is generally very steep and requires easily accessible technical help” (p. 158). In their study of a graduate online course at a major southwestern university to determine the factors that influence interaction, Vrasidas and McIsaac (1999) find that prior experience with computers and other various distance learning technologies influences learner participation. One student from the Vrasidas and McIsaac study emphasized that practice (with the tools) was necessary to succeed in this type of learning environment. This study is discussed in greater detail in the next section.

#### Interaction and Transactional and Psychological Distance

Examining instructional strategies reveals the importance of interaction as an intrinsic element to any instructional strategy in any learning environment, and especially in a distance learning environment. Recognizing the importance of this attribute is essential when determining which instructional strategies address the transactional and psychological distance experienced by many distance learners, namely which strategies consider the need for dialogue, structure, and rapport development.

Yet determining which instructional strategies or combination of strategies constitute the arrangement that best addresses transactional and psychological distance is neither clearly delineated nor agreed upon in the literature. Reviewing instructional strategies within the context of distance learning environments reveals that the four “sub-meanings” or categories of

interaction learner-content, learner-instructor, learner-learner, and learner-interface are always present, to a greater or lesser degree, in all course designs. However, researchers have not reached a unified decision as to which elements specifically constitute a “best practice” for addressing the issues of transactional and psychological distance.

Fulford and Zhang (1993) and Zhang and Fulford (1994) examined relationships between student perception of interaction and the actual amount of time allocated for interaction in an interactive television course. They studied 233 learners at a state college, enrolled in a 10-session interactive videoconferencing course. Participants were at five various locations, two of which were two-way audio, one-way video (n=98) and three of which were two-way audio, two-way video (n=135). Although 233 learners volunteered, not all participants were present at every class session. Thus, a total of 123 participants provided complete data for the study. After each class session participants completed a survey regarding the quality of instruction and their perceptions concerning the amount of interaction. “The survey used a six-point semantic-differential scale to compel a forced choice of negative or positive answers.... Redundant parallel questions were asked using several bi-polar adjectives to increase the reliability of the measure” (Fulford & Zhang, 1993, p. 12).

Fulford and Zhang (1993) and Zhang and Fulford (1994) found that learner perceptions of the amount of time spent interacting were not significantly correlated with the actual amount of learner interaction time. Zhang and Fulford emphasize that a pedagogical implication of their study

admonishes against indiscriminate use of interaction time. They found that the perceived level of interaction is highly correlated with attitude toward interaction and satisfaction. Zhang and Fulford state that

teachers need to be made aware that class atmosphere can be improved only on students' terms.... Developing a sensitivity to the students' perspective is more important than subscribing to an abstract theory of cooperative learning or conveniently packaged repertoire of activities. A broader understanding of "personal involvement" may be in order in distance learning. (p. 63)

Vrasidas and McIssac (1999) studied the nature of interaction in an online course from both the instructor and the learner perspectives. The study was "an attempt to gain a better understanding of the complexities of the online environment and factors influencing interaction" (p. 22). The study's setting was a graduate online course at a major southwestern university. Eight participants and one professor made up the initial sample. One participant dropped the course before its completion. The course was a hybrid of face-to-face and online meetings. Face-to-face meetings were observed and tape-recorded. All student work was collected, as were all the messages from the teacher's virtual mailbox. The frequency of the online learner-learner and learner-instructor interactions was monitored. Vrasidas and McIssac conducted semi-structured interviews with the instructor and all of the students during the last three weeks of the semester. After data collection was completed the material was organized and analyzed. Assertions regarding the data were

generated and then reviewed, which “involved a detailed examination of the data and the identification of evidence that supported or disconfirmed the initial assertions” (p. 27).

Vrasidas and McIssaac’s (1999) found that the structure of the course (activities and requirements), the class size (the small number of students enrolled in the class impeded the ability of learners to communicate effectively with one another in synchronous chats), feedback (students need to receive adequate and prompt instructor feedback), and prior experience (in an online environment) influenced interaction. These four factors align easily with the four categories of interaction: structure of course (learner-content), class size (learner-learner), feedback (learner-instructor), and prior experience in an online environment (learner-interface). Surprisingly, the results of their study contradict Moore’s (1991) tenet claiming that increased course structure decreases dialogue and increases transactional distance. Vrasidas and McIssaac (1999) found that a higher degree of structure in the form of required activities, online discussions, and peer paper editing provided for an increase in dialogue and interaction. They attribute this finding to the “development of more seamless conferencing systems in the last six years [which] has eliminated some of the earlier restrictions that technology placed on the delicate structure-dialogue balance” (p. 32). Vrasidas and McIssaac conclude by emphasizing that this study has only “scratched the surface” of the complex construct of interaction and its role in developing a meaningful distance learning environment.

In their conceptual article discussing possible barriers to interactions at a distance, Repman and Logan (1996) also discuss the critical role that interaction plays in distance learning environments. They cite the four categories of interactions and discuss these “subgroups” as well as offering instructional strategies aimed at overcoming the barriers to including a balance of these four types of interactions in courses delivered at a distance. Table 2 summarizes their findings.

Table 2

Repman and Logan's (1996) Four Categories of Interactions with Appropriate Instructional Strategies

Learner-content	Learner-instructor	Learner-learner	Learner-interface
1. Available instructional content via video, audio, CDROM, Internet 2. Case-study assignments 3. Full-text databases 4. Detailed course guides	1. Offer positive, confidence building activities during first class 2. Tell students about oneself 3. Allow for active learning and learner ownership	1. Develop sense of community by actively overcoming physical isolation through communication tools: e-mail, listservs, and MOO's	1. Emphasize the use of technology as a tool 2. Provide for practice opportunities and technical for learners with delivery interface

As Wagner (1997, 1998) continues this conversation, however, it evolves into a much more radical examination of interaction. She explains that the emphasis should be placed on the outcomes of an interaction versus the agents of interaction as indicated by the interaction categories: learner-learner, learner-content, and learner-instructor identified by Moore (1989). She does not, however, mention the fourth interaction category, learner-interface, identified by Hillman et al. (1994). Wagner (1997) asserts that Moore's (1991) schema does not include a specific description of an interaction's purpose, intent, or outcome. Wagner claims that the prior emphasis on the agents of an interaction has led to the present, more meaningful, discussion of outcomes enabled by the various agents or types of interactions. Wagner has proposed the following interaction categories based on outcomes: (a) interaction for participation, (b) interaction for communication, (c) interaction for feedback, (d) interaction for elaboration, (e) interaction for learner control/self-regulation, (f) interaction for motivation, (g) interaction for negotiation, (h) interaction for team-building, (i) interaction for discovery (j) interaction for exploration, (k) interaction for clarification, (l) interaction for closure. Wagner maintains that by

focusing on the outcomes of an interaction rather than the agents of an interaction permits interactions to serve more effectively as a means to the end of performance improvement.... By emphasizing the outcomes of an interaction, one can see the effect that an interaction has on the learners, whether the learner is in a distance learning endeavor or a traditional learning endeavor. (p. 21)

The value of considering interactions in terms of agents versus outcomes is an open debate. However, Wagner's (1997) assertion continues to emphasize the importance of interaction within both distance and traditional learning environments.

### Pedagogical Universality of Interaction

The perceived importance of interaction within all types of learning environments reflects the evolving, and often asserted, opinion among researchers that they do not need to develop new innovative teaching approaches in order to be successful as distance educators (Wagner & McCombs, 1995; Wiesenberg, 1999). Wiesenberg captures this idea in her article examining her own evolving "theory of practice" for online teaching, stating that

the result of this critical examination was the reaffirmation of a conceptual framework that has served me well in previous face-to-face teaching contexts and the clarification of instructional innovations that I have discovered in the process of moving on-line ... my recent on-line teaching experiences, my virtual learners' and colleagues' experiences ... has reminded me in several ways of the value of adult education principles and practices as the cornerstone of my theory-of-practice. It has reaffirmed assumptions that I hold about face-to-face instruction and equipped me to better deal with challenges presented in both learning environments. (p. 159)

Wagner and McCombs (1995) agree stating that "distance educators have opportunities to leverage the variable of distance to demonstrate the efficacy of

instructional practices designed to benefit ALL students, regardless of their physical location or technology mediation” (p. 32). Thus, determining which instructional strategies best address the challenges of transactional and psychological distance faced by distance learners results from actively considering during the instructional strategy selection process the context of the distance learning environment, the characteristics of the distance learner, and the importance of providing opportunities for learner interaction. However, including opportunities for learner interaction is not isolated to the process of choosing instructional strategies. Considering means to allow for interaction is essential throughout all areas of the instructional design process; including the process for incorporating student support services into the instructional design model.

### Instructional Design Models

The characteristics of distance learners, the challenges that they face, specifically transactional and psychological distance, as well as the instructional strategies that are chosen to address their instructional needs, are all essential elements of the comprehensive instructional design process. These elements are all also a part of the environment housed within the instructional design model of a distance course. This instructional design model serves as a “blueprint,” systematically arranging the instructional environment to facilitate learning.

### Instructional Design Defined

Shambaugh and Magliaro (1997) define instructional design as an

intellectual process which provides systematic features to assist designers in their construction of structured possibilities to address the needs of learners, and are responsive to the nature of the content to be taught, and the realities of the instructional setting.

(p. 291)

Dick and Carey (1996) also describe the instructional design process in terms of a system with all of the components working together to produce effective instruction. Smith and Ragan (1999) refer to instructional design as “the systematic process of translating principles of learning and instruction into plans for instructional materials and activities” (p. 2). Finally, Gagné, Briggs, and Wagner (1992) describe instructional design as the arrangement of the procedures and the resources utilized to promote learning. Therefore, based on these four definitions, instructional design can be viewed as the process of systematically arranging the learning environment to assure that successful learning is optimized.

### Instructional Design Models Defined

Instructional design models are iconic representations of the systematic processes of instructional design. They serve as a set of visual directions for progressing through the instructional design process. An instructional design model is a “written and visual depiction of a designer’s framework for addressing instructional issues and for constructing instructional design plans” (Shambaugh & Magliaro, 1997, p. 291). Models clearly represent the “complex forms, processes and functions of physical phenomena or ideas.... They

communicate their associated processes visually by illustrating the procedures that make it possible to produce instruction” (Gustafson & Branch, 1997, pp. 17-18). Gustafson and Branch summarize the relationship among the central elements of the instructional design process with the conceptual diagram depicted in Figure 1.

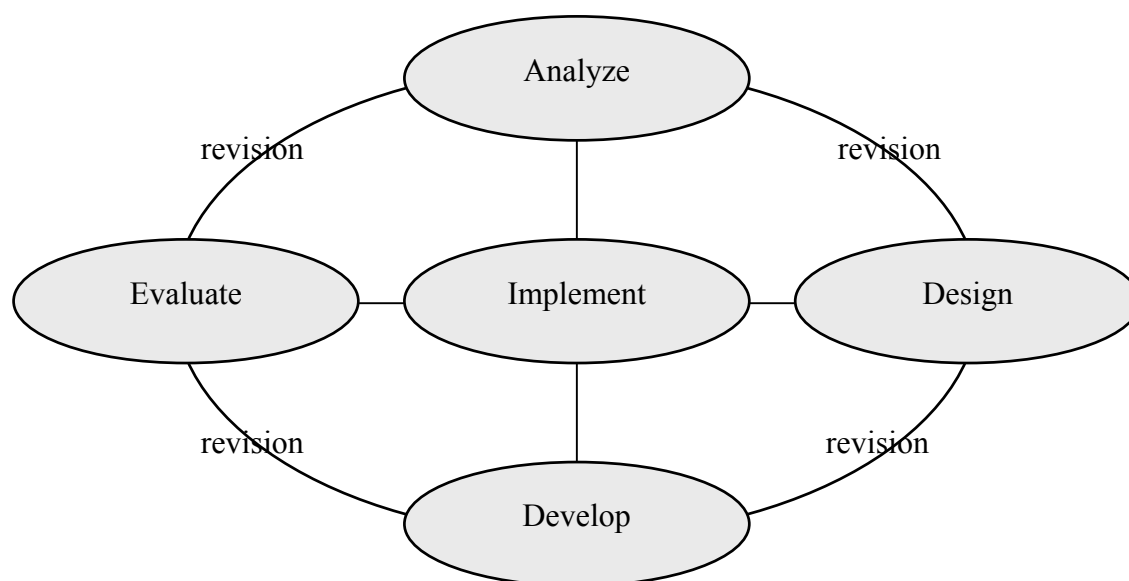


Figure 1. A Model depicting the general characteristics of the Instructional Design Process.

Instructional design model: Dick and Carey. The instructional design process can be approached as a linear process (Gustafson & Branch, 1997). The Dick and Carey (1996) model, represented in Figure 2, is a linear, procedural model with a series of steps. Instructional goals serve as the point of origin, the first step of the instructional design process. Dick and Carey describe the

process as resembling that of a cookbook recipe. They suggest that the novice instructional designer adhere to the sequencing of the model. However, they acknowledge that experienced designers in particular circumstances may find it necessary to modify the model. Dick and Carey (1996) emphasize that the actual process of developing instruction, selecting an instructional topic, developing instructional resources, and designating a set of learners, will change a designer's perspective on the design model. Referring to their cookbook metaphor, they state that when "you begin to use a recipe ... you use your own kitchen, your own ingredients, and your own personal touch will result in a unique product" (Dick & Carey, p. 5).

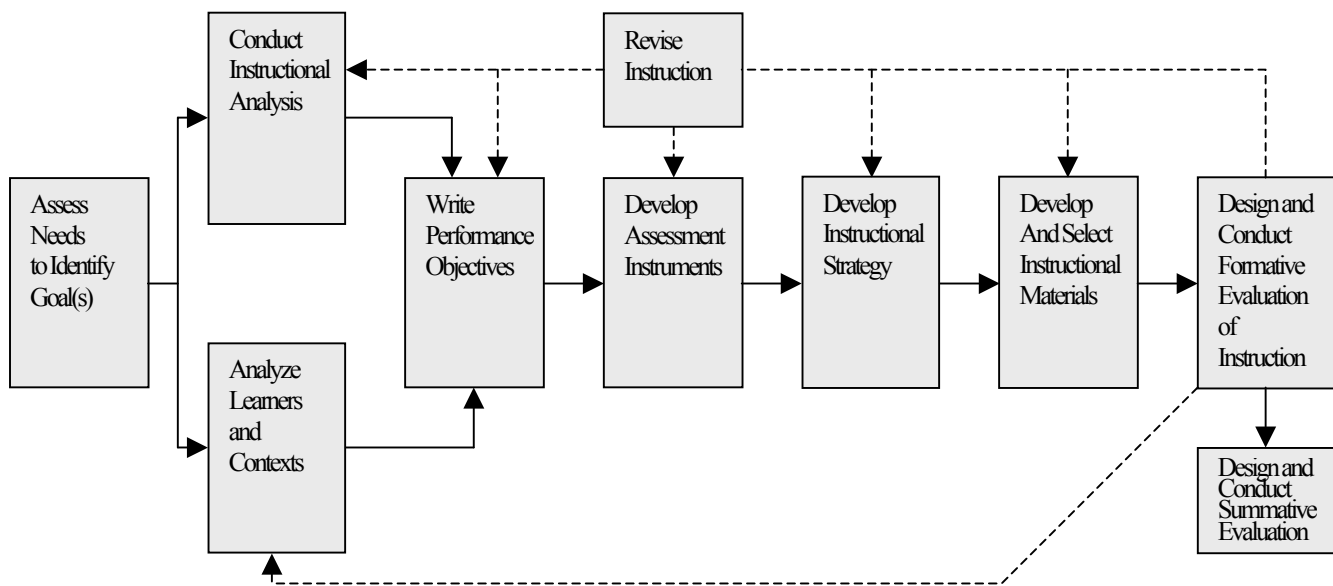


Figure 2. The Instructional Design Model of Dick and Carey (1996).

Instructional design model: Smith and Ragan. Smith and Ragan (1999)

have also developed a linear, procedural instructional design model depicted in Figure 3. Their instructional design model answers the questions “Where are we going?” “How will we get there?” and “How will we know that we’ve arrived?” (Smith & Ragan, 1999, p. 7). These questions are answered through a systematic three-stage process of analysis, strategy development, and evaluation. Within each major design phase a series of sequential design steps is to be followed. Smith and Ragan acknowledge that while, generally, designers will follow this prescribed sequence, particular circumstances may cause a designer to modify the sequence of design steps.

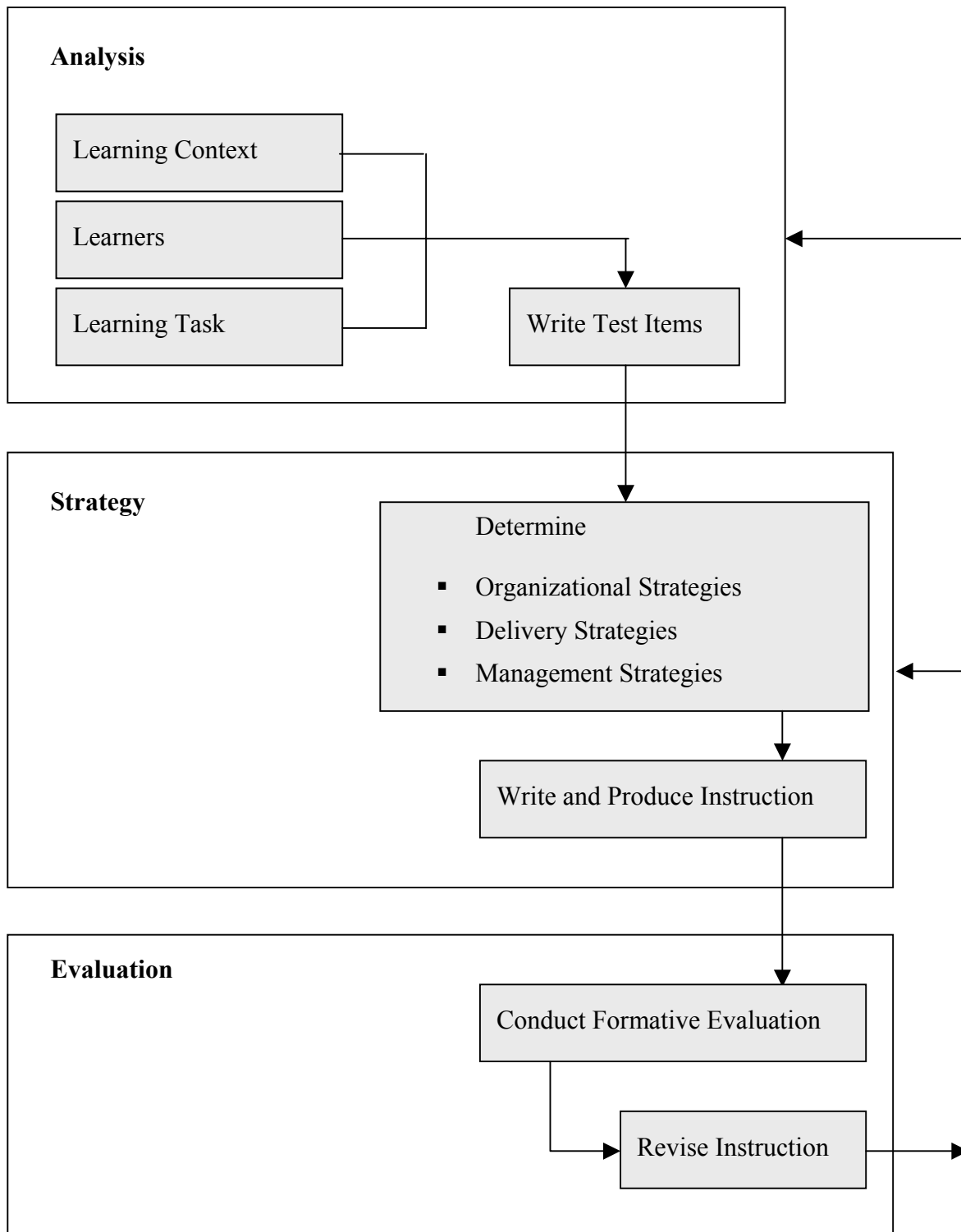


Figure 3. The Instructional Design Model of Smith and Ragan (1999).

Strengths and limitations. The Dick and Carey (1996) and Smith and Ragan (1999) models are examples of a systematic approach to the design and development of instruction. Advantages to utilizing this model approach include (a) encouraging learner advocacy; (b) supporting effective, efficient, and appealing instruction; (c) supporting coordination among designers, developers, and those who will implement the instruction; (d) facilitating diffusion, dissemination and adoption; (e) supporting development for alternate delivery systems; and (f) facilitating congruence among objectives, activities, and assessment (Smith & Ragan, 1999).

Both the Dick and Carey (1996) and the Smith and Ragan (1999) instructional design models are what Gustafson and Branch (1997) refer to as rectilinear processes, with rows and boxes connected by straight lines with one-way arrows and return lines. Gustafson and Branch assert that this type of instructional design model “often does not acknowledge the specific complexities associated with the instructional design process” (p. 20). Additionally, in their profile of the Dick and Carey model, Shambaugh and Magliaro (1997) state that although “revision is noted in the model, this strict closure to each phase may be difficult to achieve in practice” (p. 34).

These two instructional design models also do not include a formalized student support structure for learners within their designs. Hudspeth and Brey (1986) emphasize that there are many types of services that must be provided for learners, with some services emphasized for traditional teaching environments and others being critical for distance learners. While both

previous models refer to the analysis of the learners and the learning environment as steps in the instructional design model process, they do not depict the inclusion of support services for learners as one of these steps.

Instructional design model: Kemp, Morrison, and Ross. An instructional design model that is an instantiation of the inclusion of support services is the Kemp, Morrison, and Ross (1996) instructional design model, depicted in Figure 4. It differs from the preceding two instructional design models in its basic approach to the instructional design model process, and is, therefore, discussed separately.

The Kemp et al. (1996) model is depicted as a set of concurrent procedures. This model approaches instruction from the “perspective of the learner rather than from the perspective of the content, the traditional approach” (Kemp, et al., p. 3). It focuses on answering the following questions:

1. What level of readiness do individual students need for accomplishing the objectives?
2. What instructional strategies are most appropriate in terms of objectives and learner characteristics?
3. What media or other resources are most suitable?
4. What support is needed for successful learning?
5. How is achievement of the objectives determined?
6. What revisions are necessary if a tryout of the program does not match expectations? (Kemp, et al, p. 6)

Kemp, et al. (1996) indicate that instructional design is a continuous cycle. They emphasize that a designer may begin anywhere and proceed in any order.

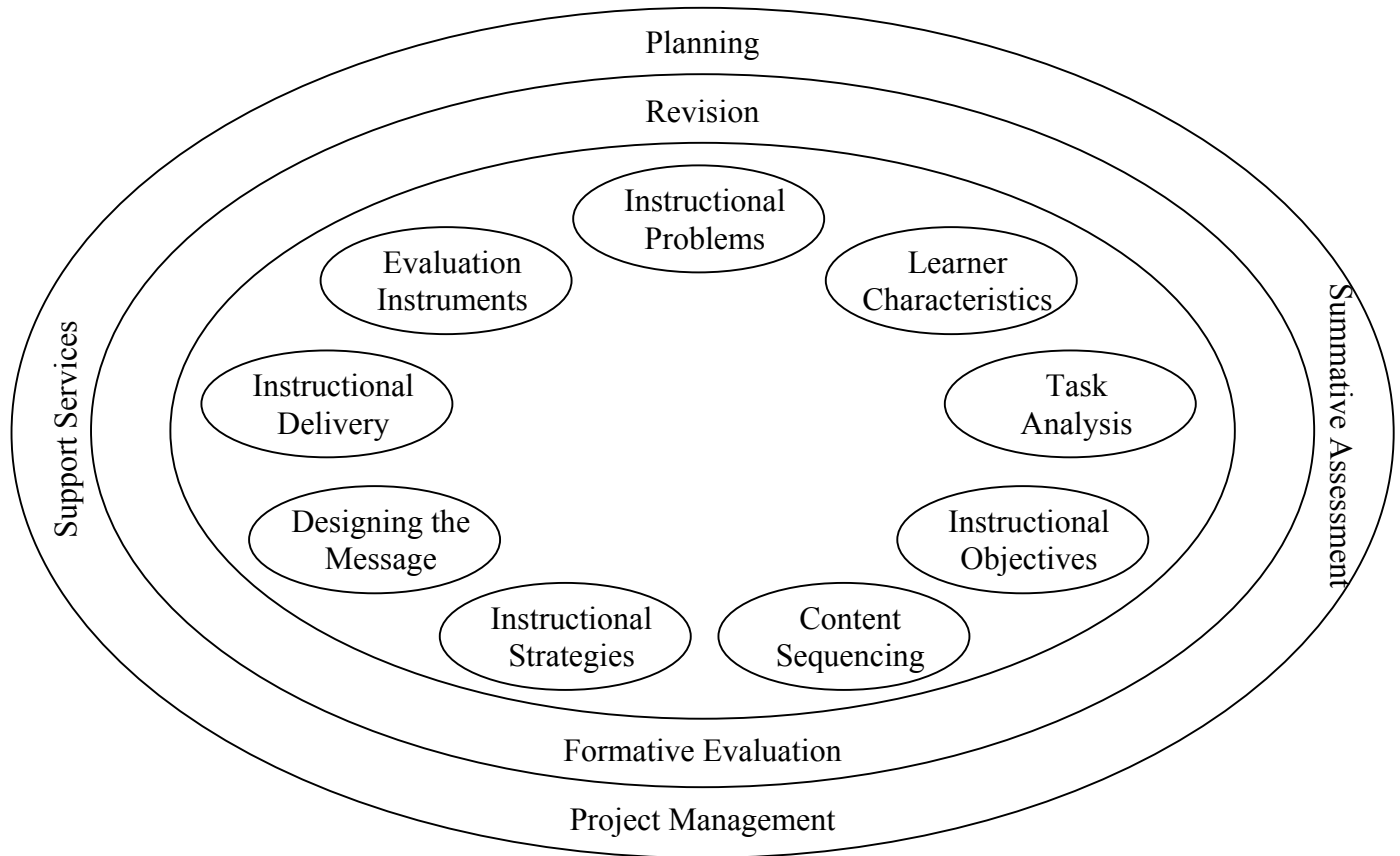


Figure 4. The Instructional Design Model of Kemp, Morrison, and Ross (1996).

Strengths and limitations. The Kemp et al. (1996) instructional design model is also an example of a systematic approach to the process of instructional design. This model portrays instructional design as a set of procedures that overlap or occur simultaneously. This type of portrayal tends to communicate the simultaneous interactions that characterize the manner in

which instructional development is commonly practiced (Rowland, 1992). This model also includes a formalized element of support services for learners.

However, this type of model does not specifically address the exact nature of the interdependence among the instructional design model elements. The designer is responsible for determining exactly how to adapt and utilize the model per instructional situation (Shambaugh & Magliaro, 1997). This decision-making process is much more clearly delineated in the linear, procedural models of Dick and Carey (1996) and Smith and Ragan (1999).

Considering Context in the Instructional Design Process. Although rarely addressed, each of the preceding models is embedded within a specific context particular to a specific instructional situation. Dick and Carey (1996) emphasize “it is important as designers for us to know the environment in which our learners will be using their skills” (p. 93). Shambaugh and Magliaro (1997) state that physical, emotional, and instructional-use factors make up the instructional context of a learning environment.

Tessmer and Richey (1997) describe context as “those situational elements that affect both the acquisition and application of newly acquired knowledge, skills, or attitudes” (p. 87). In their article discussing the role of context within the instructional design process, Tessmer and Richey list several assumptions concerning the role of context in relation to the instructional design process:

1. We are condemned to context, it is an influential and inevitable aspect of every learning experience.

2. Context is a medley of factors that inhibit or facilitate the learning process.
3. Multiple contexts may exist for a given learning experience.
4. Instructional designers are responsible for the successful application and acquisition of learning and, therefore, must respond to all contexts that facilitate the processes and resources for learning.
5. Instructional designers can accommodate context, but not control it; they may adjust contextual factors to facilitate instructional needs, or they may adjust the instruction to fit the context.
6. The impact of context varies with the nature of the learner, the content, and the intensity of the contextual elements.
7. Successful instructional designs must be, to a certain extent, situation-specific.
8. A systems approach to instructional design must address a broad range of contextual element that inevitably affect learning and performance (pp. 88-89).

Gustafson and Branch (1997) also emphasize the importance of considering context. In their taxonomy of instructional design models, they remind the reader that models of instructional design “vary widely in their purposes, amount of detail provided, degree of linearity in which they are applied, and quantity, quality and relevance of the accompanying operational

tools” (p. 26). They emphasize that the utility of an instructional model is directly related to the setting and the purpose for which it was intended.

Thus, when utilizing a systems approach to designing instruction within a distance learning environment, a designer must address the impact that the context of distance will have on this process. Exemplifying this consideration, Moore and Thompson (1997) explain that “in distance education contexts, major consideration is given to incorporating activities and strategies to help ‘bridge the gap’ between students and instructors and between groups of students” (p. 36).

### Instructional Design and Distance Learning Environments

Instructional design is critical to distance education (Smaldino, 1999). “Good distance education, like good face-to-face education, is based on careful planning and design of instruction” (Moore & Thompson, 1997, p. 36). Garrison (1989) emphasizes that distance learning environments gain a great deal from the design and delivery considerations afforded by applying a systematic approach to the instructional design of these environments. Applying such an approach to the design and development of instruction delivered via distance provides “a strategy for understanding the roles of the student located at a remote site and the instructor designing materials to be delivered at a distance over some technical medium” (Schreiber & Berge, 1998). This type of instructional design approach, which identifies all the environmental components and determines the contributions of each of these components to the

learning outcomes, ensures a more effective distance education effort (Moore & Kearsley, 1996).

This discussion of the literature clearly demonstrates that the incorporation of a systematic approach to the design of instruction at a distance is necessary, if not critical. However, what is less discernibly defined is which instructional design model is most effective in facilitating learning at a distance. A more productive way of approaching this issue is to focus not on specific instructional design models, but on the considerations that must be included within an instructional design model to assure its effectiveness within the context of a distance learning environment.

#### Addressing Distance Learner Needs Through Support

The importance of developing an understanding of distance learners, what defines them, the challenges they face, as well as how their instructional needs are met through chosen instructional strategies, has already been established as an essential instructional design consideration. However, this understanding also recognizes the necessity for addressing and supporting learner needs that extend beyond their instructional needs. Therefore, another important design consideration is the inclusion of student support services as part of the instructional design process (Hill, 1997).

Student support services include an entire range of institutional programs and resources that support student learning and personal development (Kovel-Jarboe, 1997). All learners benefit from the availability of quality support services; for distance learners these services are especially important (Chute, et

al., 1999). An essential aspect of any distance education project is the support services available to the students (Abate, 1999; Gibson & Gibson, 1997; Holmberg, 1989; Hudspeth & Brey, 1986; Kovel-Jarboe, 1997; Moore & Kearsley, 1996; Nunan, 1992; Peters, 1998; Robinson, 1981; Willis, 1993). Sewart (1992) also emphasizes the importance of the inclusion of these resources. He states that students will not easily achieve success in a distance learning environment if they are not provided with a student support system. “The success or failure of student support will be judged on a number of performance indicators. The most simple and obvious of these is probably the rate of success of the students” (p. 8).

#### Instructional Design Model for Distance Education

No definitive answer exists concerning the instructional design model best suited for utilization in all distance environments. However, the essentiality of planning and organization prior to instructional implementation of a distance course is clear and establishes an instructional “standard that is acceptable in all venues” (Smaldino, 1999, p. 13).

The organization of the Dick and Carey (1996) and Smith and Ragan (1999) models provide designers with a solid introduction to the concepts, applications, philosophy, and theory of the systematic design of instruction (Gustafson & Branch, 1997). However, examining the considerations that must be included in an instructional design model for use in a distance learning environment reinforces the necessity of including a formalized element of student support services. While the Dick and Carey (1996) and Smith and Ragan

(1999) models do not include this component, the Kemp et al. (1996) model does provide this element. In addition, the circular nature of the Kemp et al. model also lends itself extremely well to the distance learning context, where many instructional elements tend to overlap or occur simultaneously. Of greatest significance is the Kemp et al. model's recognition of the importance of directly addressing the student support services needs of distance learners within the context of the instructional design of the course. Although not the universally accepted choice for use in a distance learning environment, the Kemp et al. model affords serious consideration as an instructional design model to be applied in such a learning context.

#### Student Support Services and Wellness

Many instructional design models have been proposed for use in planning and implementing instruction (Gustafson & Branch, 1997). One such viable model, which warrants serious consideration for implementation in a distance learning environment, is the Kemp et al. (1996) model. The viability of the Kemp et al. model is due, in part, to its inclusion of a formalized, though underdeveloped, student support services component. However, a more thorough exploration of what constitutes sound student support services for distance learners is necessary so as to determine which specific support services should ultimately be included in such an instructional design model.

#### Student Support Services for Distance Learners

An almost infinite variation of student support systems exist in distance education (Sewart, 1992). However, student support services for distance

learners are often extremely underdeveloped (Peters, 1998). Chute et al. (1999) cite insufficient student support services as “a common mistake that can sabotage distance education implementation efforts” (p. 192). Hardy (1999) explains that

the institution may not always demonstrate an understanding of the needs of distance learning students. Many institutions fail to provide support that is critical to the success of the students in distance education settings.... This type of service is often overlooked because it is often taken for granted in the face-to-face, traditional, on-campus environment. (p. 50)

Krauth (1999) asserts that students enrolled in distance education programs need the same types of student support services that are available to on-campus students, but that distance learners expect the delivery of these support services to meet their needs for flexibility and convenience. She also notes that special needs also arise based on distance learners’ isolation and the fact that they depend heavily on technology for learning and accessing resources. Abate (1999) states, “think of all the offices on campus, all of the services provided for traditional students. All of these should be considered and made available in some fashion for students studying at a distance” (p. 2).

While no exhaustive, universal model exists for which student support services should be available to distance learners, the literature indicates that important components of student support services offered to distance learners include (a) orientation of students to distance learning, (b) access to library

resources, (c) academic advising, (d) course registration, (e) personal counseling, (f) technical support, (g) financial-aid, (h) mentoring, and (i) opportunities for social interaction (Beede & Burnett, 1999; Chute et al., 1999; Kovel-Jarboe, 1997; Nunan, 1992; Sewart, 1992).

However, one element that is rarely directly addressed in the literature concerning student support services for distance learners concerns the extracurricular needs of distance learners which relate to a variety of such issues as employment, job stability, work-load, family responsibilities, health, and social interests/obligations (Moore & Kearsly, 1996). Distance learners play a variety of roles other than “student,” each with its own set of responsibilities and all of which directly impact learning at a distance. An individual does not relinquish his or her many life roles when becoming a distance learner. These many roles may conflict with one another if they are not acknowledged and addressed. Robinson (1981) indicates that a distance learner may “have domestic problems of one kind or another, including those arising from the conflicting demands on his time of full-time employment, family commitments and study requirements” (p. 142). To help alleviate the heightened stress level incurred from balancing these many roles, Gibson and Gibson (1997) emphasize the importance of including time and stress management components as part of the student support services available to distance learners. Sewart (1992) stresses the need for student support services to meet these various needs, stating that “the greater the input to the provision of student support services, the greater the success rate” (p. 9) of the learners.

Krauth (1999) stresses that this diverse combination of distance learner needs necessitates the development and delivery of specifically conceived approaches to student support services. She asserts that such approaches are critical to learners' success. However, determining the specific combination of services and the means by which to make these services available is problematic. The concept of wellness may offer a means by which to address this aim.

### Wellness

Managing the many roles that a distance learner may have is often considered a form of time management; yet it is also a form of life management. Life management is another term for describing a person's overall attempt to maintain wellness (Connick, 1999). The concept of wellness can be described as the development or "enhancement of that quality of life resulting from a balanced lifestyle that promotes physical, emotional, social, occupational, intellectual and spiritual well-being" (Johnson & Wernig, 1986, p. 35). Thus, wellness is a balance of the body, mind, and spirit, recognizing the inter-relatedness of these elements, acknowledging that nothing is truly separate and independent (Edlin, Golanty, & Brown, 1996). In addition, wellness maintenance focuses on identifying the various areas, or roles, in life that are not in balance and then making choices to regain an overall sense of balance and, thus, a higher level of health and well-being (Edlin et al, 1996). Examining the elements that constitute wellness reveals that they correspond with many of the various student support service needs of distance learners.

Wellness defined. A series of lectures on “high-level wellness” delivered by Dr. Halbert L. Dunn in the 1950s marked the birth of the wellness movement in the United States. Dunn (1961) defined wellness as an integrated method of functioning that focuses on maximizing an individual’s potential within his or her environment (see Ardell, 1984).

John Travis, however, became the first physician to formally offer wellness education and services to the public (Ardell, 1984). Travis and Ryan (1981) define wellness as being: (a) a choice, a decision made to move toward optimal health; (b) a way of life, a lifestyle designed to achieve the highest potential for well-being; (c) a process, a development of awareness that there is no end point, but that health and happiness are possible in each moment; (d) an efficient channeling of energy received from the environment, internally transformed, and then externally sent on to affect the outside world; and (e) an integration of the body, mind and spirit, an overall and deep appreciation for one’s self.

Hettler (1980) has given wellness an operational definition by identifying the six dimensions of this construct, as depicted in Figure 5.

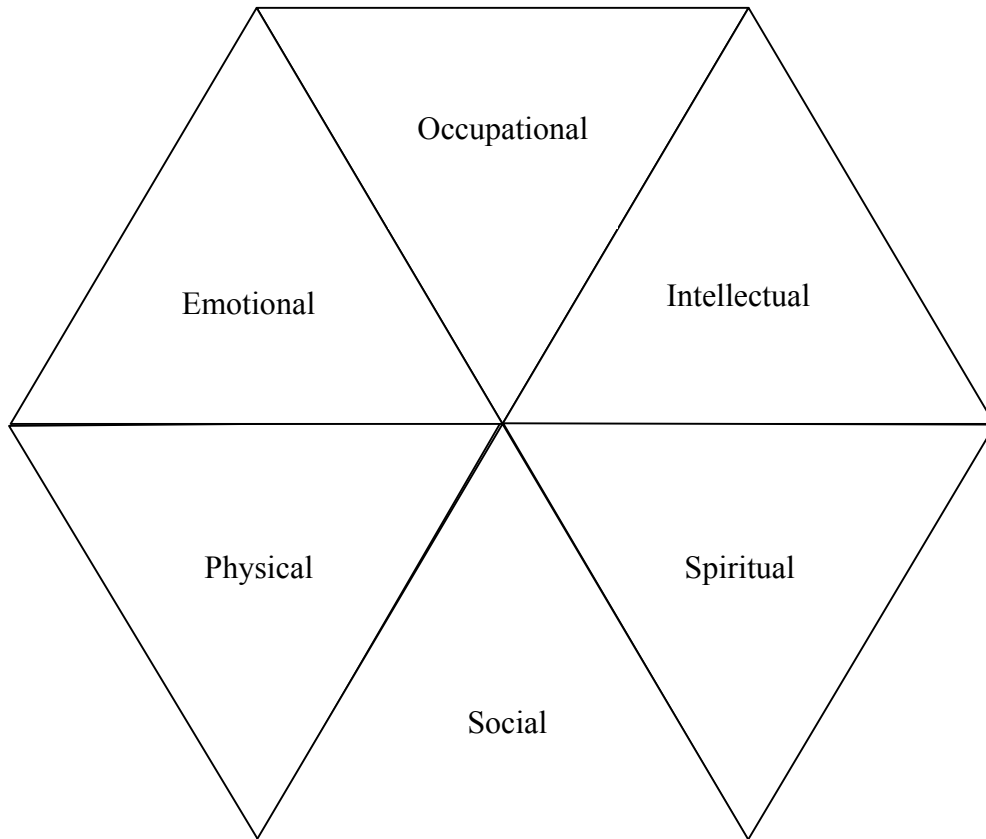


Figure 5. The six dimensions of wellness according to Hettler (1980).

Leafgren and Elsenrath (1986) explain Hettler's six components:

1. Emotional wellness emphasizes an awareness and acceptance of one's feelings. Emotional wellness includes the degree to which one feels positive about oneself and life. It includes the capacity to manage one's feelings and related behaviors including the ability to realistically assess one's limitations and ability to cope effectively with stress. The emotionally well person maintains satisfying relationships with others.

2. Intellectual wellness encourages creative, stimulating mental activities. An intellectually well person uses the resources available to expand his or her knowledge in improved skills along with expanding his or her potential for sharing with others. An intellectually well person uses the intellectual and cultural activities in the classroom and beyond the classroom as well as human and learning resources available within the university community and the larger community.
3. Physical wellness encourages regular physical activity to achieve cardiovascular fitness. It also emphasizes the importance of balanced nutrition and discourages the use of tobacco, drugs and excessive alcohol consumption. It encourages consumption and activities that contribute to overall wellness.
4. Social wellness results in contributions to one's human and physical environment for the common welfare of one's community. It emphasizes the interdependence with others and nature, and includes the pursuit of harmony in one's family life.
5. Occupational wellness is the preparation for work in which one will gain personal satisfaction and find enrichment in one's life through work. It is also related to one's attitude about work.
6. Spiritual wellness involves seeking meaning and purpose in human existence. It includes the development of a deep appreciation for the depth and expanse of life.

Thus, wellness is a continuous, active process, in which an individual is aware of the different areas in life, identifying the areas that need improvement and then making choices that help one attain a higher level of overall health and well-being (National Wellness Institute, 1998). Ultimately the goal of wellness is to maximize an individual's well-being and to establish habits that promote well-being throughout an individual's life (Leafgren & Elsenrath, 1986).

Wellness in education. Mens sans in corpore sano (a sound mind in a sound body) has long been a byword of liberal education (Johnson & Wernig, 1986). This Latin phrase embodies the perspective of student affairs in higher education whose goal has been the development of the student as a whole person (American Council on Education, 1949; Leafgren & Elsenrath, 1986). This philosophy, in turn, is consistent with the concept of wellness and has been adopted by student affairs personnel in higher education. "Interest and enthusiasm for campus recreation and wellness programs pervade the college scene today" (Leafgren & Elsenrath, p. 3). University wellness programs have typically integrated and extended standard student services to support individual efforts and choices promoting health, well-being, and a balanced life style (Hybertson, Hulme, Smith & Holton, 1992). Archer, Probert, and Gage (1986) investigated wellness in college students, concluding that Hettler's (1980) model can be applied to designing university wellness programs. Such programs have focused on motivating the individual to take responsibility for personal behaviors and attitudes to achieve healthier, more fulfilled lives (Montgomery & Dalton, 1986). "The increasing creation of wellness programs in higher

education are evidence of institutional efforts to improve the quality of life, psychological well-being and holistic development of students” (Hermon & Hazler, 1999, p.339).

The university environment provides a setting in which formerly held attitudes and beliefs can be challenged and modified. The introduction of a total wellness program has the potential to influence “positive lifestyle choices, making possible the achievement and maintenance of optimal wellness” (Johnson & Wernig, 1986, p.34). Study skills advice, test taking strategies, stress management, time management, nutritional information, weight management, physical activity, psychological well-being, and avenues for spiritual growth, are all elements that are viable wellness resources. Appendix A expands this concept, specifically in regard to distance learners.

Wellness as a component of an instructional design model. Including a wellness component within an instructional design model to be implemented in a distance learning environment is important. This importance centers around this component’s ability to provide learner access to support resources. Access to student support services has been shown to be a critical factor in learner success (Tinto, 1989). In the context of a distance learning environment, the instructional design of a course, as indicated by Kemp et al. (1996), provides a means by which learners may conveniently gain access to these student support services. Hardy and Boaz (1997) support such efforts, stating that “distance students often feel a loss of connection with the main campus, efforts should be made to provide a more inclusive atmosphere in the distance environment” (p.

45). Krauth (1999) asserts that it is important to consider learner access when designing student support services “so as not to disenfranchise the very students intended to be served through distance education.... Distance learners want to be as connected to campus as possible and to feel that their needs are being considered” (p. 14). Simply stated, incorporating student support services directly into the instructional design of a course facilitates learner access to these resources.

In summary, the legitimacy of the inclusion of a wellness component within an instructional design model is based on its ability to support holistically the diverse wellness needs of distance learners. Edlin et al. (1996) emphasize this aspect stating that

because wellness is dynamic and continuous, no dimension of wellness functions in isolation. When you have a high level of wellness ... all dimensions are integrated and functioning together. The person’s environment (including work, school, family, community), and his or her physical, emotional, intellectual, occupational, spiritual and social dimensions of wellness are in tune with one another to produce harmony.... No part of the mind, body or environment is truly separate and independent. (pp. 9-10)

The inclusion of a wellness component within an instructional design model of a courses being taught at a distance would provide easily accessible student support services to distance learners; services which have been deemed a necessary component of a distance learning environment by accreditation

committees (SACS, 1998 and CAS, 2001). These resources would provide abundant opportunities for meeting the extracurricular needs of distance learners. This access would also contribute to the development of the whole student, would address the challenges of transactional and psychological distance by providing opportunities for learners to interact with one another as well as with many types of content, in the form of the wellness resources, and has the potential to affect positively a distance learner's overall learning experience.

## CHAPTER 2

### Methods

#### Purpose of Study

The purpose of this study is (a) to determine which student support service resources should be included in an online wellness resource prototype and (b) to create a paper based schematic, or blueprint, for this prototype. The literature has identified an instructional design gap, indicating that readily accessible student support services are a necessary but underdeveloped component of distance education. The literature also recognizes the concept of wellness as having potential value in association with student support services. This study will explore whether distance learners indicate a need for access to online wellness resources from within their online course.

Many delivery technologies are utilized in distance education. Due to the prevalence of online learning within distance education, an online course environment provides the context for this study.

#### Research Questions

This study will be guided by the following research questions:

1. Which student support services constitute a wellness component in online distance education as determined through a needs assessment of online distance learners?
2. How could such a wellness component be organized in the form of a schematic, or blueprint, that is developed in preparation for implementing such a component within an online learning environment?

## Overview

To successfully address the research questions of this exploratory study, a two-stage design has been developed using both quantitative and qualitative methods. The mixed methods approach to data analysis provided richer detail and expanded the scope and breadth of the study (Greene, Caracelli, & Graham, 1989; Miles & Huberman, 1994; Rossman & Wilson, 1991).

This study was conducted at a large, predominately Caucasian, Research I, Land-grant University in the Southeast. To preserve the context in which this study was conducted, while simultaneously protecting the confidentiality of the study participants, the name of this university has been given the pseudonym, “Land-Grant University,” or “L-GU.”

Stage One of this study consisted of a needs assessment to produce a prioritized list of wellness resources to be used as the content for an Online Wellness Resource Center or OWRC, which would be incorporated into the instructional design of an online course. The purpose of this study’s Stage Two was to create a schematic, or blueprint, of this Online Wellness Resource Center prototype, using the prioritized wellness list provided by Stage One’s needs assessment as the basis for the schematic content.

The OWRC schematic presented detailed information outlining all aspects of the OWRC development process. This process included reviewing the compiled list of wellness resources, identifying and listing the existing wellness resources that are presently available through L-GU’s administrative units as well as independent online wellness resources (which have not been developed

at L-GU). Any additional wellness resources that needed to be developed in order to complete the OWRC were also identified.

This schematic was specifically intended for L-GU, which plans to use the data and schematic from this study to develop an OWRC prototype. However, general directions were included to give the reader sufficient information to conduct a needs assessment and to develop an OWRC schematic, independent of the L-GU content or context. Figure 6 summarized this study's two-stage research design.

This chapter describes the methodology for the study's two-stage research design. Chapter Three reports the results from Stage One, the needs assessment, and Chapter Four contains Stage Two, the OWRC schematic.

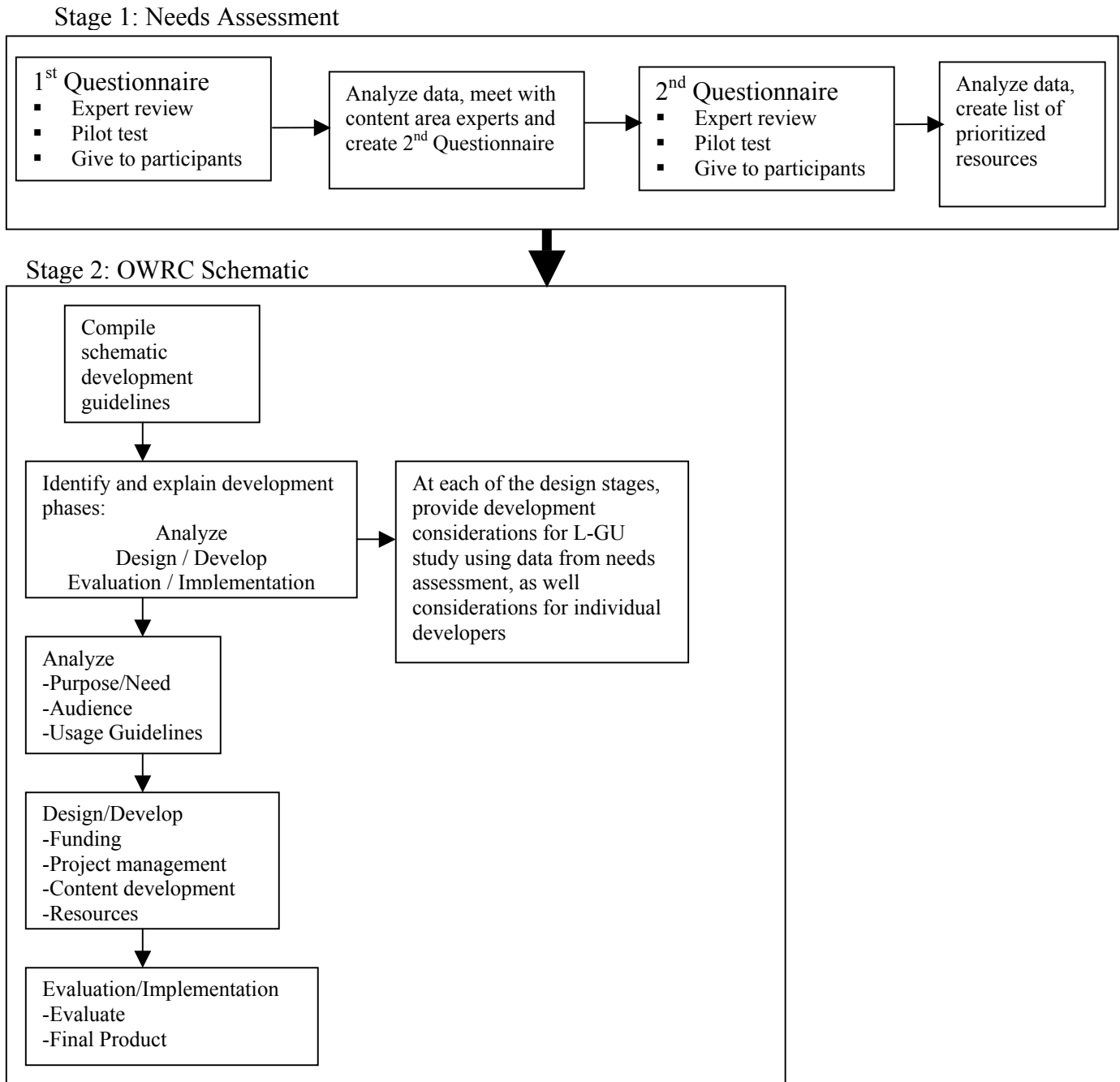


Figure 6. The study's research design stages with a description of each.

### Stage One: Needs Assessment

Needs are defined as an identified gap between what is expected or needed and the actual conditions (Kemp et al., 1996). A needs assessment is a

tool for identifying a problem and then selecting an appropriate intervention (Kaufman & English 1979; Kaufman, Rojas, & Mayer, 1993). Dick and Carey (1996) state that “a needs assessment is a study conducted to determine the exact nature of an organizational problem and how it can be resolved” (p. 18). For the purpose of this study, the needs assessment identified the wellness needs of distance learners. This information was utilized in selecting the appropriate student support services to be included in the wellness resource schematic that was developed at the conclusion of this assessment, during Stage Two of this study.

Kemp et al. (1996) describe four phases for conducting a needs assessment: planning, collecting data, analyzing data and preparing the final report. Figure 7 identifies the various steps within each of the four needs assessment phases.

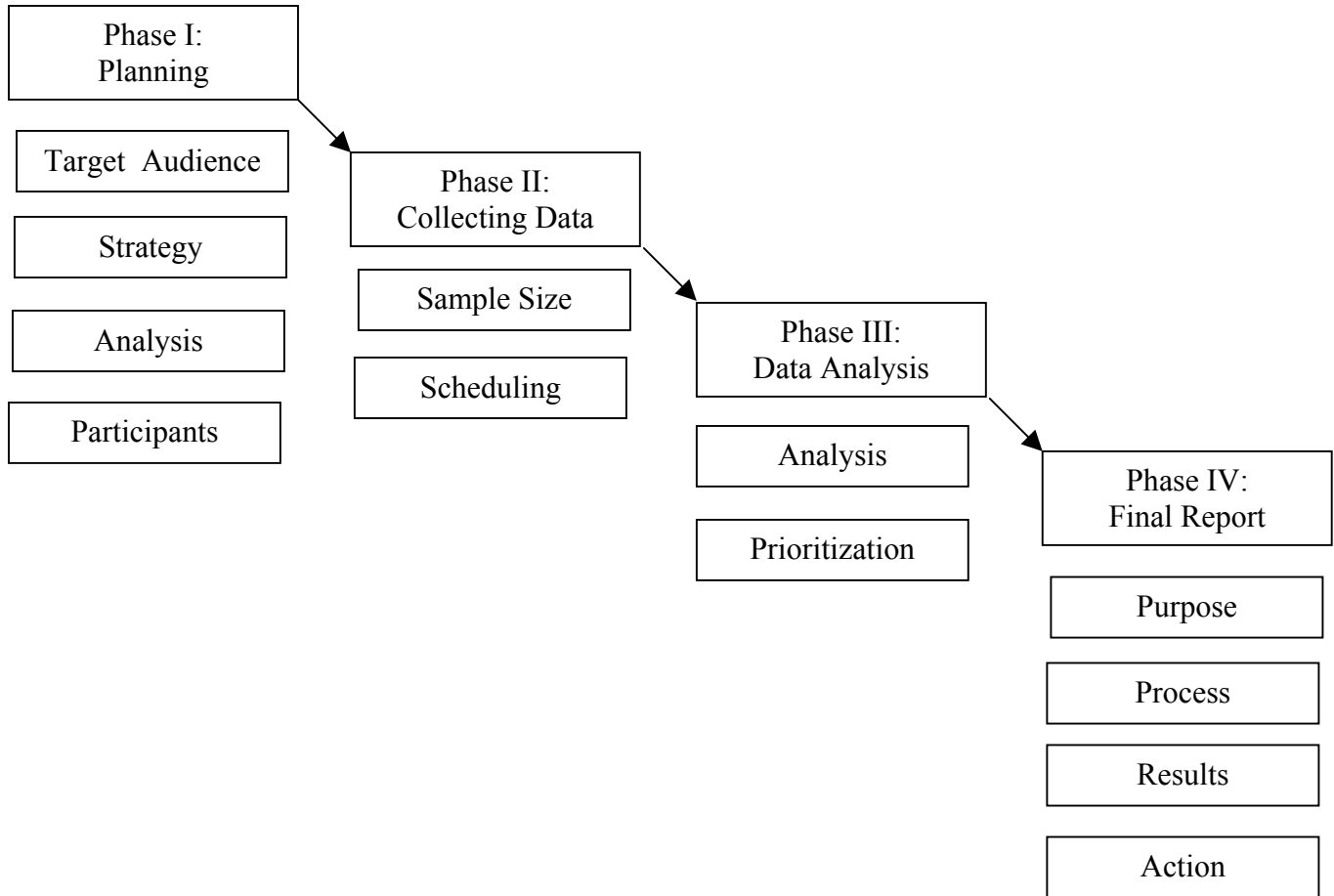


Figure 7. The needs assessment process depicted by Kemp et al. (1996).

Needs Assessment Phase I: Planning

The planning phase of a needs assessment consists of determining the target audience of the assessment, choosing the data collection techniques and analysis methodologies that will be utilized during the assessment, and designating the participants who will serve as the sample for the assessment (Kemp et al., 1996). For the sake of document clarity, the Target Audience and the Participants listed separately in Phase 1 of the Kemp et al. (1996) needs assessment model will be discussed collectively in this chapter.

Target audience and participants. The students who served as the target audience for this needs assessment were distance learners enrolled in three online masters-level programs at L-GU for the spring 2001 semester: an online Masters program in the school of arts and sciences, referred to for the purpose of this study as MA&S; an online Masters program in the school of education, abbreviated for the purposes of this study as MEDU; and an interdisciplinary online Masters program with an information technology focus, for the purpose of this study designated as IMIT. The students enrolled in these programs are geographically distant from the L-GU's main residential campus and, therefore, cannot physically access the campus's resources.

For this needs assessment the target audience was divided into two groups, the pilot test group and the participant group. The pilot test group consisted of five learners who had recently completed the MEDU program. These learners were chosen to function as the pilot group because of their experience as online distance learners, having completed the entire MEDU program. The purpose of the pilot group was to review the data collection instruments for overall clarity and understandability. A professor in the MEDU program initially contacted the pilot group to explain their role within the needs assessment. The researcher then contacted the pilot group and sent them the URL for the first instrument.

The needs assessment participant group consisted of learners enrolled in two online courses in the MA&S program, three courses in the MEDU program, and two courses in the IMIT program. Permission was granted from the

administration in each of these programs to use these courses for the needs assessment. The researcher also communicated with the various course instructors and was assured of their cooperation. Permission was granted from L-GU's Institutional Review Board for Protection of Human Subjects in Research. The researcher drafted a letter to the Review Board requesting permission to conduct this assessment (Appendix B). Only after permission was awarded did the researcher conduct the assessment. All participation in this needs assessment was voluntary; at no point during the needs assessment did learners receive any form of compensation for their participation.

Strategy. Two questionnaire instruments were used to collect the data for this needs assessment. Both questionnaires were accessed online. They were constructed using Purseus Survey Solutions for the Web ® software. The data from these questionnaires were primarily dichotomous (e.g., agree versus disagree). Participant identities were coded numerically (i.e., no names were used) to protect the privacy of the participants. The second questionnaire also contained open-ended responses. These responses were also recorded without names or any identifying information. Only the researcher had access to these data.

The first instrument used was a 25-item questionnaire (see Appendix C). The data gathered from this questionnaire helped the researcher to identify whether the participants possessed those learner characteristics necessary to be successful distance learners, as well as their levels of wellness in the six major wellness dimensions. This instrument was constructed based on a series of

existing distance learning and wellness inventories (Connick, 1999; Edlin et al. 1996; Hurley, 1992; McVay, 1998; National Wellness Institute, 1998; Travis & Ryan, 1988). This process included incorporating those items appearing most frequently on the existing inventories, as well as by referring to the literature discussing the characteristics of distance learners. The researcher followed the guidelines for designing a questionnaire presented by Gall, Borg, and Gall (1996) during the instrument construction process.

The questionnaire contained seven questions asking learners to evaluate their learner characteristics as they pertained to performing successfully as a learner within a distance environment. The questionnaire also contained 18 questions asking learners to evaluate their levels of wellness in the six wellness dimensions. Questions 8 - 10 pertained to Occupation Wellness, 11 - 13 regarded Intellectual Wellness, 14 - 16 referred to Spiritual Wellness, 17 - 19 covered Social Wellness, 20 - 22 concerned Physical Wellness, and questions 23 - 25 focused on Emotional Wellness.

The content validity of this questionnaire was established by a panel of five experts in the fields of student services and distance education, referred to as the Expert Review Panel. This panel included one assistant professor specializing in distance education, the director of L-GU's centralized administrative organization for distance learning, the director of career services, the director of the student counseling center, and the director of planning and assessment in the office of student affairs. Before reviewing the instrument, the experts received a letter via e-mail from the researcher (see Appendix D). This

letter contained a brief explanation of the purpose and process for the review, instructions for reviewing the instrument, and the URL to access the questionnaire. Reviewers were provided space at the end of the questionnaire to make recommendations for revisions to the instrument. The experts were given two weeks to examine the questionnaire.

After this review, the necessary modifications were made to the instrument based on the feedback received through the review process. These modifications included several major revisions and have, therefore, been included as part of the methodology (see Appendix E). The order of the original questionnaire was reversed, with the wellness items coming before the seven questions asking learners to self-evaluate their distance learner characteristics as they pertained to performing successfully as a learner within a distance environment. Seven additional wellness questions were also added. A general wellness question asking learners to indicate whether they felt that their life was “very balanced” became the first questionnaire item. The 18 questions asking participants to evaluate their levels of wellness in the each of the six dimensions followed. In addition, an encapsulating question was added to each section asking learners to indicate whether they were “satisfied” with their current level of wellness regarding that dimension. These items were added so that individual wellness dimension satisfaction frequencies could be measured. Questions 2 - 5 pertained to Occupational Wellness, 6 - 9 regarded Intellectual Wellness, 10 - 13 referred to Spiritual Wellness, 14 - 17 covered Social Wellness, 18 – 21 concerned Physical Wellness and questions 22 - 25 focused on Emotional

Wellness. The characteristic questions followed, items 26- 32. Thus, the revised instrument contained a total of 32 items.

The instrument was then pilot-tested using a small group of five online learners. These five learners were drawn from the target population, but they were not included in the needs assessment participant group. The pilot group was asked to review the instrument to ensure that the vocabulary and the format were clear and understandable. The group received a letter from the researcher via e-mail (see Appendix F). This letter contained a brief explanation of the purpose and process for the pilot test, instructions for reviewing the instrument, and the URL to access the questionnaire. After the pilot group reviewed the instrument, they were asked to make recommendations for modifications in the space provided at the end of the questionnaire. The pilot test group had two weeks to complete the pilot-test.

After the pilot-test was completed, the necessary modifications were applied and the instrument was made available to the participant group. Prior to dissemination, the participants' instructors notified each participant about the questionnaire. The participant group also received a letter via e-mail from the researcher (see Appendix G). This letter contained a brief explanation of the purpose of the questionnaire, instructions for completing the instrument, and the URL to access the questionnaire. The participants had two weeks to complete the instrument. After all the participant data were collected, reliability of this instrument was measured using the Kuder-Richardson 20 (K-R 20) formula to

test the internal consistency of this instrument. K-R 20 is widely used to estimate the internal consistency of dichotomous data (Gall et al., 1996).

The second needs assessment instrument was also constructed as a questionnaire (see Appendix H). This instrument asked participants to indicate which specific wellness resources would be most beneficial to them, based on the group's responses to the first questionnaire. The content of this instrument was determined by combining information gleaned from the literature with the data analysis from the first instrument and the input of subject area experts in the six dimensions of wellness.

Because a more detailed analysis was needed for this portion of the assessment, a larger group of subject matter experts was chosen than had served on the Expert Review Panel for instrument content validity. The researcher and members of her committee chose a specific expert from each of the six wellness dimensions. A director of one of L-GU's education centers served as the intellectual wellness expert, a career counselor with L-GU's career center served as the occupational wellness expert, one of L-GU's campus ministry directors served as the spiritual wellness expert, a L-GU professor of health education served as the physical wellness expert, a psychological counselor at L-GU's student counseling center served as the emotional wellness expert, and an L-GU associate vice president of student affairs served as the social wellness expert. The researcher presented the first questionnaire data to the experts and together. The researcher and the area experts compiled lists of tentative resources to be included as items on the second questionnaire.

The second questionnaire was divided into seven sections. The first six sections covered the six dimensions of wellness. The first section covered Physical Wellness, the second section Emotional Wellness, the third section Spiritual Wellness, the fourth section Social Wellness, the fifth section Occupational Wellness, and the sixth section Intellectual Wellness. The seventh section contained general wellness questions.

The ordering of the first six sections of the second instrument was determined by participant responses to the first questionnaire; the dimensions of wellness were ordered greatest to least deficient as indicated by participants in responding to their wellness levels on the first questionnaire. The first question in each section provided a list of wellness resources (related to that particular section's wellness dimension) and asked participants to review and select whether they would use any of the suggested resources to "maintain/increase" their wellness in that dimension. The second question asked participants to list what other types of resources, not included in the resource list of the preceding question, would benefit them. The final section asked two general questions, one objective (yes vs. no) item and one open-ended question. This final item asked participants to comment specifically on those issues and resources that they felt were not addressed in either of the two questionnaires. The researcher followed the guidelines for designing a questionnaire presented by Gall et al. (1996) during the instrument construction process.

The content validity of this questionnaire was established by the same panel of five experts in the fields of student services and distance education that

served as the first content validity Expert Review Panel. Before reviewing the instrument, the experts received a letter via e-mail from the researcher (see Appendix I). This letter contained a brief explanation of the purpose and process for the review, instructions for reviewing the instrument, and the URL to access the questionnaire. Reviewers were provided a space at the end of the questionnaire to make recommendations for revisions to the instrument. The experts were given one week to examine the questionnaire.

After this review, the necessary modifications were made to the instrument, based on the feedback received through the review process. The questionnaire was then pilot-tested using the same small group of five online learners who served as the pilot group for the first questionnaire. The pilot group was asked to review the instrument to ensure that the vocabulary and the format were clear and understandable. This group received a letter via e-mail from the researcher (see Appendix J). This letter contained a brief explanation of the purpose and process for the pilot test, instructions for reviewing the instrument, and the URL to access the questionnaire. After these learners reviewed the instrument, they were asked to make recommendations for modifications to this instrument in space provided at the end of the questionnaire. The pilot group had 10 days to complete the pilot-test.

After the pilot-test was completed, the necessary modifications were applied and the instrument was made available to the participant group. Prior to dissemination, the instructor notified the participant group regarding the questionnaire. The participant group also received a letter via e-mail (see

Appendix K). This letter contained a brief explanation of the purpose of the questionnaire, instructions for completing the instrument, and the URL to access the questionnaire. The participants had three weeks to complete the instrument. After all the participant data were collected, reliability of this instrument was measured using the Kuder-Richardson 20 (K-R 20) formula to test the internal consistency of this instrument. K-R 20 is widely used to estimate the internal consistency of dichotomous type of data (Gall et al., 1996).

The first survey was disseminated in the end of February 2001. The second survey was disseminated in the middle of April 2001.

Analysis. After the data from the first survey were collected, they were organized and summarized using descriptive statistics, focusing on frequency distributions and percentages (Gall et al., 1996). The “agree” versus “disagree” answers were numerically coded as one and two, respectively. These data indicated how the participants described themselves regarding their ability to perform successfully as distance learners.

The focus of the study, regarding the characteristics questions, was to determine whether the participant group possessed those characteristics necessary to be successful as distance learners. The intent of these questions was to establish whether learners who considered themselves successful distance learners still needed access to wellness resources. In terms of the wellness dimensions questions, the emphasis of the study was to identify areas where participants had low levels of perceived wellness across and within the six wellness dimensions. Due to the importance of all six dimensions of wellness,

no distinct cut off point was made to exclude any dimension. Instead, the researcher ordered the wellness dimensions from lowest to highest, focusing on the wellness dimensions with the highest reported deficits. The researcher also met with the six chosen wellness experts to explore those resources that would be most viable for distance learners and that should be included on the second survey. Once this process was completed, the researcher began to construct the second questionnaire. The second instrument asked specific questions related to these wellness dimensions to ascertain which student support services were most appropriate for meeting the wellness needs of the participants. The data from the second survey were also analyzed using descriptive statistics, focusing on frequency distributions and percentages (Gall et al., 1996). All seven sections were analyzed individually.

All participant responses to the objective questions (i.e., the resource lists) from the first six sections of the instrument were coded numerically. The resources selected by participants were indicated by number of individual responses, as well as by corresponding percentage within the sample. The researcher incorporated these percentages in the process of making the final list of wellness resource recommendations. The open-ended questions from the first six sections were analyzed qualitatively. These data were coded for patterns of information. Pattern coding is a way of identifying emergent themes (Miles & Huberman, 1994). The aim of the researcher was to “identify the salient, grounded categories of meaning held by the participants in the setting” (Marshall & Rossman, 1989, p. 116). The researcher analyzed the data by

dividing them into “chunks” or categories. Each independent category was analyzed individually. All of the identified categories provided the researcher with additional information concerning the specific wellness needs of the participants and, therefore, were included in the final data analysis. The objective question from the seventh section was also coded numerically. The “yes” versus “no” answers were numerically coded as one and two respectively. The final, concluding, open-ended question from this section was also analyzed qualitatively.

#### Needs Assessment Phase II: Collecting Data

This phase focuses on the necessary considerations involved in the data collection process (Kemp et al., 1996). These considerations include considering the sample size that will be used and the scheduling of the data collection.

Sample size. The exploratory nature of this study indicated the need for using purposeful sampling in order to develop a deeper understanding of the phenomenon being studied. The goal of purposeful sampling was to select a small number of sources that were “information-rich” (Gall, et al., 1996). The needs assessment sample represented a cross section of distance learners from three varied academic disciplines: arts and sciences, education and information technology, with  $n = 210$ . Thus, for the purposes of this needs assessment the sample size is desirable.

Scheduling. Appendix L depicts the needs assessment timeline.

### Needs Assessment Phase III: Data Analysis

After data is collected it must be analyzed to determine a prioritized list of needs (Kemp et al., 1996). The following section outlines the data analysis used in this needs assessment as well as discussing the method for the subsequent prioritization of identified needs.

Analysis. The needs assessment data were analyzed based on the methods delineated in the planning phase. Specifically, the researcher employed descriptive statistic frequency distribution analysis for the quantitative data and emergent theme coding data analysis techniques for the qualitative data.

Prioritization. The purpose of this needs assessment was to identify the wellness needs of distance learners and to indicate the appropriate student support services that to be included in the schematic for the OWRC. The combined data analysis of the two questionnaires provided the necessary information to identify these needs. These services were prioritized based on the analysis from the second questionnaire.

### Needs Assessment Phase IV: Compiling a Final Report

The purpose of this phase is to prepare a final report of the needs assessment. The report includes: (a) a summary of the purpose of the study, (b) a summary of the needs assessment process, (c) a summary of the results, and (d) recommendations based on the data (Kemp et al., 1996).

To maintain clarity of purpose, for this study only point (d), recommendations based on the data, have been included and are listed in Chapter Three. This information, in the form of a list of wellness resources, was

used in selecting the appropriate student support services to be included in the paper-based schematic for the OWRC prototype that was developed during Stage Two of this study and is also presented in Chapter Four of this document. A separate Needs Assessment Report will be compiled and will be disseminated to the Expert Review Panel, all the wellness experts who met with the researcher, and the instructors whose students served as the participant group for this needs assessment. The researcher will send out this Needs Assessment Report after this study has received final approval by the researcher's doctoral committee.

### Stage Two: OWRC Schematic

The purpose of this study's Stage Two was to create a blueprint, or schematic, of this Online Wellness Resource Center prototype, using the prioritized wellness list provided by Stage One's needs assessment as the basis for the schematic content.

The OWRC schematic presented detailed information outlining all aspects of the OWRC development process. This process included reviewing the compiled list of prioritized wellness resources, identifying and listing existing wellness resources that are presently available through L-GU's administrative units as well as independent online wellness resources (which have not been developed at L-GU). Any additional wellness resources that needed to be developed in order to complete the OWRC were also identified.

This schematic was specifically intended for L-GU, which plans to use the data and schematic from this study to develop an OWRC prototype. However, general directions were included to give the reader sufficient information to

conduct a needs assessment and to develop an OWRC schematic, independent of the L-GU content or context.

This chapter has described the methodology for the study's two-stage research design. Chapter Three reports the results from Stage One, the needs assessment, and Chapter Four contains Stage Two, the OWRC schematic.

## CHAPTER 3

### Results

The purpose of Stage One of this study was to gather sufficient data to develop a list of wellness resources to be included in the paper-based schematic for an Online Wellness Resource Center, OWRC, prototype to be developed in Stage Two of this study. This chapter follows the data analysis procedures detailed in Phase I of the needs assessment and describes the data results obtained from the Stage One needs assessment. The collected quantitative data were analyzed using SPSS® 10.0, a computer-based statistical analysis software package; the qualitative data were categorized by wellness dimension and were analyzed for common themes. This final list of resources is presented in Appendix S.

#### Data Results for the Needs Assessment

For Stage One, the needs assessment, of this study, two, online questionnaires were used to collect data containing both objective and open-ended items. These instruments were disseminated to distance learners enrolled in three online Master's-level programs at L-GU for the spring 2001 semester: an online Master's program in the school of arts and sciences, referred to for the purpose of this study as MA&S; an online Master's program in the school of education, abbreviated for the purposes of this study as MEDU; and an interdisciplinary online Master's program with an information technology focus, for the purpose of this study designated as IMIT. The students enrolled in these

programs are geographically distant from the L-GU's main, residential campus and, therefore, cannot physically access the campus's resources.

### Questionnaire I

The first instrument consisted of a 32-item questionnaire (see Appendix E). The first questionnaire item was a general wellness question asking learners to indicate whether they felt that their life was "very balanced." Questions 2 - 5 pertained to Occupation Wellness, 6 - 9 regarded Intellectual Wellness, 10 - 13 referred to Spiritual Wellness, 14 - 17 covered Social Wellness, 18 - 21 concerned Physical Wellness and questions 22 - 25 focused on Emotional Wellness. The final seven items, 26- 32, asked learners to self-evaluate their distance learner characteristics as they pertained to performing successfully as a learner within a distance environment.

After all data were collected, reliability of this instrument was measured using the Kuder-Richardson 20 (K-R 20) formula to test the internal consistency reliability of this instrument. K-R 20 is widely used to estimate the internal consistency of dichotomous data (Gall et al., 1996). The resulting alpha coefficient was .79.

Of the 210 participants, 84 responded to the first questionnaire, resulting in an overall response rate of 40%. Over 70% of respondents indicated that they were "satisfied with their overall level of wellness." Intellectual wellness, 82%, had the highest reported wellness satisfaction and Physical wellness, 35%, had the lowest reported satisfaction. Responses to the questionnaire concerning

overall wellness satisfaction, as well as wellness dimension satisfaction levels for each of the six wellness dimensions are displayed in Table 3.

Table 3

Wellness Satisfaction Percentages

Wellness Dimension	Satisfied with level of wellness
<b>Overall Wellness</b>	72.3%
Intellectual Wellness	82.1%
Social Wellness	77.4%
Occupational Wellness	71.4%
Emotional Wellness	66.7%
Spiritual Wellness	65.5%
Physical Wellness	34.5%

In addition to the items asking participants to indicate their satisfaction within each of the six wellness dimensions, participants were also asked to respond to three additional items pertaining to each of the six dimensions. Respondents were asked whether they “agreed” or “disagreed” with these items. The highest reported “agree” responses, by percentage, included, for Occupational Wellness, taking advantage of opportunities to learn skills that enhance employment opportunities, 100%; for Intellectual Wellness, seeking opportunities to learn new things 100%; for Spiritual Wellness, feeling connected with other human beings, 86%; for Physical Wellness, eating

wholesome foods, 54%; and for Emotional Wellness identifying overly stressful situations 89%.

The highest reported “disagree” items included, for Occupational Wellness, an awareness of resources to assist a job search, 23%; for Intellectual Wellness, reading about different topics from a variety of newspapers, magazines and books, 23%; for Spiritual Wellness, spending a portion of every day in prayer, meditation, or personal reflection, 42%; for Social Wellness, an interest in participating in university or community events, 32%; for Physical Wellness, exercising regularly, 63%; and for Emotional Wellness, having problems concentrating due to worry, 63%. The responses to these 18 items are displayed in Appendix M.

Responses to the remaining seven items pertaining to distance learner characteristics indicated that all respondents evaluated themselves as possessing those characteristics deemed necessary to succeed as a distance learner. These responses are displayed in Appendix N.

## Questionnaire II

This instrument was divided into seven sections. The first six sections individually covered the six dimensions of wellness. Each section contained two questions. The first section covered Physical Wellness, the second section Emotional Wellness, the third section Spiritual Wellness, the fourth section Social Wellness, the fifth section Occupational Wellness, and the sixth section Intellectual Wellness. The seventh section contained concluding wellness questions.

After all data were collected, reliability of this instrument was measured using the Kuder-Richardson 20 (K-R 20) formula to test the internal consistency of this instrument. K-R 20 is widely used to estimate the internal consistency of dichotomous data (Gall et al., 1996). Performing the K-R 20 produced an alpha coefficient of .88.

Of the 210 participants, 85 responded to the questionnaire, yielding an overall response rate of 40%. Participants were asked to indicate which listed wellness resources they would use to “maintain/increase” their wellness in each of the six wellness dimensions. The highest rated resource was access to salary information, with 72% of respondents indicating that they would use this resource. The lowest rated resource was access to e-mail addresses and contact information of campus ministry leaders with, 4% of respondents indicating that they would use this resource. Appendix O summarizes responses to the six wellness resource dimension sections. Appendix P provides more detailed information, displaying response ratings to all wellness resource items by number of respondents and corresponding percentages, as well as the averaged response rate for each dimension overall. For analysis purposes, those respondents who checked a resource were recorded as “yes” and those who left a resource unchecked were recorded as “no”.

Each of the first six wellness questionnaire sections contained one open-ended, concluding item which asked participants to indicate what other types of resources would benefit them in regards to that section’s dimension of wellness. Intellectual, Occupational, and Social Wellness received the lowest number of

responses, with only three comments or 4%. Emotional Wellness received four comments for a 5% response rate; Spiritual Wellness had six comments, a 7% response rate; and Physical Wellness received the highest number of responses, 13, for a response rate of 14%. Respondent comments are presented by wellness dimension in Appendix Q.

Qualitative comment themes. Not many participants responded to the open-ended questionnaire items. The highest number of responses to any given wellness dimension's open-ended items was 13 (14%). This response rate was to the item at the end of the Physical Wellness section. Within this section the most often recurring resource requests pertained to the area of exercise (six responses). A second theme that emerged pertained to respondents' requests for general wellness resources (four responses). Spiritual Wellness received the second highest response rate (7%). The main theme of this dimension can be best summed up with, "I take care of this without a computer." Five out of six respondents reported that they pursued their Spiritual Wellness locally within their own communities. The four responses for Emotional Wellness were varied; the two most similar responses indicated an interest in having access to relaxation music and hypnosis information. The three remaining wellness dimensions, with only three responses each, had thematic threads running through each. For Intellectual Wellness respondents expressed interest in resources that are broad in their intellectual scope and are not necessarily related to a particular field of study. Responses to Occupational Wellness focused on job related resources. Finally, for Social Wellness, respondents

expressed a need for interaction opportunities with their peers and with their instructor/advisor.

Final Section. The final section on the questionnaire contained two concluding questions. The first concluding item was a forced choice item (“yes” vs. “no”) and asked participants to indicate whether links to general wellness inventories would be helpful. Twenty-six percent of the respondents marked “no” and 73% of respondents marked “yes” for this item. The second concluding question was open ended and asked participants to add any further comments that they felt should be considered to facilitate the process of creating a meaningful online wellness resource center. Four respondents (5%) provided final comments for this item. Respondent comments are presented in Appendix R.

Concluding qualitative comment themes. The four responses to this concluding section indicated that, due to time management issues, these individuals were not interested in access to wellness resources. These responses were inconsistent with the expressed need for specific wellness resources within the six dimensions of wellness and with the frequently checked participant response percentage (73%) to the item asking whether learners would like access to in-depth wellness inventories. However, to explore this discrepancy fully, follow up interviews would be required and are, unfortunately, beyond the scope of this study.

## Wellness Resource List

The purpose of these data analysis was to provide the necessary information to enable the researcher to create a list of wellness resources for recommendation to be used as the content for the OWRC prototype schematic that is presented in Chapter Four. The following process determined this list.

Not every resource presented to respondents was incorporated into the final wellness resource list. Only resources receiving a 25% or higher “checked” response rate were included on the final list. Twenty-five percent indicates that one out of four learners has requested access to this resource; as these resources are going to be incorporated into a development project, this number was determined by the researcher to be a reasonable cutoff point for development purposes. The resources were then ordered from highest-rated to lowest-indicated request. Those requests scoring the same numeric percentage have been ordered alphabetically. (While not a wellness dimension resource, wellness inventory links were requested by 73% of the respondents, a higher request than any other dimension resource and has, therefore, also been included in the final wellness resources list.)

This final list was then broken down into four priority levels. These levels are intended to aid a developer in determining the order of the wellness resources to be developed and included in the OWRC. Those resources having received a checked response by 50% or more of participants were considered first priority resources. Fifty percent or higher indicates that at least one out of ever two respondents requested this resource Based on this high frequency, the

researcher determined that these resources should be slated for initial development and implementation. The remaining priority levels were divided as follows: (a) those resources receiving between 40% and 49% response rates were second priority resources; (b) those receiving between 39% and 30% were third priority resources; (c) and those resources between 30% and 25% were considered lowest priority resources. Appendix S displays the finalized wellness resource list, categorized in four priority levels.

## CHAPTER 4

### Stage Two: Online Wellness Resource Center Schematic

#### Overview

This chapter describes Stage Two of this study's two-stage research design. Stage Two involved the development of the paper-based schematic for an Online Wellness Resource Center (OWRC) prototype. This schematic directly addresses this study's second research question, which is "How could such a wellness component be organized in the form of a schematic, or blueprint, developed in preparation for implementing such a component within an online environment?" The content for this schematic consists of the final, prioritized list of wellness resources resulting from Stage One's needs assessment data analysis. While this schematic has been specifically designed for use at L-GU, the needs assessment methodology presented in Chapter Two and the general guidelines presented in the following schematic have been composed to provide the reader with sufficient information to successfully conduct a similar needs assessment as well as to develop an OWRC prototype specific to the reader's target audience and their resulting wellness needs.

#### Schematic Organizational Guidelines

The development of an online product is guided by detailed instructions that constitute a blueprint, or schematic, for that product (Driscoll, 1998). The framework for this schematic is based on a synthesis of information drawn from several texts containing examples of principles and guidelines for developing instructional, training, and multimedia projects (Bergman & Moore, 1990;

Driscoll, 1998; Kemp et al., 1996; Lockee, 1996; Mantyla & Gividen, 1997).

Kemp et al. (1996) support this practice; they state that design models serve as guides and that only those steps considered relevant to a particular design project should be included in the development effort. The following list of development guidelines was gleaned from the above mentioned texts and are applicable to the OWRC development process.

#### Purpose and Need

1. Determine the purpose and need for the project. The initial question that must be asked when undertaking a design project concerns the purpose of that project. Why specifically is a project being conducted? What is the need that warranted the initiation of such a project?

#### Audience

2. Determine the audience. The group for whom the resulting product is intended must also be described. The specific needs of the audience influence the content that will be developed. The audience description should include their general characteristics.

#### Usage Guidelines

3. Determine how the audience will use the product. A brief explanation must be included detailing how the audience is to interact with the product. This explanation should also include a description of the environment in which these interactions are intended to occur.

### Funding

4. Secure funding for the project. Before any project can be initiated a source of funding must be secured. Project funding must then be organized to produce a project budget. This budget includes the salary and time requirements of the individuals who will be working on the project as well as the hardware and software costs associated with the project.

### Project Management

5. Designate project manager. An effective and successful design project requires a person with detailed planning and organization skills. The project manager is responsible for leading the project; she has responsibilities during every phase of the project. The first task of the project manager is to familiarize herself with the foundation of the project and then to organize the team that will develop the project. The make up of a project design team depends on the scope of the project. A summation of the roles of a project manager are: (a) communicating the purposes of the project to all involved individuals; (b) assigning project tasks and job responsibilities; (c) developing schedules and ensuring that deadlines are met for completion of all project components; (d) arranging for resources as needed (e.g., media production, evaluation); (e) approving checklists and checking budgetary expenses; (f) ensuring that ongoing evaluations take place at specified approved points; (g) regularly reporting status of project to

stakeholders; (h) reporting when product is ready for use; and (i) reporting results after product has been initially implemented.

### Content Development

6. Designate content developer. The job of the content developer is to create and/or organize the content that will be included in the final product. The content developer needs to be familiar with the basic principles of instructional design. Instructional design can be viewed as the process of systematically arranging the learning environment to assure that successful learning is optimized. Instructional design models are iconic representations of the systematic processes of instructional design. They serve as a set of visual directions for progressing through the instructional design process. For an online environment, the Kemp, Morrison and Ross (1996) instructional design model is recommended for utilization (see Figure 4). The circular nature of the Kemp et al. model lends itself extremely well to the distance learning context, where many instructional elements tend to overlap or occur simultaneously. Of greatest significance is the Kemp et al. model's recognition of the importance of directly addressing the student support services needs of distance learners within the context of the course's instructional design.

## Resources

7. Determine which planning documents to use during product production. Planning documents are necessary to communicate the content design of a proposed product to the development team. Documentation includes design documents, navigational maps and storyboards. Design documents are detailed plans that provide the development team with a vision of the final product. A design document should include a general introduction describing the context of the project. It should explain the strategy for content presentation, i.e., how the learner may access the information. The design document should also include a list of the specific design resources, i.e., hardware and software that will be needed by the production team as well as the role of each of the production team members. This document should include specific directions regarding the main phases of the production process, product design, development, delivery, and evaluation as well as a project timeline and budget. Navigational maps provide a visual overview of how the content is to be structured. They provide visual pictures of the web site structure. Storyboards depict how a website will visually unfold. They visualize the content.

## Evaluate

8. The product must also be evaluated. This process includes formative evaluation during the development process and field testing of the product prototype. The guidelines indicated by Tessmer (1993),

provide substantive examples of how to conduct both formative and field test evaluations.

### Final Product

9. At the conclusion of the entire production project, a final report must be given to the relevant stakeholders of the project. This report recounts the project development process and describes any modifications from the original design plan. The final report should include the outcome of the project and discuss the final product.

These guidelines should serve as the underlying impetus with which all design and production decisions and procedures can be made. The following sections provide an example of how these guidelines can be applied. Gustafson and Branch (1997) summarize the relationship among the central elements of the instructional design process that are included in such models as Kemp et al., (1996) with the following instructional design processes: analysis, design and development, and evaluation and implementation (see Figure 1). The following sections are categorized based on this organization, framed by the aforementioned delineated guidelines for product development. The L-GU example is discussed, as are other development contexts.

### Analysis

This phase of the design process employs the first three development guidelines. These principles pertain to the purpose and need of the product, the audience using the product, and the guidelines for using the product.

The primary purpose of the L-GU project is to provide centralized student support services to distance learners at the university, accessible from within their online course. The literature has identified an instructional design gap, indicating that readily accessible student support services are a necessary, but underdeveloped, component of distance education. The literature also recognized the concept of wellness as having potential value in association with student support services for distance learners. A needs assessment was conducted to determine whether L-GU distance learners indicated a need for access to online wellness resources within their online course, and if so, which specific resources did they deem viable wellness resources. The needs assessment data analysis indicated that learners were interested in having access to wellness resources. The analysis also provided a prioritized list of wellness resources that these learners considered meaningful.

L-GU graduate student online learners are the intended audience for the OWRC prototype to be developed from this schematic. One of L-GU's main distance education foci is the delivery of online graduate programs. The learners who participated in the needs assessment from Stage One of this study were all enrolled in online Masters programs at L-GU; these learners were at various stages within their Masters programs, with some at the beginning of their program and others close to completion. Based on the data gathered during the needs assessment, these learners consider themselves to possess those characteristics necessary to succeed as distance learners. These characteristics include having strong time management skills, being able to work

independently, being comfortable with technology and having the ability to express ideas both orally and in writing (see Appendix N). Yet, while these learners consider themselves to possess those characteristics necessary to succeed as distance learners, they still expressed a need for access to certain wellness resources.

The L-GU learners are intended to interact with the various wellness resources housed within the OWRC. These learners will access the OWRC from within their online course. Therefore, the minimal technical requirements to access the OWRC will be those indicated as necessary for the course in which the OWRC is housed. Learner utilization of this course component is completely voluntary. The OWRC is designed for individual use but also provides for learner/learner interaction opportunities through certain proposed resources such as the virtual coffee shop and peer mentoring opportunities.

The L-GU example pertains to graduate student wellness needs. Developers who focus on an undergraduate student population should recognize that wellness needs could vary for this group. A needs assessment is necessary to determine accurately the needs of any population that differs from that of the population sampled in this study. Therefore, it is critical for a developer to include a wellness inventory in the need assessment that is performed for the course.

The needs assessment methodology provided for the L-GU example, and presented in Chapter Two, is extensive. For a developer working alone, the scope of such a project (see Timeline of Needs Assessment, Appendix L) may be

too large. However, the second wellness instrument utilized in this study is very broad and also supports open-ended comments from respondents, allowing for a great deal of additional information gathering from groups. A developer could utilize this instrument if developing a survey would not be feasible.

### Design and Development

This phase of the design process addresses development guidelines four through seven. These four guidelines pertain to the funding of a project, project management, resources needed for the project, and the content development of the project .

The funding for L-GU's OWRC development has been designated by two of L-GU's administrative units: the centralized, distance education office, referred to as CDEO and the office of student affairs. They will combine resources to fund the budget for this project. Consulting with the director of CDEO, course developers and instructional designers at CDEO, the researcher developed a budget that included the basic components that typify a CDEO development project. While the resulting proposed budget is over \$50,000, it should be noted that many of the computers and software applications included in this budget have been previously purchased by the CDEO and are not an actual cost for this project, however since they are being used for this project they have been included as budget considerations. The OWRC for L-GU budget is outlined in Appendix T.

The resources available at L-GU have influenced the make-up of the L-GU OWRC budget. An OWRC development project could be completed with a

smaller budget, however, the scope of the development project would be more limited. The contents of such a budget have been determined by the researcher after consulting with the CDEO instructional developers to determine what the absolute minimum components for development would be. A budget denoting the minimum requirements for an OWRC development project is outlined in Appendix U.

For the OWRC project at L-GU, a nine-month, temporary faculty position designating a project manager to lead the development has been allotted by L-GU's office of student affairs and the CDEO. This individual's office will be located within the course development facilities of CDEO. The project manager will be given permission to utilize members of this unit's course development team for this development project.

The first task of the OWRC project manager will be to assemble an OWRC development team, brief them about the project and assign team member responsibilities. This team will consist of a graphic designer, a systems administrator, six wellness Subject Matter Experts (SME's) and a content developer. As this is an online prototype, all members of the team, with the exception of the SME's, will need to be familiar with web design principles and with web design software packages.

The responsibilities of the production team are as follows: (a) The graphic designer will be responsible for creating the visual look of the OWRC web site; (b) The systems administrator will assist the project manager with uploading the OWRC components to the CDEO web server where it will be housed. The

systems administrator will also assist the project manager in collecting OWRC user data during the formative evaluation and field test segments of this development project; and (c) The SME's will serve as consultants to the content developer for their specific wellness dimension content.

For the L-GU OWRC project, the project manager will also serve as the content developer. Thus, the project manager will both manage and develop the content for the OWRC. The content developer must have knowledge of the basic principles of instructional design and experience as an instructional designer. For the L-GU project, the content developer must have access to the data results from the needs assessment conducted in Stage One of this study in order to develop the OWRC content.

The final, prioritized wellness resource list produced by the needs assessment and presented in Appendix S will provide the content areas for the OWRC. The four resource priority levels allow for a phased in production approach, beginning with the highest level of priority and moving to the lowest priority level. For example, five of the six wellness dimensions have resources that fall under Priority One, therefore, these resources will all be included in the first development phase. Spiritual Wellness, however, only has one resource that is categorized as a Priority Three resource; thus, initially, this resource will not be implemented.

While the majority of the wellness resources are available at L-GU or on the Internet, many of them will need to be re-purposed for implementation within the OWRC. Several will need to be developed by the content developer in

conjunction with the wellness SMEs Her task is to review all of these resources to determine whether they need to be re-purposed for the OWRC. Appendix V displays prioritized wellness resource availability.

The course developer will also use a navigational map and story boards of the OWRC to assist with the development process. Appendix W depicts an example of a navigational map of the OWRC. While the six individual wellness dimension pages appear equal in size on this map, this depiction is not an indication that these six dimensions are equal in the number of resources, or priority of resources that they house. Appendices X-Z display an example how the OWRC will be accessed within an online course. These example website storyboards were created using Blackboard 5 ®, a course website development template used by many faculty at L-GU. Examples of the individual wellness dimension pages are explained in Appendices AA-GG. These six pages clearly display the prioritization of the six wellness dimension resources as well as their availability.

The project manager will also develop a timeline for the project. This timeline will outline each of the priority development phases. An example of a possible timeline is presented in Appendix HH.

In addition to the aforementioned responsibilities, the project manager must also assess the hardware and software development needs for this project. Due to the development that members of the production team will be conducting, they will need access to computers with a minimum of a Pentium II 450 processor, at least 128 megabytes of RAM and Internet access. The graphic

designer will use a Powermac G4 Dual/533s, with 640 megabytes RAM, 40-gigabyte hard-drive, dual 19-inch monitors, and a second video card. The server on which this prototype will be housed is a PowerEdge 6400, Pentium III Xeon 700MHz/1MB.

The software applications that will be necessary for this project include, a graphic design software package, web development software, a web log analysis program, a web browser, and a word processing tool. These computers and software applications will be provided by L-GU's distance education administrating unit. The project manager will discuss any further hardware or software purchases necessary for this project with the director of CDEO.

The project manager will also present the team with a design document detailing the entire project development process. This document will include many of the documents previously discussed in this schematic; this document will provide the team with a detailed context for the content development of the project, their job descriptions for the project, includes a navigational map of the web site structure, a description of software applications that they will be utilizing for the project, and contains the project time line and projected budget. This document is presented in Appendix II.

The project manager will also report regularly to the two main stakeholders of the project, CDEO and the offices of student affairs. She will meet monthly with the vice president for student affairs and with the director of CDEO and brief them on the current project status.

The L-GU project is a high-end project with a large budget; an individual developer, working alone, should be aware that with reduced funding the development phase of this project would be quite different.

First, a production team would not be necessary. If a graphic designer is not available, the website interface could be kept simple and a lower end computer could be used to create the graphics for the website. If access to a high-end server is not possible, the OWRC could be housed on a standard (Pentium II) machine.

The individual developer should also consider the wellness resource implantation and development process. If working alone, she will have production limitations; she should determine what is realistic for her to develop. For example, Social Wellness resources are very course-specific. Creating opportunities for students to meet, either physically, or synchronously at a distance, will take time to organize and may be beyond the scope of what an individual can successfully manage.

Another consideration is the prioritization of various wellness dimension resources. For example, the needs assessment in the L-GU example had one Spiritual Wellness resource on the final resource list as a Priority Three development consideration. Should an individual developer encounter a similar situation, she may choose not to include resources with lower priority levels. This may exclude certain wellness dimensions entirely. Or, a developer may also choose to phase resources into the OWRC gradually over time, based on priority level from highest to lowest, as depicted in the L-GU example.

However, while the individual developer should remember to keep production of the OWRC as simple as possible, she should not jeopardize the quality of the resulting resource center. Thus, the judgment of the developer does factor into the development process. The greatest benefit to the individual developer is the pre-existing availability of many wellness resources online. While these resources may need to be re-purposed, their general availability is a great development asset in terms of time and development cost. The time and commitment involved in revising an already existing resource is considerably less than creating one.

### Evaluation and Implementation

This phase of the design process employs the final two development guidelines. These two principles pertain to the evaluation of the product prototype, as well as recommendations for final product implementation.

The project manager must also conduct ongoing formative evaluations of the OWRC, as well as a summative evaluation of a field test of the final prototype. These evaluations have been incorporated into the OWRC development timeline and they will follow the evaluation guidelines presented by Tessmer (1993). The prototype will be continuously assessed throughout each development phase. These formative assessments will include expert reviews and pilot tests. After the prototype production is completed, the OWRC will be field-tested. A field test is a situational evaluation; the product is evaluated in the same environment in which it will ultimately be used (Tessmer). The OWRC will be field tested as a component of three graduate distance learning courses

for the first Summer 2002 semester. Modifications will be made and the final product will be presented to stakeholders. The OWRC will be ready for implementation in the Fall 2002 semester.

For a smaller scale OWRC development project, the evaluation process will be simplified. A field test may not be possible. The prototype should be formatively assessed, at a minimum with an expert review and a pilot test.

As with all design projects, all the possible considerations cannot be predicted in a project schematic. This schematic has addressed the primary considerations that a potential developer must follow to ensure the successful development of an OWRC.

## CHAPTER 5

### Summary and Conclusions

This chapter brings closure to the present study and sets the stage for the further development and implementation of the OWRC. First, this chapter discusses this study's purpose and contribution to the fields of distance education and student affairs. The conclusions and limitations of this study are also described. This final section of this chapter explores the implications for future research based upon the results of this study.

#### Summary

The purpose of this study was to answer the following two research questions:

1. Which student support services constitute a wellness component in online distance education as determined through a needs assessment of online distance learners?
2. How could such a wellness component be organized in the form of a schematic, or blueprint, that is developed in preparation for implementing such a component within an online learning environment?

Two successive research activities provided the basis for the OWRC schematic developed in Chapter Four, a review of the literature and a data based needs assessment.

#### Review of Literature

A literature review was conducted to provide the theoretical basis to support the concept of offering wellness resources to distance learners. This review

revealed that ensuring quality educational opportunities is an essential consideration for the field of distance education, and that access to student support services is a fundamental component of ensuring this quality (CAS, 2001; Mills & Ross, 1993; SACCS, 1998). However, the literature also revealed that these services are often underdeveloped, or completely overlooked (Peters, 1998). Specifically, the review found scant research discussing which specific support services are available to meet distance learners' "extracurricular needs," needs relating to a variety of issues such as employment, job stability, work load, family responsibilities, health, and social interests and obligations (Moore & Kearsly, 1996).

To address this gap, literature from the field of student affairs was also reviewed. A fundamental component of this field concerns the development of the student as a whole person (American Council on Education, 1949; Leafgren & Elsenrath, 1986). This philosophy uses the concept of wellness to offer resources for addressing the needs of the whole student. The whole student/wellness perspective, then, includes the resources that would meet the "extracurricular needs" of distance learners described in the distance education literature. Thus, the concept of wellness was chosen as a potential means for meeting these needs.

As access to student support services has been shown to be a critical factor in learner success (Tinto, 1989). The literature review also explored developing a method with which to make these services available to learners. In the context of a distance-learning environment, the instructional design of a

course provides a means by which to arrange the learning environment so as to enable learners to conveniently gain access to these wellness resources. Such an approach has been recognized by Kemp, Morrison, and Ross (1996) who have incorporated student services directly into their instructional design model.

To establish a comprehensive basis for the study's two research questions, the following areas were also explored in-depth as a part of the study's literature review: (a) the evolving definition of distance education, (b) the characteristics of distance learners, (c) the impact of transactional and psychological distance on learners at a distance, (d) instructional strategies addressing transactional and psychological distance, (e) instructional design that addresses the extracurricular needs of distance learners through support services, and (f) wellness and how it functions as a student support service component of an instructional design model. An examination of these topics traced how each one influenced the other; how these elements collectively revealed a need as well as a strategy for meeting the wellness needs of distance learners.

### Needs Assessment

Synthesizing the literature from both the fields of distance education and student affairs, this review established a perceived need for distance learner access to wellness resources at the course level. Of equal importance was to verify that this perceived need for wellness resources, is, in fact, an actual need of distance learners. To achieve this verification, a needs assessment was conducted on a sample of over 200 distance learners enrolled in three separate

Master's programs at L-GU in the Spring semester, 2001. This needs assessment used two online survey instruments to determine the wellness needs of distance learners.

Participant responses to the study's two questionnaires indicated that they did express an interest in access to wellness resources. The "extracurricular needs" of distance learners (needs relating to employment, work load, family responsibilities, health, and social interests and obligations) referred to in the literature by Moore and Kearsley (1996) are reflected in the final wellness resource list produced by this study. These resources include, (a) access to salary information (occupational wellness), (b) exercise plans for people with busy schedules (physical wellness), (c) opportunity to physically meet classmates (social wellness), (d) strategies for improving concentration and memory (emotional wellness), (e) hobby information (intellectual wellness), and (f) information on meditation (spiritual wellness). Thus, the perceived need described in the literature while, not clearly apparent as an actual learner need based on the needs assessment results, was corroborated with actual learner interest. While these results are still tentative, this holistic approach to providing student support services is consistent with the mission of most universities, which is to offer avenues for growth and development for the whole person. (American Council on Education, 1949; Leafgren & Elsenrath, 1986) and, therefore, is an important consideration for designers of distant learning courses.

### Specific Contributions of Study

Based on this research, a gap exists between this identified need for a wellness component in online distance education and a method for meeting it; no examples for determining the specific resources needed and no means by which to provide these services to learners within their course are available to distance education and student affairs practitioners. Thus, the main contribution of this study was to provide such an example. This study:

1. Created a methodology for conducting a needs assessment to determine the wellness needs of distance learners, including guidelines for online survey instrument development and validation.
2. Compiled a list of specific wellness resources derived from the data gathered in the study's needs assessment.
3. Identified specific student services associated with the specified wellness resources.
4. Developed a detailed schematic describing all the aspects necessary for creating an online wellness resource center, OWRC, to house the identified wellness resources.

In summary, the specific contributions of this study is its ability to fill the identified gap by determining specific distance learner wellness needs, presenting the corresponding resources needed to address these needs, and describing, in detail, a need-based tool that can be developed to bring these resources to learners within their online course. The results of this study

provide a model that any other institution can follow to establish its own locally validated prioritized list of wellness resources.

### Significance of Study

Gall et al., (1996) state that educational research should develop new knowledge related to teaching, learning, and educational administration; this knowledge is valuable as its development eventually leads to the improvement of educational practice. The present study, building upon this stipulation, added to the body of knowledge available to distance education and student affairs practitioners by offering new information regarding distance learners' wellness needs and by identifying the corresponding student support service resources to meet these needs. This study also provided an example of how to develop a prototype for implementing an online wellness resource center, which has the potential to improve educational practice and, thereby, the quality of distance education programs by offering a more inclusive and readily available student support service system to distance learners. While this dynamic potential has not yet come to fruition, this study marks an initial step in this process, outlining a direction for future research in the area of student support services for distance learners.

### Limitations of Study

Characteristic of any research, this study has limitations that qualify its findings. First, the scope of this study was limited to one institution. Three Master's level programs in three separate disciplines made up the sample for this study. No doctoral or undergraduate programs were included.

This study was also limited because no comparisons were possible between students in the three various Masters programs. Due to confidentiality issues, the researcher was not able to isolate responses by program or course. The present study did not specifically address the needs of distance learners with disabilities, such as visually impaired learners or learners with learning disabilities such as dyslexia. Although these learners are an important constituency for distance learning programs, addressing their needs was outside the scope of this study.

Some logical inconsistencies were found in participant responses to the final, open-ended comment section of the second questionnaire; four participants commented that they felt that they would have no time to use wellness resources were they to be provided (see Appendix R), yet in all six of the previous wellness dimension sections of the second questionnaire no respondents selected the “ I would not use any of the above listed resources” item. The data collection methods in this study did not include follow-up questioning. Therefore, the researcher was unable to determine, through further investigation, what factors contributed to the inconsistency presented between the dimension comment sections and the concluding comment section on the second questionnaire.

#### Conclusions and Implications for Future Research and Development

Given that this study focused on the initial stage of the development of a product, two conclusions are drawn; however, they are, at best, preliminary. One, the perceived need for wellness resources for distance learners was

supported as an actual expression of interest in access to such services, as reflected in the results of the needs assessment conducted on learners in three L-GU graduate programs (see Appendix S). Two, based on the potential expense of developing an OWRC, this undertaking should be done at the university level (see Appendix T).

Based on the data from the present study, the OWRC prototype will be developed and field-tested at L-GU within the next year. Several tentative questions are posed here to frame the evaluation of the OWRC prototype. The following list contains these questions as well as the corresponding rationale for asking each question.

1. This study did not include wellness resources specified for learners with disabilities. This limitation has been documented, although it specified physical impairments and learning disabilities as such as dyslexia. Yet, one respondent indicated an interest in information related to “quick and healthy meals for diabetics” (see Appendix Q). Was this an isolated request, or is there a need to include wellness resources for learners with special needs?
2. Wellness is typically divided into six dimensions (Hettler, 1980). However, the results of this study’s needs assessment indicated low resource request rates for one dimension, Spiritual Wellness (see Appendix P). The apparent lack of need for most of the Spiritual Wellness resources was also supported by the qualitative comments for this dimension (see Appendix Q). The highest, and only, Spiritual Wellness

resource (information about meditation) to be included on the final list of recommended recourses was a Third Priority development consideration. Does this indicate that distance learners do not need access to resources in this dimension of wellness?

3. The needs assessment of this study produced a prioritized list of wellness resources indicated as important to the learners (see Appendix S). However, inconsistencies, as documented in the limitation section of this study, existed between the individual wellness dimension resource requests and the final qualitative comments (See Appendices Q and R). Follow-up was not possible and participants did not physically have access to an Online Wellness Resource Center, so no actual usage patterns could be monitored. Therefore, when presented with an actual OWRC, will learner usage patterns reflect their resource requests?

While these questions have emerged from the present study, additional questions are likely to surface as the implementation and field test of the OWRC prototype actually occur.

## References

Abate, K. (1999). Support services for distance education. eduport.Kiosk, 1, 1-4. Retrieved September 3, 1999, from the World Wide Web:

<http://eduport.com/community/kiosk/19991/serve.htm>

American Council on Education (1949). The student personnel point of view. Washington, DC: Author.

Archer, J., Jr., Probert, B. & Gage, L. (1987). Attitudes towards wellness. Journal of College Student Personnel(28), 311-317.

Ardell, D. (1984). The history and future of wellness. Wellness Perspectives: Journal of Individual Family and Community Wellness, 1, 3-23.

Baxter Magolda, M. B. (1999). The evolution of epistemology: Redefining contextual knowing at twentysomething. Journal of College Student Development, 40, 333-344.

Beede, M., & Burnette, D. (Eds.). (1999). Planning for student services: Best practices for the 21<sup>st</sup> century. Ann Arbor, MI: Society for College and University Planning.

Berman, R., & Moore, T (1990). Managing interactive video/multimedia projects. Englewood Cliffs, NJ: Educational Technology.

Biner, P. M., & Dean, R. S. (1997). Profiling the successful tele-education student. Distance Education, 1(2), 1-3.

Biner, P. M., Bink, M. L., Huffman, M. L., & Dean, R. S. (1995). Personality characteristics differentiating and predicting the achievement of

televised-course students and traditional-course students. The American Journal of Distance Education, 9(2), 46-60.

Bischoff, W. R., Bisconer, S. W., Kooker, B. M., & Woods, L. C. (1996). Transactional distance and interactive television in the distance education of health professionals. The American Journal of Distance Education, 10(3), 4-19.

Boyd, R. A., & Apps, J. W. (1966). Psychological definition of adult education. Adult Leadership, 13, 160-181.

Brookfield, S.T. (1986). Understanding and facilitating adult learning. San Francisco: Jossey-Bass.

Burge, L. (1988). Beyond andragogy: Some explorations for distance learning design. Journal of Distance Education, 3(1), 5-23.

Cattell, R. B., Eber, H. W., & Tatsuoka, M. M. (1970). Handbook for the 16PF. Champaign, IL: Institute for Personality and Ability Testing.

Chute, A. G., Thompson, M. M., & Hancock, B. W. (1999). The McGraw-Hill handbook of distance learning. New York: McGraw-Hill.

Commission on Colleges Southern Association of Colleges and Schools (1998). Policies procedures guidelines. Decatur, GA: Author.

Connick, G. P. (Ed.). (1999). The distance learner's guide. Upper Saddle River, NJ: Prentice Hall.

Council for the Assessment of Standards. (2001). Standards and guidelines for educational services for distance learning students. Boulder, CO: Western Cooperative.

Day, C., & Baskett, H. K. (1982). Discrepancies between intentions and practice: Reexamining some basic assumptions about adult and continuing professional education. International Journal of Lifelong Education, 1(2), 143-155.

Dewey, J., & Bentley, A. F. (1949). Knowing and the known. Boston: Beacon.

Dick, W., & Carey, L. (1996). The systematic design of instruction. New York: HarperCollins.

Dille, B., & Mezack, M. (1991). Identifying predictors of high-risk among community college telecourse students. The American Journal of Distance Education, 5(1), 24-35.

Driscoll, M. (1998). Web-based training: Using technology to design adult learning experiences. San Francisco: Jossey-Bass.

Dunn, H. (1961). High level wellness. Arlington, VA: R. W. Betty.

Edlin, G., Golanty, E., & Brown, K. M. (1996). Health and wellness. Boston: Jones & Bartlett.

Elias, J. M. (1979). Andragogy revisited. Adult Education, 29(4), 252-255.

Eggen, P. D., & Kauchak, D. P. (2001). Strategies for teachers: Teaching content and thinking skills (4<sup>th</sup> ed.). Needham Heights, MA: Allyn & Bacon.

Faith, K. (Ed.). (1988). Towards new horizons for women in distance education; international perspectives. New York: Routledge.

Feasley, C. E. (1983). Serving learners at a distance: A guide to program practices. Washington, DC: George Washington University.

Fulford, C. P., & Zhang S. (1993). Perceptions of interaction: The critical predictor in distance education. The American Journal of Distance Education, 7(3), 8-20.

Gall, M. G., Borg, W. R. , & Gall, M .G. (1996). Educational research: An introduction (6<sup>th</sup> ed.). White Plains, NY: Longman.

Gagné, R. M., Briggs, L. J., & Walter, W. W. (1992). Principles of instructional design (4<sup>th</sup> ed.). Orlando: Harcourt Brace.

Garrison, D. R. (1989). Understanding distance education: A framework for the future. London: Routledge.

Garrison, D. R. (1990). Communications technology. In D. R. Garrison & D. G. Shale (Eds.), Education at a distance: From issues to practice (pp. 41-52). Malabar, FL: Krieger

Garrison, D. R., & Shale, D. G. (1987). Mapping the boundaries of distance education: Problems in defining the field. The American Journal of Distance Education, 1(1), 7-13.

Garrison, D. R., & Shale, D. G. (Eds.). (1990). Education at a distance: From issues to practice. Malabar, FL: Krieger. Gibson, C. C. (1990). Learners and learning: A discussion of selected research. In M. G. Moore (Ed.), Contemporary issues in American distance education (pp. 121-136). Oxford: Pergamon.

Gibson, C. C. (1993). Toward a broader conceptualization of distance education. In D. Keegan (Ed.), Theoretical principles of distance education (pp. 80- 92). Oxford: Pergamon.

Gibson, C. C. (1996). Toward an understanding of academic self-conception distance education. The American Journal of Distance Education, 10 (1), 22-36.

Gibson, C. C., & Gibson, T. L. (1997). Workshops at a distance. In J.A. Fleming (Ed.), New Directions for Adult and Continuing Education (pp. 59-69). Oxford: Pergamon.

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Towards a conceptual framework for mixed-method evaluation designs. Educational Evaluation and Policy Analysis, 11(2), 255, 274.

Gustafson, K., & Branch R. (1997). Survey of instructional design models. Syracuse, NY: Information Resource Publications.

Hardy, D. (1999). Institutional guidance for the distance learner. In M. Boaz, E. Elliott, D. Foshee, D. Hardy, C. Jarmon, & D. Olcott (Eds.), Teaching at a distance: A handbook for instructors (pp. 49-53). Mission Viejo, CA: Archipelago and League for Innovation in the Community College.

Hardy, D. W. & Boaz, M. (1997). Learner development: Beyond the technology. In T. Cyrs (Ed.). Teaching and Learning at a Distance: What It Takes to Effectively Design, Deliver, and Evaluate Programs. New Directions For Teaching and Learning. San Francisco: Jossey-Bass.

Hartree, A. (1984). Malcolm Knowles' theory of andragogy: A critique. International Journal of Lifelong Education, 3(3), 203-210.

Hayes, E. (1990). Adult education: Context and challenge for distance education. The American Journal of Distance Education, 4(1), 25-34.

Hermon, D. A., & Hazler, R. J. (1999). Adherence to a wellness model and perceptions of psychological well-being. Journal of Counseling & Development, 77, 339-343.

Hettler, B. (1980). Wellness promotion on a university campus. Family and Community Health, 3(1), 77-95.

Hill, J. R. (1997). Distance learning environments via the World Wide Web. In B. H. Kahn (Ed.), Web-based instruction (pp. 75-80). Englewood Cliffs, NJ: Educational Technology.

Hillman D. C., Willis D. J., & Gunawardena, C. N. (1994). Learner-interface interaction in distance education: An extension of contemporary models and strategies for practitioners. The American Journal of Distance Education, 8(2), 30-42.

Houle, C.O. (1971). The design of education. San Francisco: Jossey-Bass.

Hurley, J. S., & Schlaadt, R.G. (1992). Wellness life-style. Guilford, CT: Dushkin.

Hypertson, D., Hulme, E., Smith, W. A., & Holton, M. A., (1992). Wellness in non-traditional-age students. Journal of College Student Development, 33, 50-55.

- Holmberg, B. (1977). Distance education: A survey and bibliography. London: Kogan Page.
- Holmberg, B. (1986). Growth and structure of distance education. London: Croom Helm.
- Holmberg, B. (1989). Theory and practice of distance education. New York: Routledge.
- Hudspeth, D. R., & Brey, R. G. (1986). Instructional telecommunications: Principles and applications. New York: Praeger.
- Jarvis, P. (1984) Andragogy: A sign of the times. Studies in the Education of Adults, 16, 32-38.
- Johnson. K. J., & Wernig. S. R. (1986). Life directions: A comprehensive wellness program at a small college. In F. Leafgren (Ed.), Developing campus recreation and wellness programs (pp. 33-41). San Fransisco: Jossey-Bass.
- Joyce, B., & Weil, M. (1996). Models of teaching (5<sup>th</sup> ed.). Needham, Heights, MA: Allyn & Bacon.
- Kaufman, R., & English, F.W. (1979). Needs assessment: Concept and application. Englewood Cliffs, NJ: Educational Technology.
- Kaufman, R., Rojas, A. M., & Mayer, J. (1993). Needs assessment: A user's guide. Englewood Cliffs, NJ: Educational Technology.
- Keegan, D. (1986). Foundations of distance education (2<sup>nd</sup> ed.). London: Croom Helm.

Keegan, D. (1988). On defining distance education. In D. Sewart, D. Keegan, & B. Holmberg (Eds.), Distance education: International perspectives (pp. 6-33). New York: Routledge.

Keegan, D. (1993). Introduction. In Keegan, D. (Ed.), Theoretical principles of distance education. New York: Routledge.

Keegan, D. (1996). Foundations of distance education (3<sup>rd</sup> ed.). London: Croom Helm.

Kegan, R. (1994). In over our heads: The mental demands of modern life. Cambridge, MA: Harvard University Press.

Kember, D. (1989). A longitudinal-process model of drop-out from distance education. Journal of Higher Education, 60(3), 278-301.

Kemp, J. E., Morrison, G. R., & Ross, S. T. (1996). Designing effective instruction. Upper Saddle River, NJ: Prentice-Hall.

Knowles, M. S. (1980a). The growth and development of adult education. In J. M. Peters (Ed.), Building an effective adult education enterprise (pp. 12-40). San Francisco: Jossey-Bass.

Knowles, M. S. (1980b). The modern practice of adult education. Chicago: Follett.

Knowles, M. S. (1984). Andragogy in action. San Francisco: Jossey-Bass.

Knowles, M. S. (1990). The adult learner: A neglected species. Houston: Gulf.

Kovel-Jarboe, P. (1997). From the margin to the mainstream: State-level policy and planning for distance education. New Directions for Community Colleges, 99, 23-32.

Kozma, R. B. (1991). Learning with media. Review of Educational Research, 61(2), 179-211.

Krauth, B. (1999). Trends in support services for distance learners. In M. Beede & D. Burnette, (Eds.), Planning for student services: Best practices for the 21<sup>st</sup> century. Ann Arbor, MI: Society for College and University Planning.

Leafgren, F., & Elsenrath, D. E. (1986). The role of campus recreation programs in institutions of higher education. In F. Leafgren (Ed.), Developing campus recreation and wellness programs (pp. 3-19). San Fransisco, CA: Jossey-Bass.

Lockee, B., B. (1996) Development of a hypermedia template using Whole language instructional methods for the preservation of native american languages. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg, VA.

McIsaac, M. S., & Gunawardena, C. N. (1996). Distance education. In D. H. Jonassen (Ed.), Handbook of research for educational communications and technology (pp. 403-437). New York: Simon Schuster Macmillan.

McVay, M. (1998). How to be a successful distance student: Learning on the internet. Needham Heights, MA: Simon & Schuster.

Mantyla, K., & Gividen, R.(1997). Distance learning: A step-by-step guide for trainers. Alexandria, VA: American Association for Trainers and Developers.

Marshall, C., & Rossman, G. B. (1989) Designing qualitative research. Thousand Oaks, CA: Sage.

Miles, M. B., & Huberman M. A. (1994). Qualitative data analysis (2nd ed.). Thousand Oaks, CA: Sage.

Mills, R., & Ross, P. (1993). Putting the student first: Management for quality in distance education. In T. Evans & D. Nation (Eds.), Reforming open and distance education: Critical reflections from practice (pp. 113-129). London: Kogan Page.

Montgomery, B., & Dalton, J. C. (1986). Promoting wellness through recreation facility development and programming. In F. Leafgren (Ed.), Developing campus recreation and wellness programs (pp. 54-52). San Francisco: Jossey-Bass.

Moore, M. G., & Thompson M. M. (1997). The effects of distance learning. University Park, PA: American Center for the Study of Distance Education.

Moore, M. G. (1989). Editorial: Three types of interaction. The American Journal of Distance Education, 3(2), 1-6.

Moore, M. G. (1972). Learner autonomy: The second dimension of independent learning. Convergence, 5(2), 76-87.

Moore, M. G. (1990). Recent contributions to the theory of distance education. Open Learning, 5(3), 10-15.

Moore, M. G. (1991). Distance education theory. The American Journal of Distance Education, 5(3), 1-6.

Moore, M. G. (1993). Theory of transactional distance. In D. Keegan (Ed.), Theoretical principles of distance education (pp. 22-38). New York: Routledge.

Moore, M. G., & Kearsley, G. (1996). Distance education: A systems view. Belmont, CA: Wadsworth.

National Education Association. (2000). A survey of traditional and distance learning higher education members. Washington, D.C.: Author.

National Wellness Institute, Inc. (1998). The six dimensions of wellness. [Brochure]. Stevens Point, WI: Author.

Nunan, T. (1992). Student support as a factor affecting the quality of Australian distance education: The findings of the project to investigate quality and standards in distance education. Paper presented at the Institute of Distance Education-Deakin University Monash Distance Education Centre TAFE Off Campus. (ERIC Document Reproduction Service No. ED 355 419)

Peters, O. (1998). Learning and teaching in distance education: Analyses and interpretations from an international perspective. London: Kogan Page.

Repman J., & Logan, S. (1996). Interactions at a distance possible barriers and collaborative solutions. Techtrends, 41(6), 35-38.

Pratt, C. C. (1979). Evaluating the impact of training of the world of practice. In P. P. Le Breton (Ed.), The evaluation of continuing education for professionals: A systems view. Seattle: University of Washington Press.

Robinson, B. (1981). Support for student learning. In A. Kaye & G. Rumble (Eds.), Distance teaching for higher and adult education. London: Croom Helm.

Rossmann, G. B., & Wilson, B. L. (1991). Numbers and words revisited: Being "shamelessly eclectic." Educational Review, 9, 627-643.

Rowland, G. (1992). What do instructional designers actually do? An initial investigation of expert practice. Performance Improvement Quarterly, 5(2), 65-86.

Rumble, G. (1986). The planning and management of distance education. New York: St. Martin's.

Saba, F., & Shearer, R. (1994). Verifying key theoretical concepts in a dynamic model of distance education. The American Journal of Distance Education, 8(1), 36-59.

Schreiber, D. A., & Berge, Z. L. (1998). Distance training: How innovative organizations are using technology to maximize learning and meet business objectives. San Francisco: Jossey-Bass.

Sewart, D. (1992). Student support systems in distance education. Paper presented at the World Conference of the International Council For Distance Education, Bangkok, Thailand.

Sewart, D., Keegan, D., & Holmberg, B. (1988). Students and their progress. In D. Stewart, D. Keegan, & B. Holmberg, (Eds.), Distance education: International perspectives (pp. 165-195). New York: Routledge.

Shambaugh, R. N., & Magliaro, S. G. (1997). Mastering the possibilities: A process approach to instructional design. Boston: Allyn & Bacon.

Smaldino, S. (1999). Instructional design: For distance learning. Techtrends, 43(5), 9-13.

Smith, P. L., & Ragan, T. J. (1999). Instructional design (3<sup>rd</sup> ed.). New York: McMillian.

Taylor, C. D., & Burnkrant, R. (1999). Summer 1999: Online courses - Assessment report to the Institute for Distance and Distributed Learning. Blacksburg, VA: Virginia Polytechnic Institute and State University

Tessmer, M. (1993). Planning and conducting formative evaluations. London: Kogan Page.

Tessmer M., & Richey, R. C. (1997). The role of context in learning and instructional design. Educational Technology, Research, & Development, 45(2), 85-115.

Tinto, V., (1989). Leaving college: Rethinking the causes and cures of student attrition (2<sup>nd</sup> Ed.). Chicago: University of Chicago Press.

Travis, J. W., & Ryan, R. S. (1981). The wellness workbook (2<sup>nd</sup> Ed.). Berkley, CA: Ten Speed.

Vrasidas, C., & McIsaac, M. S. (1999). Factors influencing interaction in an online course. American Journal of Distance Education, 13(3), 22-36.

Wagner, E. D. (1994). In support of a functional definition of interaction. American Journal of Distance Education, 8(2), 6-29.

Wagner, E. D. (1997). Interactivity: From agents to outcomes. New Directions for Teaching and Learning, 71(3), 19-26.

Wagner, E. D. (1998). Interaction strategies for online training designs. Madison, WI: Proceedings of the Annual Conference on Distance Teaching and Learning (ERIC Document Reproduction Service ED 422 811)

Wagner, E. D., & McCombs, B. L. (1995). Learner centered psychological principles in practice: Designs for distance education. Educational Technology, 35,(2), 32-35.

Wang, A. Y., & Newlin, M. H. (1999). Characteristics of students who enroll and succeed in psychology web-based classes. Unpublished manuscript.

Weston, C., & Cranton, P. A. (1986). Selecting instructional strategies. Journal of Higher Education, 57(3), 259-288.

Wiesenberg, F. (1999). Teaching on-line: One instructor's evolving "theory of practice." Adult Basic Education, 9(3), 149-161.

Willis, B. (1993). Distance education: A practical guide. Englewood Cliffs, N.J.: Educational Technology.

Wilkinson, T. W. (1990). The perceptions and actions of selected distance educators on academic procrastination in the telecommunications-based distance education programs in higher education. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg, VA.

Wolcott, L. (1996). Distanced but not distanced: A learner-centered approach to distance education. Techtrends, 41(7), 23-27.

Zhang S., & Fulford, C. P. (1994). Are interaction time and psychological interactivity the same thing in the distance learning television classroom? Educational Technology, 34(6) 58-64.

## Appendix A: Potential Wellness Resources

Wellness Dimension	DL Characteristics	Wellness Resources
Occupational wellness	Distance learners must see the occupational relevance of the course or program in which they are enrolled.	Resources may include interest inventories indicating possible career choices and access to career advisors within their field.
Intellectual wellness	Distance learners must possess or develop intrinsic motivation, be problem solvers, and be independent and efficient learners.	Resources may include ways to improve study skills, reduce test taking anxiety, and improve time management.

adult learners, are moving from an external sense of self to an internal sense of self-definition and self-authorship. This journey is very reflective and may include elements of spirituality.

include information regarding meditation and self-reflection, access to information regarding organized religions, and basic information pertaining to spirituality.

<p>are not able to contact their classmates face- to-face. Developing social relationships may be challenging.</p>	<p>include interactive academic and non-academic communication possibilities between learners.</p>
--	--

Physical wellness

<p>Distance learners are usually balancing many different roles and responsibilities, which may interfere with</p>	<p>Resources pertaining to nutrition, exercise, and sleep, may be beneficial to learners and may help them to</p>
--	---

---

their ability to  
maintain a physically  
healthy lifestyle.

practice a healthier  
lifestyle.

geographically and  
often psychologically  
isolated, and have  
many diverse  
responsibilities and  
roles, maintaining  
emotional wellness  
may prove to be  
challenging.

stress management  
information, basic  
information related to  
maintaining emotional  
wellness, and  
information about  
emotional counseling  
services.

---

## Appendix B: IRB Form

### **Outline for Protocol to Accompany IRB Request**

#### **Justification of Project**

The literature has identified an instructional design gap, indicating that readily accessible student support services are a necessary but underdeveloped component of distance education. The literature also recognizes the concept of wellness as having potential value in conjunction with student support services. The purpose of this study is to determine the wellness needs of distance learners and to identify those student support services that meet the indicated needs. For the purpose of this study, a needs assessment will identify the wellness needs of distance learners. Many delivery technologies are utilized in distance education. Due to the prevalence of online learning within distance education, an online course environment will provide the context for this study.

The significance of this study is three-fold. First, this study will expand the distance education literature by adding to the discussion of student support services for distance learners. This study will attempt to identify those wellness services and resources most needed by distance learners. Second, this study will enhance the literature of the field of student affairs by addressing distance learners in the context of their student support services needs. Student affairs administrators have traditionally been concerned with the needs of traditional on-campus learners. However, the ever-increasing number of enrolled distance learners has led administrators to recognize the need for expanding student support services beyond the tangible campus. Finally, this study will provide a schematic of a model for meeting the wellness needs of distance learners within an online learning environment.

#### **Procedures**

The target audience for this needs assessment is distance learners enrolled in three online, masters-level programs at L-GU: an online Masters program in the school of arts and sciences, MA&S; an online Masters program in the school of education, MEDU; and an interdisciplinary online Masters program with an information technology focus, IMIT. The students enrolled in these programs are geographically distant from the L-GU's main residential campus and, therefore, cannot physically access the campus's resources.

The participant group will consist of learners enrolled in two online courses in the MA&S program, three courses in the MEDU program, and two courses in the IMIT program. The total number of participants is 210. Permission has been granted from the administration in each of these programs to utilize these courses. The investigator has also communicated with the

various course instructors and has been assured of their cooperation during the needs assessment. Participation in this needs assessment is fully voluntary.

Two questionnaire instruments will be used to collect the data for this needs assessment. Both questionnaires will be accessed online. They will be constructed using Purseus Survey Solutions for the Web© software.

The first instrument utilized will be a 25-item questionnaire. The data gathered from this questionnaire will help the investigator to identify those areas where learners indicate that they do not possess successful distance learner characteristics as well as low areas of wellness. The questionnaire will contain seven questions asking learners to self-evaluate their distance learner characteristics as they pertain to performing successfully in a distance environment. The questionnaire will also contain 18 questions asking learners to evaluate their overall level of wellness.

The second needs assessment instrument will also consist of a 25-item questionnaire. This instrument will ask participants to indicate which specific wellness resources would be most beneficial to them based on the areas of needs indicated by the first questionnaire. The content of this instrument will be determined by combining information gleaned from the literature and by analyzing the data from the first questionnaire. It will also include space for the participant group to comment specifically on those issues and resources that they feel have not been addressed in either of the two questionnaires.

Their instructor prior to dissemination will notify the participant group about questionnaires. The participant group will also receive a letter via e-mail containing the URL of the questionnaire, instructions for accessing the instrument and a brief explanation of the purpose of the questionnaire. The participants will have two weeks to complete each instrument. The first questionnaire will be disseminated around the middle of the semester; the second questionnaire will be disseminated at the end of the semester. Both questionnaires will take less than fifteen minutes to complete.

### **Risks and Benefits**

There are no perceived risks to the subjects by completing these questionnaires.

### **Confidentiality/Anonymity**

The data from the two online questionnaires will be scored dichotomously (e.g., yes versus no). Participant responses will automatically be recorded and sent to the investigator via e-mail, but the investigator will not have access to any information regarding the identity of those responding to the survey. The investigator will code each response numerically. Only the investigator will have access to these data.

## **Informed Consent**

The Informed Consent form (see below) will be accessed from the web. Before participants can access the questionnaire instrument they must click “I agree” indicating their consent.

## **Biographical Sketch**

The principle investigator is an assistant professor in the Instructional Technology graduate program at Virginia Tech. She teaches courses in distance education and co-directs an off-campus IT master's program for professional educators. She also assists faculty in the transformation of courses for distributed instruction. Her research interests include instructional development issues in distance education, as well as distance program evaluation.

The co-investigator is a third year doctoral student in the Instructional Technology program in the department of Teaching and Learning at Virginia Tech. The investigator has completed twelve hours of research courses in the course of her doctoral program, including EDRE 6614 Qualitative Methods in Educational Research and EDRE 6794 Behavior Science Methods I & II. The investigator has also served as a graduate assistant with the Institute for Distance and Distributed Learning since May, 1999 where she has worked on projects involving the design, development, implementation and evaluation of courses at L-GU delivered at a distance.

Informed Consent Statement  
A Survey to Explore Distance Learners' Wellness Needs (web-based)

This questionnaire is being conducted to provide information on how you characterize yourself as a distance learner as well as how you view your general level of wellness. This information will be used to help determine which wellness resources will be most beneficial to distance learners enrolled in online courses at Virginia Tech. Later in the semester you will be asked to complete a second questionnaire asking questions about specific wellness resources, which will be constructed, based on your responses to this first questionnaire. All results of this questionnaire will be shared in group form with no identifying information from individual respondents.

Students enrolled in three online, Masters-level programs at L-GU: an online Masters program in the school of arts and sciences, MA&S; an online Masters program in the school of education, MEDU; and an interdisciplinary online Masters program with an information technology focus, IMIT, for the spring 2001 semester have been invited to participate in this questionnaire. Each of you will respond to the questionnaire that asks you to characterize yourself as distance learners and to indicate your level of wellness. The survey should take about 5 minutes to complete.

Your participation has the potential to assist in determining how to better meet the wellness needs of distance learners at Virginia Tech. If you are interested in receiving a summary of the results, please contact Stephanie Scheer at the address below. This study makes no promise of direct benefits or compensation to participants to encourage involvement. All data will be analyzed in group form without identifying characteristics. At no time will the researcher release individual responses to the study to anyone other than the individuals working on the project without your written consent. All data associated with the survey will be destroyed two years after completion of the study.

Your participation is completely voluntary. Refusing to participate will in no way affect your course grade or will result in any other penalty. You may withdraw at any time. Completing the first survey does not commit you to completing the second survey that will follow later this semester. If you have questions or concerns at any time about this survey, please contact Dr. Barbara Lockee or Stephanie Scheer at the addresses below.

This research project has been approved by the Institutional Review Board for Research Involving Human Subjects at Land Grant State University and by the Department Teaching and Learning.

By clicking on the "I agree" button below, you voluntarily agree to participate in the study and acknowledge that you have read and understand the above information. If you have questions about this information before completing the survey, please contact Stephanie Scheer at the address below.

I agree.

Stephanie B. Scheer  
611 Clay Street #1  
Blacksburg, VA 24060  
(540) 961-5372  
[sscheer@vt.edu](mailto:sscheer@vt.edu)

Dr. Barbara Locke  
220 War Memorial Hall  
Blacksburg, VA 24061  
(540) 231-5587  
[lockeebb@vt.edu](mailto:lockeebb@vt.edu)

## Appendix C: Needs Assessment Questionnaire 1-original

*Please answer the following questions with "yes" or "no."*

1. I have access to a computer and/or the multi-media equipment required for a distance learning experience.
2. I feel comfortable using a computer for basic word-processing, accessing the Internet, and sending/receiving e-mail.
3. I have strong time management skills and am able to meet deadlines and keep track of assignments.
4. I enjoy and am successful at independent learning.
5. I am able to learn without face-to-face interaction with others.
6. I can easily express my ideas, comments, and questions orally and in writing.
7. I am generally flexible and can easily adjust to my changing schedule.
8. I am satisfied with my current occupation.
9. I take advantage of opportunities to learn skills that will enhance my future employment possibilities.
10. I am aware of occupational choices that I am well suited for.
11. I seek opportunities to learn new things.
12. I actively pursue learning about topics that interest me
13. I read about different topics from a variety of newspapers, magazines and books.
14. I am satisfied with my spiritual life.
15. I spend a portion of every day in prayer, meditation, and or personal reflection.

16. I feel a sense of connectedness with other human beings.
17. I am satisfied with my social interactions with others.
18. I am willing to make and sustain close friendships and intimate relationships.
19. If given the opportunity, I have an interest in participating in university or community events.
20. I exercise regularly (continuous, vigorous, sweat-producing exercise for 20-30 minutes at least three times a week).
21. I maintain the recommended weight for my height and gender.
22. I eat a variety of wholesome, minimally processed foods (fruits, vegetables, whole grains and whole grain products, low-fat dairy and low fat/high protein foods).
23. I take time every day to relax.
24. I am able to identify those situations and factors that overstress me.
25. I rarely have problems concentrating because I am worrying about other things.

## Appendix D: Needs Assessment Expert Review Panel Letter 1

Dear \_\_\_\_\_,

Hello and a belated happy new year. We spoke last semester about my dissertation and about your serving as a subject area expert for the needs assessment that I am conducting this semester as part of my dissertation. My first data collection instrument, that I using in my needs assessment, is ready for review. Your focus as an expert reviewer of the instrument is to determine whether the questions accurately reflect the content, or conceptual domain of your particular area of expertise. The questionnaire that you are reviewing for content validity can be accessed at <http://www.vpsa.vt.edu/surveys/stephanie/dlwq1.htm>.

Please record any recommendations for modifications of the instrument in the space provided at the end of the questionnaire and then please submit the survey. Please enter your comments by February 6, 2001. If you have any questions or need any more information regarding my study please e-mail me at [sscheer@vt.edu](mailto:sscheer@vt.edu).

Thank you,

Stephanie Scheer

Distance Learner Wellness Questionnaire

**Purpose:** The purpose of this questionnaire is to determine how you **view your general level of wellness** as well as **how you characterize yourself as a distance learner**. This information will be used to help determine which wellness resources will be most beneficial to distance learners.

**Definition:** Wellness is a way of life focused on achieving the highest potential for the overall well being of an individual. The major areas of one's life influence a person's level of overall wellness. These major life areas are generally divided into the following six dimensions: **occupational, intellectual, spiritual, social, physical, and emotional**. The main goal of wellness is the maximization of one's well being by establishing healthy habits that create a sense of balance in **all** these major life areas, thus improving wellness levels in these individual life areas ultimately leads to a higher overall level of wellness for the individual. It is important to remember that achieving overall wellness is an individualized and ongoing, life long process.

**Contacts:** Stephanie Scheer, [sscheer@vt.edu](mailto:sscheer@vt.edu), (540) 231-8238 or Dr. Barbara Lockee, [lockeebb@vt.edu](mailto:lockeebb@vt.edu), (540) 231-5587

**Instructions:** Please read each question carefully before answering. **Your completion of this questionnaire is completely voluntary. If you feel uncomfortable answering any question, please feel free to skip that question.**

Thank you for taking the time and thought to complete this survey.  
We appreciate your participation!

---

Overall I feel that my life is very well balanced.  
agree  
disagree

Occupational Wellness  
I am satisfied with my current occupational choice.  
agree  
disagree

I take advantage of opportunities to learn skills that will enhance my future

employment possibilities.

agree  
disagree

I am aware of resources to assist with my job search.

agree  
disagree

I am satisfied with my current level of occupational wellness.

agree  
disagree

#### Intellectual Wellness

I seek opportunities to learn new things.

agree  
disagree

I actively pursue learning about topics that interest me

agree  
disagree

I read about different topics from a variety of newspapers, magazines and books.

agree  
disagree

I am satisfied with my current level of intellectual wellness.

agree  
disagree

#### Spiritual Wellness

I am satisfied with my spiritual life.

agree  
disagree

I spend a portion of every day in prayer, meditation, or personal reflection.

agree  
disagree

I feel a sense of connectedness with other human beings.

agree  
disagree

I am satisfied with my current level of spiritual wellness.

agree  
disagree

#### Social Wellness

I am satisfied with my social interactions with others.

agree  
disagree

I am willing to make and sustain close friendships and intimate relationships.

agree  
disagree

If given the opportunity, I have an interest in participating in university or community events.

agree  
disagree

I am satisfied with my current level of social wellness.

agree  
disagree

#### Physical Wellness

I exercise regularly.

agree  
disagree

I maintain the recommended weight for my height and gender.

agree  
disagree

I eat a variety of wholesome, minimally processed foods.

agree  
disagree

I am satisfied with my current level of physical wellness.

agree  
disagree

#### Emotional Wellness

I take time every day to relax.

agree  
disagree

I am able to identify those situations and factors that overstress me.

agree

disagree

I have problems concentrating because I am worrying about other things.

agree  
disagree

I am satisfied with my current level of emotional wellness.

agree  
disagree

#### General Questions

I have access to a computer and/or the multi-media equipment required for a web-based distance learning experience.

agree  
disagree

I feel comfortable using a computer for basic word-processing, accessing the Internet, and sending/receiving e-mail.

agree  
disagree

I have strong time management skills and am able to meet deadlines and keep track of assignments.

agree  
disagree

I enjoy and am successful at independent learning.

agree  
disagree

I am able to learn without face-to-face interaction with others.

agree  
disagree

I can easily express my ideas, comments, and questions orally and in writing.

agree  
disagree

I am generally flexible and can easily adjust to my changing schedule.

agree  
disagree

## Appendix F: Needs Assessment Pilot Test Group Letter 1

Dear \_\_\_\_\_,

Thank you in advance for participating in this pilot test! Your input is very valuable and I really appreciate it. You will be reviewing a questionnaire that will later be disseminated to fellow on-line learners to help determine which types of student support services would be beneficial to on-line distance learners. You will first read an informed consent letter. At the end of the letter you will be asked to click the “I Agree” button, which will then take you to the questionnaire. You do not need to answer the questions to the survey. Your focus is to carefully read the questionnaire to determine whether the vocabulary utilized is clear and that the questions are understandable. Did the survey make sense to you? Were the directions clear? Would you take the time to fill out this survey? Please put your comments concerning phrasing of questions, clarity of directions, usage of vocabulary or any other aspects of the survey that are unclear in the space provided at the end of the instrument. Please enter your comments by Feb 24, 2001. If you have any questions or have trouble accessing the survey please e-mail me at [sscheer@vt.edu](mailto:sscheer@vt.edu) or call me at 540-961-5372

The questionnaire that you are reviewing can be accessed at

<http://www.vpsa.vt.edu/surveys/stephanie/consent.htm>

Once again THANK YOU so much for your time and effort. I really appreciate it!

Thanks again,

Stephanie Scheer

## Appendix G: Needs Assessment Participant Group Letter 1

Hello \_\_\_\_\_,

Thank you, in advance, for your participation! My name is Stephanie Scheer and I am a third year doctoral student in the Instructional Technology program at L-GU. The questionnaire that you have been asked to complete is part of a needs assessment that I am conducting as part of the research for my dissertation. My research focuses on identifying student support services resources, specifically wellness resources, that would be beneficial for distance learners.

This questionnaire will ask you questions regarding your overall level of wellness as well as general questions concerning how you characterize yourself as a distance learner. The following URL will take you to an informed consent statement, which is a university requirement to clearly articulate the terms of your participation in the study. If you agree to the terms of the study then click on "I agree" at the conclusion of the informed consent statement. When you click on "I agree" you will automatically be forwarded to the questionnaire. If you could please complete the questionnaire by March 13th that would be great. If you have any questions or problems please e-mail me.

To complete the questionnaire please go to the following URL

<http://www.vpsa.vt.edu/surveys/stephanie/consent.htm>

Thank you again!

Stephanie Scheer

## Distance Learner Wellness Questionnaire II

### **Wellness Questionnaire**

**Purpose:** This questionnaire has been constructed based on the results of the one you were asked to complete a few weeks ago. (Again, many thanks for taking the time to complete the first survey!) The results of the first questionnaire indicated that distance learners have varying deficit levels within each of the six dimensions of wellness. This questionnaire is intended to determine which resources distance learners would use to improve wellness. The results will be used to develop an online wellness resource center for distance learners.

**Definition:** Wellness is a way of life focused on achieving the highest potential for the overall well-being of an individual. The major areas of one's life influence a person's level of wellness. These major areas are generally divided into the following dimensions: occupational, intellectual, spiritual, social, physical, and emotional. The main goal of wellness is the maximization of one's well-being by establishing healthy habits that create a sense of balance in all these major life areas.

**Contacts:** Stephanie Scheer, [sscheer@vt.edu](mailto:sscheer@vt.edu), (540) 231-8238 or Dr. Barbara Locke, [lockeebb@vt.edu](mailto:lockeebb@vt.edu), (540) 231-5587

**Instructions:** Please read each question carefully before answering. **Your completion of this questionnaire is completely voluntary. If you feel uncomfortable answering any question, please feel free to skip that question.**

---

### **Physical Wellness**

Physical wellness encourages regular physical activity to achieve cardiovascular fitness. It also emphasizes the importance of balanced nutrition and discourages the use of tobacco, drugs and excessive alcohol consumption. It encourages consumption and activities that contribute to overall wellness. Please select all of the following resources that you would use to maintain/increase your physical wellness:

Regular reminders to get up (from the computer) and stretch, adjust your position, etc.

Ergonomic information related to extended computer use

Nutritional information

Links to calorie and fat gram calculator

Healthy meal recipes that are quick

Information on the health risks resulting from unbalanced diet and lack

of exercise  
Eating out healthily  
Safe ways to lose weight  
Information on the benefits of exercise  
Exercise plans for people with busy schedules  
I would not use any of the above listed resources

What other types of resources would be beneficial for you in regard to your physical wellness?

### **Emotional Wellness**

Emotional wellness emphasizes an awareness and acceptance of one's feelings. Emotional wellness includes the degree to which one feels positive about oneself and life. It includes the capacity to manage one's feelings and related behaviors including the ability to realistically assess one's limitations as well as effectively coping with stress. The emotionally well person maintains satisfying relationships with others.

Please select all of the following resources that you would use to maintain/increase your emotional wellness:

Stress management program  
Relaxation tips  
Strategies for improving concentration and memory  
On-line library of resources discussing areas of emotional wellness (i.e. depression, anxiety)  
Assistance with locating a counselor in your geographic area  
I would not use any of the above listed resources

What other types of resources would be beneficial for you in regard to your emotional wellness?

### **Spiritual Wellness**

Spiritual wellness involves seeking meaning and purpose in human existence. It includes the development of a sense of understanding and appreciation for one's place in life.

Please select all of the following resources that you would use to maintain/increase your spiritual wellness:

E-mail addresses and contact information for all of the L-GU campus ministry leaders  
Annotated bibliography of books dealing with spiritual issues  
Information on meditation and reflection  
I would not use any of the above listed resources

What other types of resources would be beneficial for you in regards to your spiritual wellness?

### **Social Wellness**

Social wellness results in contributions to one's human and physical environment for the common welfare of one's community. It emphasizes the interdependence with others and includes the pursuit of harmony in one's family life.

Please select all of the following resources that you would use to maintain/increase your social wellness:

- Peer mentoring (you would be paired with a recent graduate of your program or with a fellow student further along in your program)
- Virtual coffee shop chat rooms
- An opportunity to physically meet your classmates
- Information and resources concerning volunteering
- I would not use any of the above listed resources

What other types of resources would be beneficial for you in regard to your social wellness?

### **Occupational Wellness**

Occupational wellness is the preparation for work in which one will gain personal satisfaction and find enrichment in one's life through work. It is also related to one's attitude about work.

Please select all of the following resources that you would use to maintain/increase your occupational wellness:

- Outline of the career decision making process with resources for each step of this process
- Information on developing/improving Work-related soft skills (i.e. conflict management and resolution, management techniques, etc.)
- Links to federal guidelines concerning work related issues such as sexual harassment, discrimination, etc.
- Open job listings by major at L-GU's Career Services Office
- Current employers by major at L-GU's Career Services Office
- Internship listings by major at L-GU's Career Services Office
- Resume samples
- Database of alumni contacts by field
- Referral service
- Interview tips
- Salary information
- I would not use any of the above listed resources

What other types of career resources or related resources would be beneficial for you in regard to your occupational wellness?

## **Intellectual Wellness**

Intellectual wellness encourages creative, stimulating mental activities. An intellectually well person uses the resources available to expand his or her knowledge and improve skills along with expanding his or her potential for sharing with others. A person who is intellectually well focuses on a variety of interests within the university community and the larger community.

Please select all of the following resources that you would use to maintain/increase your intellectual wellness:

- Hobby information (i.e. cooking, travel, art, movies, books, etc.)
- Threaded discussions for various interests
- Virtual Fieldtrips to museums
- Links to national online newspapers and magazines
- Links to free online lectures on various topics
- I would not use any of the above listed resources

What other types of resources would be beneficial for you in regard to your intellectual wellness?

## **Concluding Questions**

Would links to general wellness inventories to more fully assess your individual levels of wellness within each of the six dimensions as well as your overall level of wellness be helpful?

- Yes
- No

Please provide any further comments that you feel would be helpful for creating a meaningful online wellness resource center.

## Appendix I: Needs Assessment Expert Review Panel Letter 2

Hello \_\_\_\_\_,

I hope that your semester is going well. Once again I would like to thank you for agreeing to participate as an Expert Review panelist for my Needs Assessment. The results from the first questionnaire, which asked learners to assess their levels or wellness as well as characterize themselves as distance learners are in and, using these results, I have constructed the second and final questionnaire of my needs assessment. The results from the first questionnaire indicate that learners do feel deficient, to varying degree, in all 6 wellness dimensions. The purpose of this second questionnaire is to determine which resources would be beneficial to learners to help them maintain/increase their levels of wellness in each or these 6 dimensions. Please review the questionnaire for content validity in your specified area of expertise.

Please type any comments, suggestions, etc, in the final comment box of the survey. Would you please also include your name so that I can tell whom to contact in case I have any questions about your comments. Please submit the Survey by Wednesday, April 4th 2001.

The url for the second survey: <http://www.vpsa.vt.edu/surveys/stephanie/Q2.htm>

If you have any questions please e-mail me at [sscheeer@vt.edu](mailto:sscheeer@vt.edu).

Thank you so very much!

Stephanie

Appendix J: Needs Assessment Pilot Group Letter 2.

Dear \_\_\_\_\_,

Thanks so much once again for your participation in this pilot test (part 2). I really appreciate your valuable input. You will once again be reviewing a questionnaire that will later be disseminated to fellow on-line learners. The purpose of this questionnaire is to determine which resources distance learners would use to improve their overall wellness. As with the first questionnaire, you will first read an informed consent letter. At the end of the letter you will be asked to click the "I agree" button which will then take you to the questionnaire. You do not need to answer the questions to the survey. Your focus is to carefully read the questionnaire to determine whether the vocabulary utilized is clear and that the questions are understandable.

Does the survey make sense to you? Are the directions clear? Would you take time to fill out this survey?

Please type your comments concerning phrasing of questions, clarity of directions, usage of vocabulary or any other aspects of the survey that are unclear in the space allotted for the final question of the survey.

Please enter your comments by April 16, 2001. If you have any questions or trouble accessing the survey please e-mail me at [sscheer@vt.edu](mailto:sscheer@vt.edu) or call me at 540-961-5372. The questionnaire that you are reviewing can be accessed at

<http://www.vpsa.vt.edu/surveys/stephanie/informedconsent2.htm>

THANK YOU so much for your time and your effort!

Stephanie

## Appendix K: Needs Assessment Participant Group Letter 2

Hello \_\_\_\_\_,

Thank you, once again, for your participation in the survey portion of this needs assessment. As I mentioned when I sent out the first wellness survey, as part of my dissertation research, I am hoping to identify those student support services resources, specifically wellness resources that would be beneficial for distance learners. The results from the first questionnaire were very informative, indicating that the majority of students felt deficits in all areas of wellness, with the highest deficit being satisfaction with one's Physical wellness. The purpose of this second questionnaire is to determine specifically which types of wellness resources would be beneficial in addressing the indicated wellness deficits. The results from this survey will be used to develop an online wellness resource center, accessible to online learners to help meet their wellness needs. The following URL will take you to an informed consent statement, which is a university requirement to clearly articulate the terms of your participation in the study. If you agree to the terms of the study then click on "I agree" at the conclusion of the informed consent statement. When you click on "I agree" you will automatically be forwarded to the questionnaire. If you could please complete the questionnaire by May 5th that would be great. If you have any questions or problems please e-mail me. To complete the questionnaire please go to the following URL <http://www.vpsa.vt.edu/surveys/stephanie/ic2.htm>

Thank you again!

Stephanie

## Appendix L: Needs Assessment Timeline

Date	Task
December 2000	Organize panel of experts, pilot-test group and participant group.
January 23, 2001	Upload instrument Send e-mail to Expert Panel
February 6, 2001	Expert Panel recommendations due Make modifications
February 10, 2001	Upload revised instrument Send e-mail to pilot group
February 24, 2001	Pilot-test complete Make modifications
February 27, 2001	Upload final instrument Send letter to participants
March 15, 2001	Data collection complete Begin data analysis
March 15-20, 2001	Construct 2 <sup>nd</sup> instrument
March 29, 2001	Upload instrument Send e-mail to Expert Panel
April 4, 2001	Expert Panel recommendations due Make modifications
April 5, 2001	Upload revised instrument Send e-mail to pilot group

---

Date	Task
April 17, 2001	Upload final instrument
	Send letter to participants
May 6, 2001	Data collection complete
	Begin data analysis
May 21, 2001	Data analysis complete

---

Appendix M: Responses to Questionnaire One Individual Wellness Items

Question	Response		Percent
<b>OCCUPATIONAL WELLNESS</b>			
I am satisfied with my current occupational choice.	Disagree	0	0%
	Agree	71	84.5%
	Missing	13	15.5%
I take advantages of opportunities to learn skills that will enhance my future employment opportunities.	Disagree	0	0%
	Agree	84	100%
	Missing	0	0%
I am aware of resources to assist with my job search.	Disagree	19	22.6%
	Agree	63	75%
	Missing	2	2.4%
<b>INTELLECTUAL WELLNESS</b>			
I seek opportunities to learn new things.	Disagree	0	0%
	Agree	84	100%
	Missing	0	0%
I actively pursue learning about topics that interest me.	Disagree	2	2.4%
	Agree	82	97.6%
	Missing	0	0%
I read about different topics from a variety of newspapers, magazines and books.	Disagree	19	22.6%
	Agree	65	77.4%
	Missing	0	0%

Question	Response		Percent
<b>SPIRITUAL WELLNESS</b>			
I am satisfied with my spiritual life.	Disagree	23	27.4%
	Agree	60	71.4%
	Missing	1	1.2%
I spend a portion of every day in prayer, meditation, or personal reflection.	Disagree	35	41.7%
	Agree	48	57.1%
	Missing	1	1.2%
I feel a sense of connectedness with other human beings.	Disagree	11	13.1%
	Agree	72	85.7%
	Missing	1	1.2%
<b>SOCIAL WELLNESS</b>			
I am satisfied with my social interactions with others.	Disagree	17	20.2%
	Agree	66	78.6%
	Missing	1	1.2%
I am willing to make and sustain close friendships and intimate relationships.	Disagree	7	8.3%
	Agree	76	90.5%
	Missing	1	1.2%
If given the opportunity, I have an interest in participating in university or community events.	Disagree	27	32.1%
	Agree	56	66.7%
	Missing	1	1.2%

Question	Response		Percent
<b>PHYSICAL WELLNESS</b>			
I exercise regularly.	Disagree	53	63.1%
	Agree	31	36.9%
	Missing	0	0%
I maintain the recommended weight for my height and gender.	Disagree	44	52.4%
	Agree	40	47.6%
	Missing	0	0
I eat a variety of wholesome, minimally processed foods.	Disagree	38	45.2%
	Agree	45	53.6%
	Missing	1	1.2%
<b>EMOTIONAL WELLNESS</b>			
I take time every day to relax.	Disagree	30	35.7%
	Agree	52	61.9%
	Missing	2	2.4%
I am able to identify those situations and factors that overstress me.	Disagree	7	8.3%
	Agree	75	75%
	Missing	2	2.4%
I have problems concentrating because I am worrying about other things.	Disagree	53	63.1%
	Agree	30	35.7%
	Missing	1	1.2%

Appendix N: Distance Learner Characteristics

Question	Response		Percent
I have access to a computer and/or multi-media equipment required for a web-based distance learning experience.	Disagree	0	0%
	Agree	83	98.8%
	Missing	1	1.2%
I feel comfortable using a computer for basic word-processing, accessing the Internet, and sending/receiving e-mail.	Disagree	0	0%
	Agree	84	100%
	Missing	0	0%
I have strong time management skills and am able to meet deadlines and keep track of assignments.	Disagree	11	13.1%
	Agree	73	86.9%
	Missing	1	0%
I enjoy and am successful at independent learning.	Disagree	8	9.5%
	Agree	75	89.3%
	Missing	1	1.2%
I am able to learn without face-to-face interaction with others.	Disagree	6	7.1%
	Agree	77	91.7%
	Missing	1	1.2%
I can easily express my ideas, comments, and questions orally and in writing.	Disagree	9	10.7%
	Agree	74	88.1%
	Missing	1	1.2%
I am generally flexible and can easily adjust to my changing schedule.	Disagree	5	6.0%
	Agree	79	94%
	Missing	1	1.2%

Appendix O: Responses to Questionnaire Two wellness resource items-brief

1. Salary information (72%) *occupational wellness*
2. Exercise plans for people with busy schedules (68%) *physical wellness*
3. An opportunity to physically meet classmates (68%) *social wellness*
4. Healthy meal recipes that are quick (66%) *physical wellness*
5. Strategies for improving concentration and memory (66%) *emotional wellness*
6. Relaxation tips (65%) *emotional wellness*
7. Open job listings by major at L-GU's Career Services Office (55%)  
*occupational wellness*
8. Nutritional information (55%) *physical wellness*
9. Stress management program (55%) *emotional wellness*
10. Healthy ways to eat out (54%) *physical wellness*
11. Safe ways to lose weight (54%) *physical wellness*
12. Hobby information (i.e. cooking, travel, art, movies, books, etc.) (51%)  
*intellectual wellness*
13. Links to national online newspapers and magazines (51%) *intellectual wellness*
14. Links to free online lectures on various topics (51%) *intellectual wellness*
15. Ergonomic information related to extended computer use (51%) *physical wellness*

16. Peer mentoring (students will be paired with a recent graduate of their program or with a fellow student further along in the program) (48%)  
*social wellness*
17. Referral service (48%) *occupational wellness*
18. Resume samples (46%) *occupational wellness*
19. Interview tips (42%) *occupational wellness*
20. Current employers by major at L-GU's Career Services Office (42%)  
*occupational wellness*
21. Virtual coffee shop chat rooms (39%) *social wellness*
22. Regular reminders to get up (from the computer) and stretch, adjust your position, etc. (37%) *physical wellness*
23. Information on meditation and reflection (35%) *spiritual wellness*
24. Outline of the career decision making process with resources for each step of this process (35%) *occupational wellness*
25. Information on developing/improving work-related soft skills (i.e. conflict management and resolution, management techniques, etc.) (33%)  
*occupational wellness*
26. Links to calorie and fat gram calculator (33%) *physical wellness*
27. Virtual fieldtrips to museums (32%) *intellectual wellness*
28. Database of alumni contacts by field (26%) *occupational wellness*
29. Information on the benefits of exercise (25%) *physical wellness*
30. Information on the health risks resulting from unbalanced diet and lack of exercise (24%) *physical wellness*

31. Internship listings by major at L-GU's Career Services Office (20%)  
*occupational wellness*
32. On-line library of resources discussing areas of emotional wellness (i.e. depression, anxiety) (18%) *emotional wellness*
33. Threaded discussions for various interests (18%) *intellectual wellness*
34. Information and resources concerning volunteering (17%) *social wellness*
35. Annotated bibliography of books dealing with spiritual issues (11%)  
*spiritual wellness*
36. Links to federal guidelines concerning work related issues such as sexual harassment, discrimination, etc. (7%) *occupational wellness*
37. Assistance with locating a counselor in the student's geographic area (6%) *emotional wellness*
38. E-mail addresses and contact information for all of the university's campus ministry leaders (4%) *spiritual wellness*

Appendix P: Responses to Questionnaire Two wellness resource items-detailed

Question	Response		Percent
PHYSICAL WELLNESS			
Regular ergonomic reminders (to get up, adjust position)	No	54	63.5%
	Yes	31	36.5%
Ergonomic information related to extended computer use	No	44	51.8%
	Yes	41	48.2%
Nutritional information	No	38	44.7%
	Yes	47	55.3%
Links to calorie and fat gram calculator	No	57	67.1%
	Yes	28	32.9%
Healthy meal recipes that are quick	No	29	34.1%
	Yes	56	65.9%
Information on health risks resulting from unbalanced diet and lack of exercise	No	65	76.5%
	Yes	20	23.5%
Healthy ways to eat out.	No	39	45.9%
	Yes	46	54.1%
Safe ways to lose weight	No	39	45.9%
	Yes	46	54.1%
Information on the benefits of exercise	No	64	75.3%
	Yes	21	24.7%

Question	Response		Percent
Exercise plans for people with busy schedules	No	27	31.8%
	Yes	58	68.2%
Averaged Checked response rate			46.34%
EMOTIONAL WELLNESS			
Stress management program	No	38	44.7%
	Yes	47	55.3%
Relaxation tips	No	31	36.5%
	Yes	54	65.3%
Strategies for improving concentration and memory	No	29	34.1%
	Yes	56	65.9%
On-line library of resources discussing areas of emotional wellness	No	70	82.4%
	Yes	15	17.6%
Assistance with locating a local counselor	No	80	94.1%
	Yes	5	5.9%
Averaged Checked response rate			42.0%
SPIRITUAL WELLNESS			
E-mail addresses and contact information of campus ministry leaders	No	82	96.5%
	Yes	3	3.5%
Annotated bibliography of books dealing with spiritual issues	No	76	89.4%
	Yes	9	10.6%
Information on meditation and reflection	No	5	64.7%
	Yes	30	35.3%

Question	Response		Percent
Averaged Checked response rate			16.47%
Peer mentoring	No	44	51.8%
	Yes	41	48.2%
Virtual coffee shop	No	52	61.2%
	Yes	33	38.8%
Opportunity to physically meet classmates	No	27	31.8%
	Yes	58	68.2%
Information and resources concerning volunteering	No	71	83.5%
	Yes	14	16.5%
Averaged Checked response rate			42.92%
<b>OCCUPATIONAL WELLNESS</b>			
Outline of career decision making process	No	55	64.7%
	Yes	30	35.3%
Information on developing work-related soft skills (i.e. conflict management/resolution)	No	57	67.1%
	Yes	28	32.9%
Links to federal guidelines concerning work related issues such as sexual harassment	No	79	92.9%
	Yes	6	7.1%
Open job listings by major provided by the university career services office	No	38	44.7%
	Yes	47	55.3%
Current employers by major provided by the university career services office	No	49	57.6%
	Yes	36	42.4%

Question	Response		Percent
Internship listings by major provided by the university career services office	No	68	80%
	Yes	17	20%
Resume samples	No	46	54.1%
	Yes	39	45.9%
Database of alumni contacts by field	No	63	74.1%
	Yes	22	25.9%
Referral services	No	44	51.8%
	Yes	41	48.2%
Interview tips	No	49	57.6%
	Yes	36	42.4%
Salary information	No	24	28.2%
	Yes	61	71.8%
Averaged Checked response rate			38.81%
INTELLECTUAL WELLNESS			
Hobby information	No	42	49.4%
	Yes	43	50.6%
Threaded discussions for various interests	No	70	82.4%
	Yes	15	17.6%
Virtual fieldtrips to museums	No	58	68.2%
	Yes	27	31.8%
Links to national online newspapers and magazines	No	42	49.4%
	Yes	43	50.6%

---

Question	Response		Percent
Links to free lectures on various topics	No	42	49.4%
	Yes	43	50.6%
Averaged checked or “yes” response			40.24%

---

Appendix Q: Open ended comments per wellness section

Wellness dimension	Comments
Intellectual	<p>Solving certain types of challenges (both technical as well as non-technical).</p> <p>TV news channels (CNN)</p> <p>Links to other virtual fieldtrips (or research information from Tech).</p>
Occupational	<p>As they say in the movie “show me the money.” This is probably a significant reason we are all here, to get better jobs, and more money.</p> <p>Technical magazine subscription, job-related websites, job related training, graduate courses</p> <p>Real-world news relating to the different fields (majors); job search tips or search engines</p>
Social	<p>I am a social creature as with most of the human race.</p> <p>The biggest problem I have is that we all have very busy schedules, are located in remote regions, and really have very little interaction.</p> <p>Meet new people either at work or at social activities, spend time on regular basis with my friends</p> <p>An opportunity to physically meet your instructors - or an advisor - or to at least know WHO my advisor is</p>

Wellness dimension	Comments
Emotional	<p>I guess I'm more concerned with receiving too much extraneous information that I have to weed through. Please no ads.</p> <p>Relaxation Music</p> <p>See physical wellness above (did not comment under physical wellness)</p> <p>Information about hypnosis</p>
Physical	<p>What will happen to me if I look at the monitor 12-14 hours a day?</p> <p>Wellness club -group for weight gain/loss - information about new research on weight loss and medical discoveries that assist with weight control</p> <p>Stress relievers</p> <p>Recipes for people with diabetes that are quick and easy.</p> <p>Question / Answer site for email questions I have about my own health or family member.</p> <p>Physical exercise and the benefits of reducing stress</p> <p>I am rather fit, physically, my main problem I guess is more do to the lack of sleep and rest.</p> <p>But that's my problem, I put myself into this situation.</p> <p>Exercise information (new types of exercises or routines), health and fitness magazines</p>

Wellness dimension	Comments
Spiritual	<p data-bbox="526 270 1365 375">Creative, effective exercise schedules; weekly recipes; various physical wellness tips</p> <p data-bbox="526 417 1422 447">Assistance in buying exercise equipment (like a treadmill)</p> <p data-bbox="526 489 802 518">A personal trainer</p> <p data-bbox="526 560 802 590">A personal trainer</p> <p data-bbox="526 636 1422 816">E-mail addresses and contact info for all the area churches as well as a brief summary from that church as to what they believe (doctrines)</p> <p data-bbox="526 858 1338 888">Attend activities and services in my church regularly</p> <p data-bbox="526 930 1398 1035">This is a strong area for me. I am very comfortable with my personal involvement in our local church body.</p> <p data-bbox="526 1077 1110 1106">I take care of this without a computer.</p> <p data-bbox="526 1148 1341 1253">I obtain my spiritual wellness through regular church attendance.</p> <p data-bbox="526 1295 1395 1325">I am currently immersed with resources from my church.</p>

Appendix R: Respondent concluding comments

Responses	Comments
Response 1	<p>As I stated earlier, I am concerned with getting too much information that has to be weeded out. I'm inundated with too much right now.... I need a break...</p>
Response 2	<p>I can't say that an online wellness resource center would be at all beneficial to me. I am an adult with the responsibilities of a career, a spouse, a child, and everything that goes along with them.</p> <p>If I could not handle my life, I certainly would not be foolish enough to add continuing my education to it! I would probably see any e-mails to my account on a further intrusion to my life because I would have to review them to be certain that there were no bits of relevant information to my course of study.</p> <p>Currently, people in the MEDU program are filling my in-box with worthless drabble and wasteful comments to bring more pity upon themselves.</p>

Responses	Comments
Response 3	<p>This is a terrible waste of my time and I am really growing to resent it. Personal e-mails to these individuals requesting that they cease this bothersome activity go unheeded, so I am sure that anything from the wellness center would further impede on my limited time.</p>
Response 4	<p>As a full-time working parent with two young children, the biggest stress factor has been time. Time management and setting realistic goals based on priorities (and perfectionism) were the primary stressors for me.</p> <p>Time is my most valuable resource. That is why I am in an "online" curriculum. It allows me to make use of late nights and early mornings. I work 40+ hours a week. I have two children, which I have to take to soccer twice a week, piano, and softball.</p> <p>I am a single parent. I also participate in a dance team that meets for two to three hours each week I don't have TIME to look at online wellness resources.</p>

## Appendix S: Final Prioritized Wellness Resource List

---

### Prioritization

#### PRIORITY ONE

1. Links to Wellness Inventories (73%)
2. Salary information (72%) *occupational wellness*
3. Exercise plans for busy schedules (68%) *physical wellness*
4. Physically meet classmates (68%) *social wellness*
5. Healthy meal recipes that are quick (66%) *physical wellness*
6. Improving concentration and memory (66%) *emotional wellness*
7. Relaxation tips (65%) *emotional wellness*
8. Nutritional information (55%) *physical wellness*
9. Open job listings by major at LG-U (55%) *occupational wellness*
10. Stress management (55%) *emotional wellness*
11. Healthy ways to eat out (54%) *physical wellness*
12. Lose weight safely (54%) *physical wellness*
13. Ergonomic information (51%) *physical wellness*
14. Hobby information (51%) *intellectual wellness*
15. Online lectures (51%) *intellectual wellness*
16. Online newspapers (51%) *intellectual wellness*

#### PRIORITY TWO

17. Peer mentoring (48%) *social wellness*
18. Referral services (48%) *occupational wellness*

19. Resume samples (46%) *occupational wellness*
20. Employers listed with Career Services (42%) *occupational wellness*
21. Interview tips (42%) *occupational wellness*

#### PRIORITY THREE

22. Virtual coffee shops (39%) *social wellness*
23. Regular ergonomic reminders (37%) *physical wellness*
24. Meditation information (35%) *spiritual wellness*
25. Outline of career process (35%) *occupational wellness*
26. Calorie calculator (33%) *physical wellness*
27. Developing work-related soft skills (33%) *occupational wellness*
28. Virtual fieldtrips (32%) *intellectual wellness*

#### LOWEST PRIORITY

29. Database Alumni contacts (26%) *occupational wellness*
  30. Benefits of exercise (25%) *physical wellness*
-

Appendix T: OWRC at L-GU Budget Outline

Item	Description	Cost
Hardware		
PCs	Pentium II 450 processor with 128 megs of ram	\$1200.00
	Powermac G4 Dual/533s, with 640 megabytes RAM, 40-gigabyte hard-drive, dual 19-inch monitors, and a second video card	\$3000.00
Servers	PowerEdge 6400, Pentium III Xeon 700MHz/1MB	\$9500.00
Software		
Word processing pkg.	Microsoft Office 2000	\$350.00
Browser	Microsoft Internet Explorer	\$0.00
Web development pkg.	Macromedia Dreamweaver 4	\$300.00
Graphics pkg.	Adobe Photoshop 6	\$610.00
Tracking/reporting software	Analog	\$0.00
Staff: Internal		
Project Manager	Full time nine-month, salaried position	\$40,000.00

Item	Description	Cost
Graphics Designer	Average of 5 hrs/week for 36 weeks @ \$20.00 an hour	\$3600.00
System Administrator	Average of 5 hrs/week for 36 weeks @ \$20.00 an hour	\$3600.00
Content Developer	(project manager will serve in this position)	
Subject Matter expert	Pro bono	
TOTAL		\$54,960

Appendix U: OWRC Minimum Requirements Budget

Item	Description	Cost
Hardware		
PCs	Pentium II 450 processor with 128 megs of ram	\$1200.00
Software		
Word processing pkg.	Microsoft Office 2000	\$350.00
Browser	Microsoft Internet Explorer	\$0.00
Web development pkg.	Macromedia Dreamweaver 4	\$300.00
Graphics pkg.	Adobe Photoshop 6	\$610.00
Tracking/reporting software	Analog	\$0.00
Subject Matter expert	Pro bono	\$0.00
TOTAL		\$2460.00

Appendix V: Wellness Resource Availability

<u>Prioritization</u>	<u>Availability</u>
PRIORITY ONE	
1. Links to Wellness inventories (73%)	Internet
2. Salary information (72%) <i>occupational wellness</i>	L-GU
3. Exercise plans for busy schedules (68%) <i>physical wellness</i>	Internet/Develop
4. Physically meet classmates (68%) <i>social wellness</i>	Develop
5. Healthy meal recipes that are quick (66%) <i>physical wellness</i>	Internet
6. Improving concentration and memory (66%) <i>emotional wellness</i>	L-GU
7. Relaxation tips (65%) <i>emotional wellness</i>	L-GU
8. Nutritional information (55%) <i>physical wellness</i>	L-GU
9. Open job listings by major at LG-U (55%) <i>occupational wellness</i>	L-GU
10. Stress management (55%) <i>emotional wellness</i>	L-GU

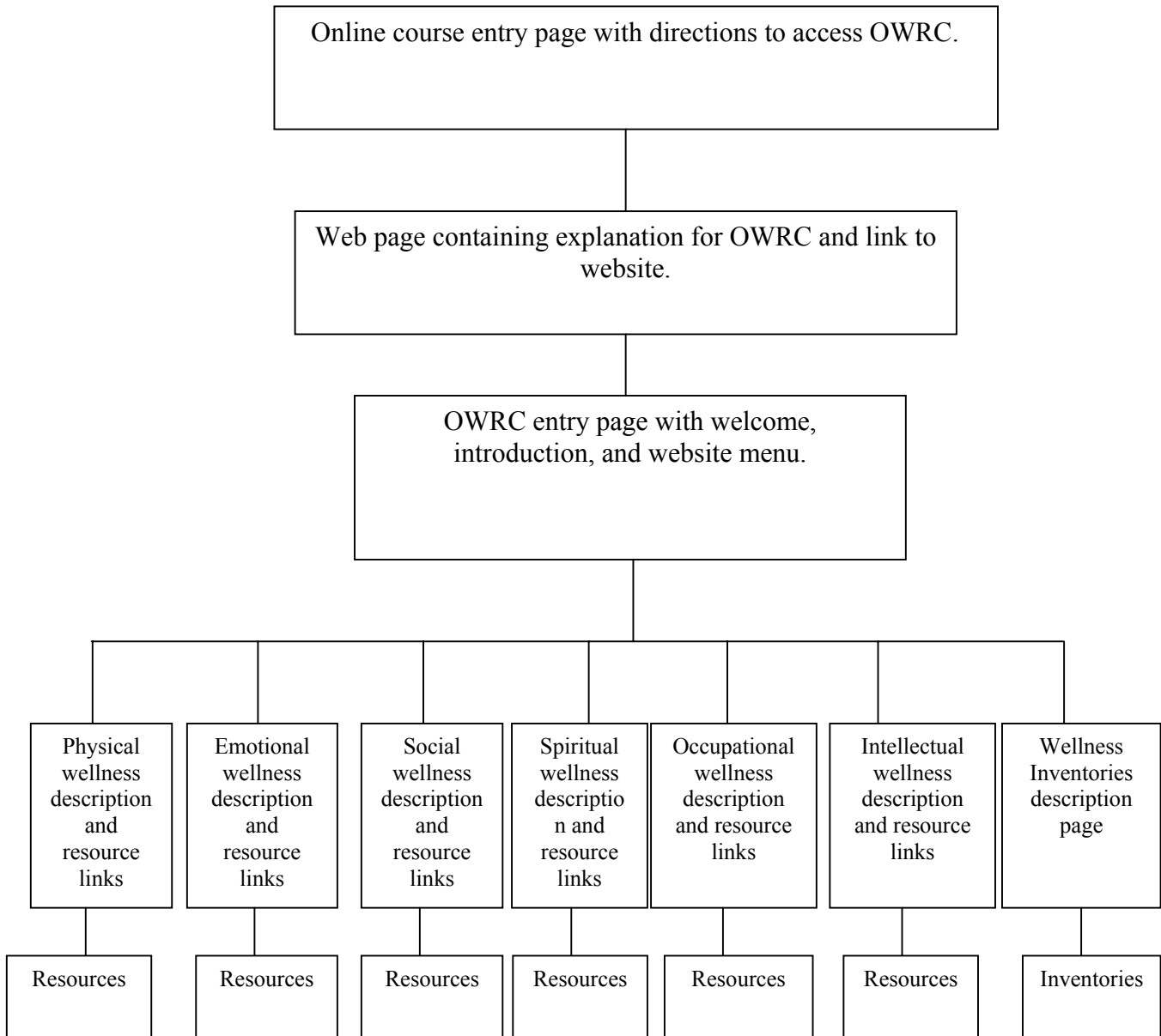
11. Healthy ways to eat out (54%) <i>physical wellness</i>	Internet
12. Lose weight safely (54%) <i>physical wellness</i>	L-GU
13. Ergonomic information (51%) <i>physical wellness</i>	Internet
14. Hobby information (51%) <i>intellectual wellness</i>	Develop
15. Online lectures (51%) <i>intellectual wellness</i>	L-GU
16. Online newspapers (51%) <i>intellectual wellness</i>	Internet
PRIORITY TWO	
17. Peer mentoring (48%) <i>social wellness</i>	Develop
18. Referral services (48%) <i>occupational wellness</i>	L-GU
19. Resume samples (46%) <i>occupational wellness</i>	L-GU
20. Employers listed with Career Services (42%) <i>occupational wellness</i>	L-GU
21. Interview tips (42%) <i>occupational wellness</i>	L-GU

### PRIORITY THREE

22. Virtual coffee shops (39%) <i>social wellness</i>	Develop
23. Regular ergonomic reminders (37%) <i>physical wellness</i>	Internet (at a price)
24. Meditation information (35%) <i>spiritual wellness</i>	Internet
25. Outline of career process (35%) <i>occupational wellness</i>	L-GU
26. Calorie calculator (33%) <i>physical wellness</i>	Internet
27. Developing work-related soft skills (33%) <i>occupational wellness</i>	Internet
28. Virtual fieldtrips (32%) <i>intellectual wellness</i>	Internet
LOWEST PRIORITY	
29. Database Alumni contacts (26%) <i>occupational wellness</i>	L-GU
30. Benefits of exercise (25%) <i>physical wellness</i>	Internet

---

## Appendix W: OWRC Navigational Map



## Appendix X: Directions for Accessing OWRC

Blackboard: Courses - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss

Address [http://www.learn.vt.edu/bin/common/course.pl?frame=top&course\\_id=\\_2911\\_1](http://www.learn.vt.edu/bin/common/course.pl?frame=top&course_id=_2911_1) Go Links »

Virginia Tech Courses Online Course Support University Resources University Computing Support Home Help Logout

COURSES > DEV\_SSCHER\_1\_200107

Announcements Course Information Staff Information Course Documents Assignments Books Communication Virtual Classroom Discussion Board Groups External Links Tools

Resources Course Map Control Panel

**Announcements**

VIEW TODAY VIEW LAST 7 DAYS VIEW LAST 30 DAYS VIEW ALL

September 24 - October 1, 2001

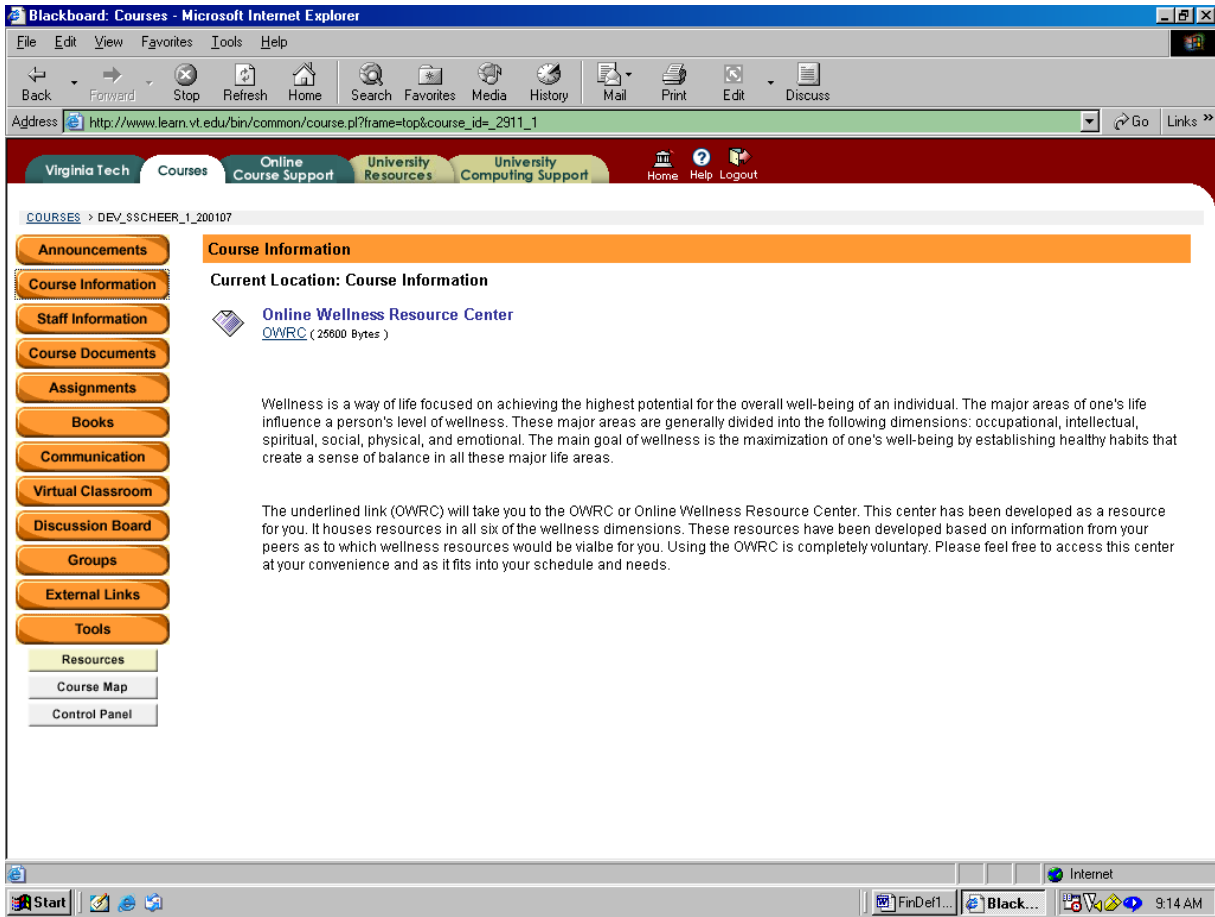
**Mon, Oct 01, 2001 -- Remember to visit the OWRC!**  
Your course contains an OWRC, or Online Wellness Resource Center. Please access it under the course information menu! Posted by Stephanie Scheer

POWERED BY  
**Bb**  
Blackboard  
www.blackboard.com  
Copyright © 1997-2001 Blackboard Inc. All Rights Reserved.

Done Internet

Start FinDef1... Black... 9:15 AM

# Appendix Y: Explanation of OWRC



## Appendix Z: Entry Page of OWRC-Blackboard

The screenshot shows a Microsoft Internet Explorer browser window displaying the Blackboard entry page for the Online Wellness Resource Center (OWRC). The browser's address bar shows the URL: [http://www.learn.vt.edu/bin/common/course.pl?frame=top&course\\_id=2911\\_1](http://www.learn.vt.edu/bin/common/course.pl?frame=top&course_id=2911_1). The page header includes navigation links for Virginia Tech, Courses, Online Course Support, University Resources, and University Computing Support. A left-hand navigation menu contains buttons for Announcements, Course Information, Staff Information, Course Documents, Assignments, Books, Communication, Virtual Classroom, Discussion Board, Groups, External Links, Tools, Resources, Course Map, and Control Panel. The main content area features the title "Online Wellness Resource Center" and a welcome message: "Welcome! To the OWRC. Wellness is a way of life focused on achieving the highest potential for the overall well-being of an individual. The major areas of one's life influence a person's level of wellness. These major areas are generally divided into the following dimensions: occupational, intellectual, spiritual, social, physical, and emotional. The main goal of wellness is the maximization of one's well-being by establishing healthy habits that create a sense of balance in all these major life areas. This website has been developed based on your indicated wellness needs. To access any of these resources click on any of the six dimensions to access that dimension's resource page. The star in the center takes you to an online wellness inventory to access your present wellness level." Below the text is a diagram consisting of a large hexagon divided into six sections, each labeled with a dimension of wellness: Occupational, Intellectual, Spiritual, Social, Physical, and Emotional. In the center of the hexagon is a black six-pointed star with the word "inventories" written across it.

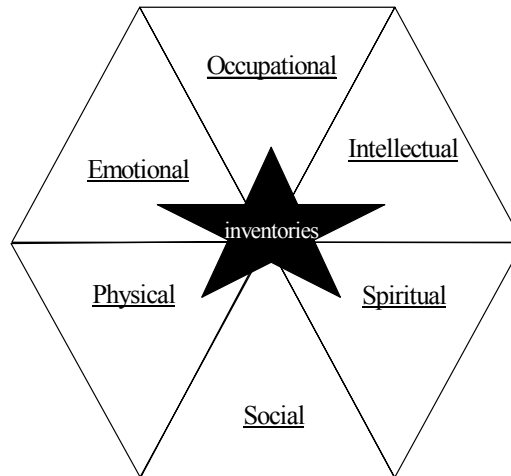
## Appendix AA: Entry Page of OWRC-storyboard

# Online Wellness Resource Center

Welcome! To the OWRC.

Wellness is a way of life focused on achieving the highest potential for the overall well-being of an individual. The major areas of one's life influence a person's level of wellness. These major areas are generally divided into the following dimensions: occupational, intellectual, spiritual, social, physical, and emotional. The main goal of wellness is the maximization of one's well-being by establishing healthy habits that create a sense of balance in all these major life areas. This website has been developed based on your indicated wellness needs.

To access any of these resources click on any of the six dimensions to access that dimension's resource page. The star in the center takes you to an online wellness inventory to access your present wellness level.




### Page description:

This is the OWRC entry page. The contents of this page should include:

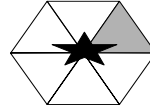
1. An introduction to the website and its contents. This visual example provides an abbreviated example of what an introduction would look like.
2. Links to the six Wellness dimension pages.
3. A link to an online wellness inventory.

## Appendix BB: Occupational Wellness Storyboard

<p style="text-align: center;"><b>O c c u p a t i o n a l W e l l n e s s</b></p> <p style="text-align: center;"><u><a href="#">Return to main menu</a></u></p> <p style="text-align: center;">Occupational wellness is the preparation for work in which one will gain personal satisfaction and find enrichment in one's life through work. It is also related to one's attitude about work. Please click on any of the following resource links for occupational wellness maintenance.</p> <p style="text-align: center;">(list links here-see description below)</p> 
<p>Page description: This is the Occupational Wellness resource page. This page should contain:</p> <ol style="list-style-type: none"><li>1. A description of Occupational Wellness.</li><li>2. Links to Occupational Wellness resources.</li><li>3. A link to return to the main menu page.</li></ol> <p>The following represent the resource obtained based on this study's needs assessment:</p> <p><b><u>Priority I</u></b> SALARY INFORMATION <a href="http://www.career.vt.edu/FOLLOWUP/POSTGRAD.html">http://www.career.vt.edu/FOLLOWUP/POSTGRAD.html</a> (at L-GU, but only has salary information for undergrads) <a href="http://www.jobweb.com/employ/salary/default.cfm">http://www.jobweb.com/employ/salary/default.cfm</a> (general public web site with salary information) OPEN JOBS <a href="http://www.career.vt.edu/JOBSEARC/CARJOBS.html">http://www.career.vt.edu/JOBSEARC/CARJOBS.html</a> and <a href="http://www.career.vt.edu/JOBSEARC/WebJobsonline.htm">http://www.career.vt.edu/JOBSEARC/WebJobsonline.htm</a> (provides information about specific jobs as well as links to job search websites.)</p> <p><b><u>Priority II</u></b> REFERRAL SERVICE <a href="http://www.career.vt.edu/jobsearc/crswrb.html">http://www.career.vt.edu/jobsearc/crswrb.html</a> (a referral service for L-GU students provided by the career center) RESUME SAMPLES <a href="http://www.career.vt.edu/jobsearc/jobspg1.htm#Resumes%20and%20vitae">http://www.career.vt.edu/jobsearc/jobspg1.htm#Resumes%20and%20vitae</a> (provides information for developing a resume or curriculum vitae) INTERVIEW TIPS <a href="http://www.career.vt.edu/jobsearc/jobspg1.htm#FACE%20TO%20FACE%20WITH%20EMPLOYERS">http://www.career.vt.edu/jobsearc/jobspg1.htm#FACE%20TO%20FACE%20WITH%20EMPLOYERS</a> (provides information regarding the entire interview process) CURRENT EMPLOYERS <a href="http://www.career.vt.edu/JOBSEARC/carsearch.htm">http://www.career.vt.edu/JOBSEARC/carsearch.htm</a> (database of current job listening)</p> <p><b><u>Priority III</u></b> OUTLINE CAREER PROCESS <a href="http://www.career.vt.edu/CARPLANN/decision.html">http://www.career.vt.edu/CARPLANN/decision.html</a> (outlines the entire process for determining a career, may need to be modified for graduate students)</p> <p><b><u>Priority IV</u></b> DATABASE ALUMNI CONTACTS <a href="http://www.career.vt.edu/vtcl99/asp/default.asp">http://www.career.vt.edu/vtcl99/asp/default.asp</a> (a career link for L-GU students to contact alumni in the field)</p>

## Appendix CC: Intellectual Wellness Storyboard

### Intellectual Wellness



[Return to main menu](#)

Intellectual wellness encourages creative, stimulating mental activities. An intellectually well person uses the resources available to expand his or her knowledge and improve skills along with expanding his or her potential for sharing with others. A person who is intellectually well focuses on a variety of interests within the university community and the larger community.

(list links here-see description below)

#### Page description:

This is the Intellectual Wellness resource page. This page should contain:

1. A description of Intellectual Wellness.
2. Links to Intellectual Wellness resources.
3. A link to return to the main menu page.

The following represent the resources obtained based on this study's needs assessment:

#### **Priority I**

##### HOBBY INFORMATION

This needs to be based on interest of learners, i.e. need to determine their interest and hobbies

##### ONLINE LECTURES

<http://alumni.iddl.vt.edu/> (short, non credit courses that are non credit and already online, policies need to be made regarding student access)

##### ONLINE NEWSPAPERS

<http://www.onlinenewspapers.com/> (World's largest listing of online newspapers links to more than 5000 newspapers on the web.)

#### **Priority II**

None

#### **Priority III**

##### VIRTUAL FIELD TRIPS

<http://www.uen.org/utahlink/tours/> (offers a variety of field trips is geared for k-12, but the areas offer ideas for further creation)

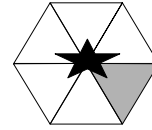
#### **Priority IV**

None

## Appendix DD: Spiritual Wellness Storyboard

### Spiritual Wellness

[Return to main menu](#)



Spiritual wellness involves seeking meaning and purpose in human existence. It includes the development of a sense of understanding and appreciation for one's place in life.

(list links here-see description below)

#### Page description:

This is the Spiritual Wellness resource page. This page should contain:

1. A description of Spiritual Wellness.
2. Links to Spiritual Wellness resources.
3. A link to return to the main menu page.

The following represent the resources obtained based on this study's needs assessment:

#### **Priority I**

None

#### **Priority II**

None

#### **Priority III**

MEDITATION INFORMATION

<http://www.meditationcenter.com/> (provides information and practices)

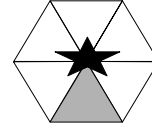
#### **Priority IV**

None

## Appendix EE: Social Wellness Storyboard

### Social Wellness

[Return to main menu](#)



Social wellness results in contributions to one's human and physical environment for the common welfare of one's community. It emphasizes the interdependence with others and includes the pursuit of harmony in one's family life.

(list links here-see description below)

#### Page description:

This is the Social Wellness resource page. This page should contain:

1. A description of Social Wellness.
2. Links to Social Wellness resources.
3. A link to return to the main menu page.

The following represent the resources obtained based on this study's needs assessment:

#### **Priority I**

##### PHYSICALLY MEET CLASSMATES

Must be developed-course specific, if not possible, due to distance of physical separation incorporate as many opportunities for learner/learner synchronous interaction as possible. These activities could include interactive video conferencing between students, audio conferencing, and online chats.

#### **Priority II**

##### PEER MENTORING

Must be developed-course specific

#### **Priority III**

##### VIRTUAL COFFEES HOPS

Must be developed-course specific

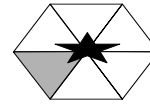
#### **Priority IV**

None

## Appendix FF: Physical Wellness Storyboard

### Physical Wellness

[Return to main menu](#)



Physical wellness encourages regular physical activity to achieve cardiovascular fitness. It also emphasizes the importance of balanced nutrition and discourages the use of tobacco, drugs and excessive alcohol consumption. It encourages consumption and activities that contribute to overall wellness.

(list links here-see description below)

#### Page description:

This is the Physical Wellness resource page. This page should contain:

1. A description of Physical Wellness.
2. Links to Physical Wellness resources.
3. A link to return to the main menu page.

The following represent the resources obtained based on this study's needs assessment:

#### **Priority I**

##### EXERCISE PLANS

<http://exercise.about.com/mbody.htm> (provides extensive information regarding exercise for beginners to advanced)

##### MEAL RECIPIES

<http://www.minutemeals.com/pages/recipes/healthy/healthy.htm> (provides quick and healthy meal recipes)

##### NUTRITIONAL INFORMATION

Re-purpose for online learners, currently available as individual consultation service for on campus students.

##### EATING OUT

[http://www.thriveonline.oxygen.com/weight/dining\\_out/](http://www.thriveonline.oxygen.com/weight/dining_out/) (information on how to eat out and be healthy)

##### LOSE WEIGHT

Re-purpose for online learners, currently available as individual consultation service for on campus students.

#### **Priority II**

None

#### **Priority III**

##### REGULAR ERGONOMIC REMINDERS

Available online, but at a price (<http://www.vision.net.au/~macsol/ergo.htm>)

##### CALORIE CALCULATOR

<http://www.career.vt.edu/CARPLANN/decision.html>

#### **Priority IV**

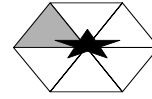
##### BENEFITS OF EXERCISE

<http://www.timeforfitness.com/article1002.html> (lists 25 benefits of exercise)

## Appendix GG: Emotional Wellness Storyboard

### Emotional Wellness

[Return to main menu](#)



Emotional wellness emphasizes an awareness and acceptance of one's feelings. Emotional wellness includes the degree to which one feels positive about oneself and life. It includes the capacity to manage one's feelings and related behaviors including the ability to realistically assess one's limitations as well as effectively coping with stress. The emotionally well person maintains satisfying relationships with others.  
(list links here-see description below)

#### Page description:

This is the Emotional Wellness resource page. This page should contain:

1. A description of Emotional Wellness.
2. Links to Emotional Wellness resources.
3. A link to return to the main menu page.

The following represent the resources obtained based on this study's needs assessment:

#### **Priority I**

IMPROVING CONCENTRATION AND MEMORY

<http://www.ucc.vt.edu/>

RELAXATION TIPS

Re-purpose for online learners, currently available for on campus students through workshops.

<http://www.kaiserpermanente.org/toyourhealth/hottopics/relax/> (provides detailed information regarding relaxation)

STRESS MANAGEMENT

Re-purpose for online learners, currently available for on campus students through workshops

<http://www.kaiserpermanente.org/toyourhealth/hottopics/stress/index.html>

(information about the causes of stress and how to manage it).

#### **Priority II**

None

#### **Priority III**

None

#### **Priority IV**

None

## Appendix HH: Tentative OWRC Project Timeline

Month	Task
January 2002	<p>Organize and brief development team and assign project roles and tasks</p> <p>Create project timeline</p> <p>Develop navigational chart for web site</p> <p>Begin priority one resource development and implementation</p>
February/March 2002	<p>Continue with priority one resource implementation, development should be complete.</p> <p>Begin priority two resource development and implementation.</p> <p>Begin formative evaluation of OWRC</p>
March 2002	<p>Continue with priority two resource implementation, development should be complete.</p> <p>Begin priority three resource development and implementation.</p> <p>Continue formative evaluation of OWRC</p>
March/April 2002	<p>Continue with priority two resource implementation, development should be</p>

Month	Task
	complete. Begin priority three resource development and implementation. Continue formative evaluation of OWRC
April 2002	Continue with priority three resource implementation, development should be complete. Begin lowest priority resource development and implementation. Continue formative evaluation of OWRC
April 2002	Make final revisions
May 2002	Conduct field test of OWRC prototype
August 2002	Make modifications based on field test results/ present to stakeholders Implement final product

## **Project Title**

Online Wellness Resource Center (OWRC) Development

---

## **Client**

Institute for Distance and Distributed Learning (CDEO)  
at Land-Grant University

Office of Student Affairs at Land-Grant University

## **Production Team**

Project Manager  
Graphic Designer  
System Administrator  
Content Developer  
Subject Matter Experts

---

## Executive Summary

The primary purpose of this project is to provide centralized student support services to distance learners at Land-Grant University, accessible within their online course. The literature has identified an instructional design gap, indicating that readily accessible student support services are a necessary but underdeveloped component of distance education. The literature also recognized the concept of wellness as having potential value in association with student support services for distance learners. A needs assessment was conducted to determine whether L-GU distance learners wanted access to online wellness resources within their online course, and if so, which specific resources did they deem viable wellness resources. The needs assessment data analysis indicated that learners were interested in having access to wellness resources. The analysis also provided a list of wellness resources that these learners considered meaningful.

The proposed OWRC, Online Wellness Resource Center will focus on developing these resources and making them accessible to learners within their online course. This project is being funded jointly by the Institute for Distance and Distributed Learning (CDEO) and the Office of Student Affairs. This development process will include actual wellness resource development as well as collecting and re-purposing those resources already available through student support services units at L-GU and the Internet. This nine month project will produce a final deliverable product, ready for implementation in the Fall 2002 semester.

## Introduction

### ***Background***

Distance education has become a major form of learning and teaching within the United States; more than 70% of colleges and universities offer courses or programs delivered at a distance (Connick, 1999). As more opportunities for learning at a distance become available, ensuring the quality of such educational experiences will continue to increase in importance.

One determining factor of quality concerns the student support services available to distance learners. Student support services include an entire range of institutional programs and resources that support student learning and personal development (Kovel-Jarboe, 1997). These services are recognized as being essential to any institution of higher education (Beede & Burnett, 1999). All learners benefit from the availability of quality support services; due to their geographic separation from the host institution, distance learners' access to these services is especially important (Chute, Thompson, & Handcock, 1999). Nunan (1992) states that “the totality of efforts to support students can be appraised in terms of the quality of the resulting education at a distance” (p. 3).

Accreditation committees also support the incorporation of support services within the context of distance learning environments (Commission on Colleges of the Southern Association of Colleges and Schools [SACS], 1998). Regional accrediting associations throughout the United States have agreed upon a set of guiding principles that all institutions engaging in distance education must adhere to. The Commission of the Southern Association of Colleges and Schools requires that institutions engaging in distance education activities provide students at a distance with learning resources and services, including support services. These support services should include the “areas of admission, skills assessment, course registration, records maintenance, academic advising, counseling, etc.” (SACS, 1998).

Unfortunately, student support services are often an underdeveloped or entirely overlooked component of the distance learning environment (Peters, 1998). These services are often neglected because they are “taken for granted” (Hardy, 1999, p. 50) in traditional university environments. However, Krauth (1999) maintains that students enrolled in distance education programs need the same kinds of student services as on-campus students, but they expect these services to meet their needs for flexibility and convenience. Some special needs also arise based on their isolation and the fact that they depend heavily on technology for learning and accessing resources. (p. 13)

One element that is rarely addressed directly in the literature regarding general student support services for distance learners concerns services and resources addressing the “extracurricular needs” of distance learners. These needs relate to the affect that a variety of life issues such as employment, job stability, work-load, family responsibilities, health, and social interests and obligations have on distance learners (Moore & Kearsly, 1996). Gibson (1993) explains that learning within distance education is the result of many

overlapping spheres of influence. Distance learners play a variety of roles other than “student,” each with its own set of responsibilities and all of which directly influence learning at a distance. Moore and Kearsely (1996) state that acknowledging these roles and extracurricular needs of distance learners is essential for assuring learners’ success in a distance learning environment. Sewart (1992) stresses the need for a broad range of student support services to meet these varied needs, stating that “the greater the input to the provision of student support services, the greater the success rate” (p. 9) of the learners.

This diverse combination of needs necessitates providing distance learners with specifically conceived approaches to student support services. These types of resource offerings are critical to these learners’ success (Krauth, 1999). However, determining the specific combination of services and the means by which to make these services available to distance learners is challenging. One approach attempting to meet this challenge focuses on incorporating wellness resources into a distance delivered course's instructional design .

*Mens sans in corpore sano* (a sound mind in a sound body) has long been a byword of liberal education (Johnson & Wernig, 1986). This Latin phrase embodies the philosophy of modern student affairs personnel in higher education whose goal has been the development of the student as a whole person (Leafgren & Elsenrath, 1986). This philosophy, in turn, is consistent with the concept of wellness and has been adopted by student affairs personnel in higher education. “Interest and enthusiasm for campus recreation and wellness programs pervade the college scene today” (Leafgren & Elsenrath, 1986, p. 3). Hermon and Hazler (1999) state that “the increasing creation of wellness programs in higher education are evidence of institutional efforts to improve the quality of life, psychological well-being and holistic development of students” (p. 339).

The university environment provides a setting in which attitudes and beliefs held by students upon entering can be challenged and modified. The introduction of a total wellness program has the potential to influence “positive lifestyle choices, making possible the achievement and maintenance of optimal wellness” (Johnson & Wernig, 1986). Career interest inventories, test taking strategies, stress management, time management, nutritional information and avenues for spiritual growth are all viable wellness resources. These services also address the extracurricular needs expressed by distance learners.

In the context of a distance learning environment, a course's instructional design provides a means by which learners may conveniently gain access to these wellness resources. Krauth (1999) asserts that it is important to consider learner access when designing student support services “so as not to disenfranchise the very students intended to be served through distance education.... Distance learners want to be as connected to campus as possible and to feel that their needs are being considered” (p. 14). Kemp, Morrison and Ross (1996) have recognized such an approach and have incorporated support services directly into their instructional design model.

However, while the inclusion of wellness resources within the instructional design of a course taught at a distance could potentially serve as a means for

bringing student support services to distance learners, no wellness component, or prototype, has been developed to house these resources. Exploring this issue has, therefore, become necessary.

### ***Opportunity Statement***

A needs assessment was conducted to establish a valid need for wellness resources. This having been achieved, the development of the OWRC will provide L-GU with the opportunity to further investigate this issue.

### ***Audience***

L-GU graduate student online learners are the intended audience for the OWRC. Based on the data gathered during the needs assessment, these learners consider themselves to possess those characteristics necessary to succeed as distance learners. These characteristics include having strong time management skills, being able to work independently, being comfortable with technology and the ability to express ideas both orally and in writing.

### ***Goal***

The goal of this development project is to produce an online wellness resource center, housing wellness resources representing all the six dimensions of wellness, that is accessible within an online course.

### **Strategy**

#### ***Information Presentation***

The content will be developed in Dreamweaver ®, a web development tool.

#### ***Student Participation***

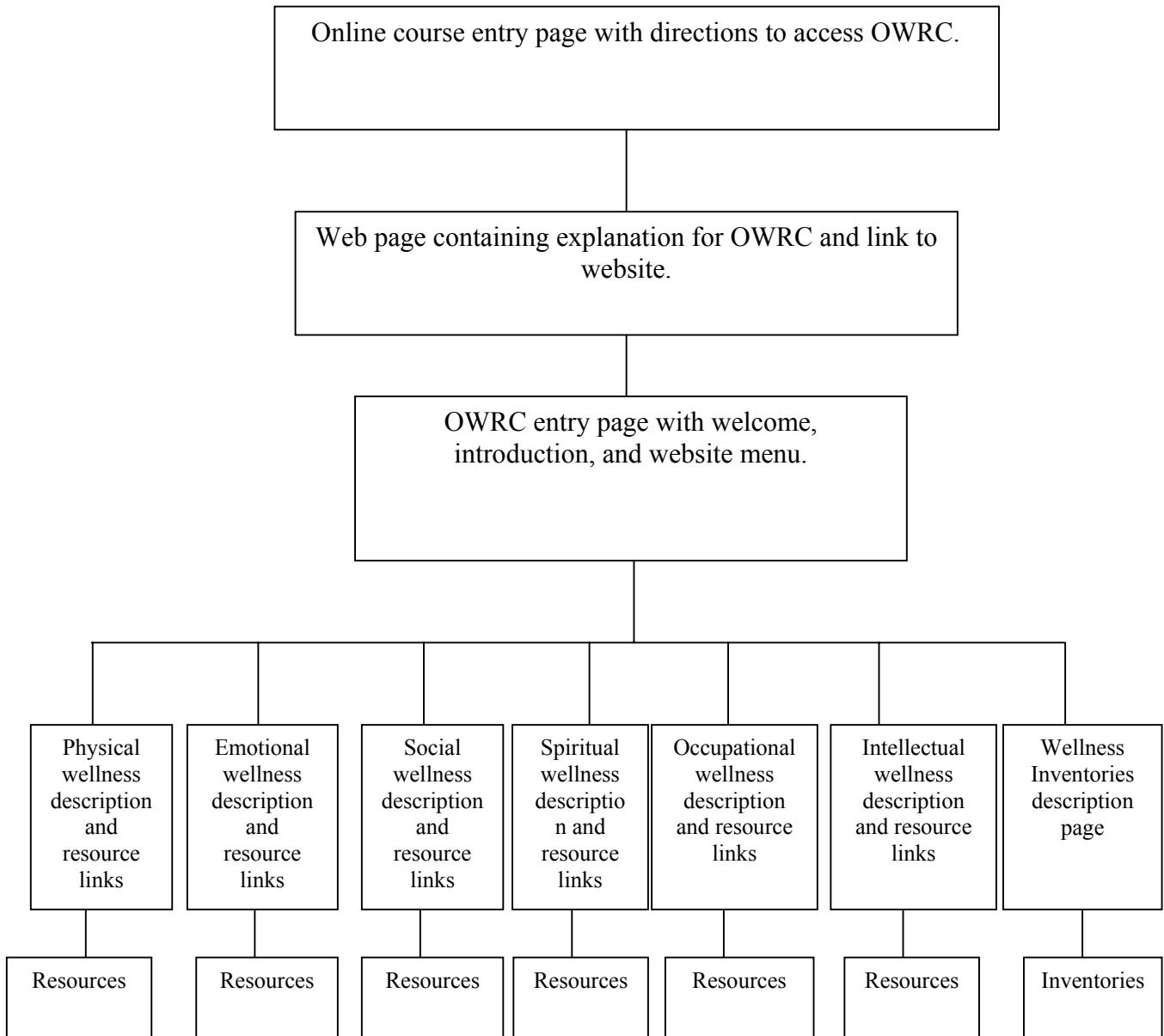
Learner usage of the OWRC is completely voluntary. They may access this resource center from within their online course. The majority of the resources housed within the OWRC are intended for individual use, but resources such as the proposed threaded discussion, and peer mentoring will provide learners opportunities to interact with fellow online colleagues.

#### ***Evaluation Strategy***

The project manager will develop formative evaluations of the OWRC as well as a field test of the final prototype. These evaluations have been incorporated into the OWRC development timeline and they will follow the formative evaluation guidelines presented by Tessmer (1993). After the

prototype production is completed, the online wellness resource center will be field-tested. A field test is a situational evaluation; the product is evaluated in the same environment in which it will ultimately be used (Tessmer, 1993). The OWRC will be field tested into the instructional design of three graduate distance learning courses for the first Summer 2002 semester. Modifications will be made and the final product will presented to stakeholders. The OWRC will be ready for implementation in the Fall 2002 semester.

## Navigation Map



## Resources

### ***Design phase***

#### **Staff**

Project manager  
Content developer  
Subject matter experts  
Graphic Designer

#### **Hardware**

Pentium II 450 with Internet Access  
Powermac G4 Dual/533s, with 640 megabytes RAM, 40-gigabyte hard-drive, dual 19-inch monitors, and a second video card

#### **Software**

Macromedia Dreamweaver 4 ®  
Adobe Photoshop 6®  
Microsoft © Internet Explorer  
Microsoft © Office 2000

### ***Development phase***

#### **Staff**

Project manager  
Content developer  
Graphic Designer  
Systems Administrator

#### **Hardware**

Powermac G4 Dual/533s, with 640 megabytes RAM, 40-gigabyte hard-drive, dual 19-inch monitors, and a second video card

#### **Software**

Macromedia Dreamweaver 4 ®  
Adobe Photoshop 6®  
Microsoft © Internet Explorer

### ***Delivery and Maintenance***

#### **Staff**

Project manager  
(or designated CDEO course developer, after project implementation Fall, '01)

#### **Hardware**

PowerEdge 6400, Pentium III Xeon 700MHz/1MB

#### **Software**

Macromedia Dreamweaver 4 ®

## Program Management

### *Timeline*

Month	Task
January 2002	Organize development team, brief team and assign project roles and tasks Create project timeline Develop navigational chart for web site Begin priority one resource development and implementation
February/March 2002	Continue with priority one resource implementation, development should be complete. Begin priority two resource development and implementation Begin formative evaluation of OWRC
March 2002	Continue with priority two resource implementation, development should be complete. Begin priority three resource development and implementation Continue formative evaluation of OWRC
March/April 2002	Continue with priority two resource implementation, development should be complete. Begin priority three resource development and implementation Continue formative evaluation of OWRC
April 2002	Continue with priority three resource implementation, development should be complete. Begin lowest priority resource development and implementation Continue formative evaluation of OWRC
April 2002	Make final revisions
May 2002	Conduct field test of OWRC prototype
August 2002	Make modifications based on field test results/ present to stakeholders Implement final product

### *Roles and Responsibilities*

Role	Description of Responsibilities
Project Manager	<p>Communicating the purposes of the project to all involved individuals</p> <p>Assigning project tasks and job responsibilities?</p> <p>Developing schedules and ensuring that deadlines are met for completion of all project components.</p> <p>Arranging for resources as needed (e.g. media production, evaluation).</p> <p>Approving checklists and checking budgetary expenses.</p> <p>Ensuring that ongoing evaluations take place at specified approved points.</p> <p>Regularly reporting status of project to stakeholders.</p> <p>Reporting when product is ready for use.</p> <p>Reporting results after product has been initially implemented.</p>
Graphic Designer	Create visual look of website
Systems Administrator	<p>Assist the project manager with uploading the OWRC components to the CDEO web server where it will be initially housed. The systems administrator will also assist the project manager in collecting OWRC user data during the formative evaluation and field test phases of this development project.</p>
Content Developer	<p>Responsible developing all wellness resources that are not presently available as well as reviewing those existing resources to determine whether they need to be re-purposed.</p>
Subject-matter expert	<p>Work with the content developer to develop wellness resources.</p>

## ***Budget***

Item	Description	Cost
Hardware		
PCs	Pentium II 450 processor with 128 megs of ram	\$1200.00
	Powermac G4 Dual/533s, with 640 megabytes RAM, 40-gigabyte hard-drive, dual 19-inch monitors, and a second video card	\$3000.00
Servers	PowerEdge 6400, Pentium III Xeon 700MHz/1MB	\$9500.00
Software		
Word processing pkg.	Microsoft Office 2000	\$350.00
Browser	Microsoft Internet Explorer	\$0.00
Web development pkg.	Macromedia Dreamweaver 4	\$300.00
Graphics pkg.	Adobe Photoshop 6	\$610.00
Tracking/reporting software	Analog	\$0.00
Staff: Internal		
Project Manager	Full time nine-month, salaried position	\$40,000.00
Graphics Designer	Average of 10 hrs/week for 36 weeks @ \$20.00 an hour	\$3600.00
System Administrator	Average of 5 hrs/week for 36 weeks @ \$20.00 an hour	\$3600.00
Content Developer	(project manager will serve in this position)	
Subject Matter expert	Pro bono	\$0.00
TOTAL		\$54,960

## ***Risks and Dependencies***

Additional software packages may be needed during project development. Also, certain modifications in the design process may need to be made throughout the project. These changes arise as the project evolves and cannot be accounted for at the onset of a project.

## Deliverables

The finalized Online Wellness Resource Center.

### ***Files***

The stakeholders will be given access to and copies of all the OWRC files housed on the CDEO server.

### ***Documents***

All documents created for this project will be catalogued and will also be accessible on the CDEO server.

<u>Document</u>	<u>Description</u>
Monthly status reports	A Monthly status report will be submitted to the following Stakeholders <ul style="list-style-type: none"><li>• Director, CDEO</li><li>• Vice President, Student Affairs at L-GU</li></ul>

## **OWRC Project Design Document References**

Beede, M., & Burnette, D. (Eds.). (1999). *Planning for student services: Best practices for the 21st century*. Ann Arbor, MI: Society for College and University Planning.

Chute, A. G., Thompson, M. M., & Hancock, B. W. (1999). *The McGraw-Hill handbook of distance learning*. New York: McGraw-Hill.

Commission on Colleges Southern Association of Colleges and Schools (1998). *Policies procedures guidelines*. Decatur, GA: Author.

Connick, G. P. (Ed.). (1999). *The distance learner's guide*. Upper Saddle River, NJ: Prentice Hall.

Dick, W., & Carey, L. (1996). *The systematic design of instruction*. New York: Harper Collins.

Gibson, C. C. (1993). *Toward a broader conceptualization of distance education*. In D. Keegan (Ed.), *Theoretical principles of distance education* (pp. 80- 92). Oxford: Pergamon.

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). *Towards a conceptual framework for mixed-method evaluation designs*. *Educational Evaluation and Policy Analysis*, 11(2), 255, 274.

Hardy, D. (1999). *Institutional guidance for the distance learner*. In M. Boaz, E. Elliott, D. Foshee, D. Hardy, C. Jarmon, & D. Olcott, *Teaching at a distance: A handbook for instructors* (pp. 49-53). Mission Viejo, CA:

Hermon, D. A., & Hazler, R. J. (1999). *Adherence to a wellness model and perceptions of psychological well-being*. *Journal of Counseling & Development*, 77, 339-343.

Johnson. K. J., & Wernig. S.R. (1986). *Life directions: A comprehensive wellness program at a small college*. In F. Leafgren (Ed.), *Developing campus recreation and wellness programs* (pp. 33-41). San Fransisco: Jossey-Bass.

Kaufman, R., & English, F.W. (1979). *Needs assessment: Concept and application*. Englewood Cliffs, NJ: Educational Technology.

Kaufman, R., Rojas, A. M., & Mayer, J. (1993). *Needs assessment: A user's guide*. Englewood Cliffs, NJ: Educational Technology.

Kemp, J. E., Morrison, G., R., & Ross, S.T. (1996). *Designing effective instruction*. Upper Saddle River, NJ: Prentice-Hall.

Kovel-Jarboe, P. (1997). From the margin to the mainstream: State-level policy and planning for distance education. *New Directions for Community Colleges*, 99, 23-32.

Krauth, B. (1999). Trends in support services for distance learners. In M. Beede & D. Burnette, (Eds.), *Planning for student services: Best practices for the 21st century*. Ann Arbor, MI: Society for College and University Planning.

Leafgren, F., & Elsenrath, D. E. (1986). The role of campus recreation programs in institutions of higher education. In F. Leafgren (Ed.), *Developing campus recreation and wellness programs* (pp. 3-19). San Fransisco, CA: Jossey-Bass.

Miles, M. B., & Huberman M. A. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage.

Moore, M. G., & Kearsley, G. (1996). *Distance education: A systems view*. Belmont: Wadsworth.

Nunan, T. (1992). Student support as a factor of affecting the quality of Australian distance education: The findings of the project to investigate quality and standards in distance education. Paper presented at the Institute of Distance Education-Deakin University Monash Distance Education Centre TAFE Off Campus. (ERIC Document Reproduction Service No. ED 355 419)

Peters, O. (1998). *Learning and teaching in distance education: Analyses and interpretations from an international perspective*. London: Kogan Page.

Rossmann, G. B., & Wilson, B. L. (1991). Numbers and words revisited: Being "shamelessly eclectic." *Educational Review*, 9(5), 627-643.

Sewart, D. (1992). Student support systems in distance education. Paper presented at the World Conference of the International Council For Distance Education, Bangkok, Thailand.

## Stephanie B. Scheer

Institute for Distance  
and Distributed Learning  
Virginia Polytechnic Institute  
and State University  
Blacksburg, VA 24061  
(540) 231-8238  
sscheer@vt.edu

611 Clay Street, Apt. 1  
Blacksburg, VA 24060  
(540) 961-5372

---

---

### Education

- 2001 Ph.D. Virginia Polytechnic Institute and State University, Blacksburg, VA  
Curriculum and Instruction (Instructional Technology)  
Dissertation: The Inclusion of a Wellness Component within an  
Instructional Design Model for Distance Education
- 1998 M Ed. University of Louisville, Louisville, KY  
Education (Occupational Training and Development)
- 1995 B.A. University of Louisville, Louisville, KY  
German
- 1995 B.A. University of Louisville, Louisville, KY  
Humanities
- 1993 Universitat Trier, Trier, Gemany  
Political Science and German
- 1992 Miami University, Miami, OH  
International Studies

### Professional Experience

- 1999- present Graduate Assistant, Institute for Distance and Distributed Learning  
Virginia Polytechnic Institute and State University, Blacksburg, Virginia
- Curriculum development for graduate course in department of Instructional Technology
  - Project manager and production team member for the development of web-based distance learning courses
  - Instructor for Faculty Development Initiative (FDI) workshops on Distance and Distributed Learning, including Online course development with Blackboard, Interactive Video Conferencing using VTEL, and Audiographics using Centra. Workshops also included segments on instructional design

considerations for distance learning environments with an emphasis on repurposing course material for a distance learning context.

- Developed an online orientation for distance learning students designed to help prepare them with the tools needed to succeed in a distance environment. These tools included information pertaining to academic as well as technical support, university resources, tips for successful learning at a distance as well as a self-assessment quiz for learners to determine whether they would be viable candidates for distance learning.
- Provide general faculty training for the design, development and assessment of instruction to be delivered at a distance, both web-based and via interactive video conferencing
- Present to various campus departments, services and programs regarding the services and resources that the Institute for Distance and Distributed Learning provides and how these various campus departments, services and programs can utilize this university resource

1998 - 1999 Graduate Assistant, Department of Teaching and Learning  
Virginia Polytechnic Institute and State University, Blacksburg, Virginia

- Service faculty and staff computers, duties included hardware maintenance, software installation, user consultation, and general computer support.

1998 Intern, Staff Development and Instructional Quality Enhancement Center  
University of Louisville, Louisville, Kentucky

- Planned and conducted a needs analysis of The University of Louisville's *New Employee Orientation Program*, including interviews, field research, data collection, and focus groups, resulting in a set of final recommendations.
- Assisted with technology workshops, faculty consultations, and general computer support.

1997 - 1998 Graduate Assistant and Supplemental Instruction Leader,  
Department of Transitional Studies  
University of Louisville, Louisville, Kentucky

- Worked as a Supplemental Instruction (SI) Leader where duties included developing SI session materials, practice exams, exercises, group activities, and facilitating student interactions, writing weekly session reports, and maintaining session records.
- Tutored individual students in German, conducted practice exercises, vocabulary drills, pronunciation drills, and oral and written proficiency exercises.
- Provided technical support and assistance in the Departmental Computer Center.

- 1996 - 1997 Customer Service Associate, Planet Hollywood  
Berlin, Germany
- 1995 - 1996 Office Assistant, The Aspen Institute & Scholz and Friends Werbe Agentur  
Berlin, Germany.

### **University Service**

- 2000-2001 Graduate Representative to the Board of Visitors  
Virginia Polytechnic Institute and State University, Blacksburg, Virginia
- Responsibilities of the Graduate Student Representative include representing the needs and concerns of the graduate student constituency to the Board of Visitors as well as serving as a liaison between the Board of Visitors and the graduate student community.
  - To foster a stronger sense of community at Virginia Tech's largest extended campus graduate center in Falls Church, VA, initiated the formation of the first graduate student organization at the center.
- 2001 Student Support Services for Distance Learners Task Force  
Virginia Polytechnic Institute and State University, Blacksburg, Virginia
- Involvement with senior members of various student affairs offices to determine needed and viable student support services for distance learners at Virginia Tech.
- 2000- 2001 Graduate Student Compensation Committee  
Virginia Polytechnic Institute and State University, Blacksburg, Virginia
- Continued work with the Office of the Executive Vice President and the Graduate School to review graduate student compensation survey data to determine a list of recommendations to be submitted for consideration for the upcoming University fiscal budget.
- 2000- 2001 Graduate Education Week Committee  
Virginia Polytechnic Institute and State University, Blacksburg, Virginia
- Organized and planned activities concerning graduate students including a research symposium, appreciation day activities, and awards ceremony.

## **Publications**

Halpin, D., Lockee, B., & Scheer S. B. (2001) *Supporting distance learners: The IT studio model*. Manuscript submitted for publication.

Wilkinson, T., & Scheer, S. B. (2000) *Distance education: A holistic approach to learning*. International Graduate, 1(2), 7-8.

## **Presentations**

Wilkinson, T., Scheer, S. B., & Turrentine, C., (2001, November) *A holistic approach to distance education*. Paper presented at the annual meeting of EDUCAUSE, Indianapolis Indiana.

Scheer, S. B. (2001, April). *Characteristics of distance learners: Understanding whom we are teaching in distance education*. Paper presented at the International Conference on College Teaching and Learning, Jacksonville, FL.

Scheer, S. B., & Doolittle, P. E. (2001, April). *Transactional and psychological distance: Confronting distance learners' alienation and isolation*. Paper presented at the International Conference on College Teaching and Learning, Jacksonville, FL.

Doolittle, P. E., & Scheer, S. B. (2001, March). *Online pedagogy: The good, the bad, and the really ugly*. Paper presented at the National Lilly Conference on College Teaching - West, Lake Arrowhead, CA.

Scheer, S. B., & Doolittle, P. E. (2000, November). *Psychosocial presence: How transactional and psychological distance affect distance learners*. Paper presented at the International Online Conference: Teaching Online in Higher Education, Fort Wayne, IN.

Head, T., Moore, J., Wilkinson, T., Raby, M., Turner, S., & Scheer, S. B. (1999, November). *Ensuring the quality of instruction in the distance learning environment: The Virginia Tech vision*. Poster session presented at the annual meeting of EDUCAUSE, Pasadena, CA.

Steffey, C., Scheer, S. B., & Valentine B., (1999, April). *Web-based IT masters program for professional educators*. Paper presented at the International Conference on College Teaching and Learning, Jacksonville, FL.

## **Awards and Honors**

Order of the Gavel, Undergraduate and Graduate Leadership Honor Society  
Phi Kappa Phi, Academic Honor Society  
Golden Key International Honor Society, Academic and Service Honor Society  
University of Louisville, Dean's Scholar  
Who's Who Among Students in American Universities and Colleges

## **Professional Affiliations**

Association for Educational Communications and Technology (AECT)  
American Educational Research Association (AERA)  
William Preston Society