

CREATING LIFELONG LEARNING:
IMPLICATIONS FOR INSTRUCTIONAL DESIGN

by

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A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

Capella University

May 2008

UMI Number: 3304473

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Abstract

Thousands of the 77 million American “baby boomers” born between 1946 and 1964 celebrate their 60th birthdays every day. As the boomers approach retirement age, many will be doing anything but retiring. It is anticipated that a large percentage will seek training for a new career, explore old or new hobbies, or look to fulfill their need for social interaction through formal and informal educational settings. This research employs a methodology for exploring and revealing the motivations, needs, and barriers to learning for older adults. This study was qualitative; ten study participants, ranging in age from 61 to 85, were selected and in-depth interviews were conducted, analyzed, and synthesized. This study recognizes the participants' need to contribute and has highlighted the importance of mentorship in these lifelong learners; the lessons learned earlier in life and the mentor-relationships formed have been a huge influence in most of the study participants' lives. Instructional designers need to understand their older adult learners' need for learning, since learning with respect to need to contribute was a response from all of the participants. Instructional designers need to consider what it means to design for lifelong learning. With the results of this study, instructional designers and lifelong learning program planners are better equipped for designing learning materials and implementing programs that are suitable for older adults.

Dedication

To my dad, Hans E. Einstein.

Acknowledgments

Thank you all, family, friends, and Capella faculty, for helping me to realize this.

To my husband, Stuart Featherstone, for his patience and support.

To my sisters, Ann, Paula, Sheryl, and Jessica, for their encouragement.

To the dogs, cats, and horses for providing endless comfort and distraction.

I am both humbled and honored to have been allowed a peek into the lives of my wise research participants. Thank you all.

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CHAPTER 1. INTRODUCTION

The important thing is not to stop questioning.

—Albert Einstein

Introduction

Seventy-seven million Americans were born between 1946 and 1964, more or less (Center for Health Communication, Harvard School of Public Health, 2004). Sociologists have defined those born during that period as “baby boomers.” In the United States, the number of adults under 35 years of age has declined by more than 8.3 million and the number of adults over 50 years of age has grown by 12.2 million from 1990 to 2000. Baby boomers are turning 50 years old at a rate of one every 7 to 10 seconds. That translates into 12,000 per day, or over 4 million per year, and will continue for the next 18 years, according to the National Center for Education Statistics (2004), located within the U.S. Department of Education and the Institute of Education Sciences. The NCES is the primary federal entity for collecting and analyzing data related to education.

The world is graying. By the year 2020, more than a third of all Americans will be 50 years old, or older. By the year 2050, adults over 65 will outnumber children 14 years of age or younger (Knable, 2004). Malayter (2004) suggests that adults of retiring age will be seeking educational and training opportunities. The question then needs to be

asked, what is known about the learning motivations, needs, and barriers of these older learners? How can instructional designers best go about developing learning materials for this segment of the population?

Background of the Study

The pre-retirement education movement in the 1950s and 1960s, with the goal of preparing older adults for their retirement, introduced the idea of learning in later life. As well, by 1965 the United Nations Educational, Scientific and Cultural Organization (UNESCO) International Committee for the Advancement of Adult Education was endorsing the concept of lifelong education (Glendenning, 2000). In 1962, a group of 152 New York City retired schoolteachers founded a “scholarly” learning community in Greenwich Village at the New School for Social Research, which is now known as the New School University. This learning community was called the Institute for Retired Professionals and was the first known formal Lifelong Learning Institute (LLI). Throughout the 1960s and 1970s other colleges and universities replicated or adapted the Institute for Retired Professionals' lifelong learning model. Lifelong Learning Institutes, alternatively called Institutes for Learning in Retirement or Learning in Retirement Institutes, are organizations of older learners, sponsored by a host campus with its own special character and mission, and functioning in a particular community. A commitment to learning is the common bond among LLI members. At retirement age and beyond, many baby boomers will seek training for a new career, explore old or new hobbies, or look to fulfill the need for social interaction, and a Lifelong Learning Institute is just one option for them to consider. There is no one single “model” followed by Lifelong

Learning Institutes. Some lifelong learning programs are based on a peer learning model, with extensive class participation, while other programs are much more didactic. In the latter case, students want to be “taught” by the instructor, rather than taking on the teaching role themselves.

Since there is no one curriculum or instructional design method for a Lifelong Learning Institute, the question must then be asked, how do Lifelong Learning Institute program planners and instructional designers decide what and how to teach? Since there are no set course topics, “rules” of instruction, or instructional design methods to follow, how do program planners go about determining what an audience of older adult learners want or how best to teach them?

Statement of the Problem

The problem of older adult learner motivations and needs, and barriers to learning for older adults is not well understood. Just as pedagogy, the art and science of teaching (Knowles, 1975) has been adopted for children, and andragogy, the art and science of helping adults learn (Knowles, 1984), older adults require methodologies that will address their learning needs. Instructional designers need a methodology for uncovering these motivations, needs, and barriers, through an interview process, with members from the intended audience, which are 61 through 85 years of age.

Purpose of the Study

This study is being conducted to better understand how older adults learn. For a given older adult population, what are their perceptions of lifelong learning? What are

their motivations for learning; what are their learning needs; and what are their barriers to learning? What best practices should instructional designers use to meet the motivations and needs, and minimize or eliminate barriers to learning for older adults? How can instructional designers help older adults achieve successful learning? This research employs a methodology for exploring and revealing the motivations, needs, and barriers to learning for older adults. With the results of this study, instructional designers and lifelong learning program planners will be better equipped for designing learning materials and implementing programs that are suitable for older adults.

Rationale

Creating lifelong learning opportunities for older adults offer tremendous benefits to the individual, the organized group of learners, the institution that hosts the learning events, and the community in which the events take place. Learning opportunities and institutions, in all of their various forms, are part of what creates the soul of a community and its inhabitants. Lifelong Learning Institutes offer a unique educational opportunity in which peer learning, where learners learn from their classmates, collaborative leadership, and active member participation are fundamental. Instructional designers must have an understanding of the audience for which they are designing. A study of this type provides a model for designers and developers to follow.

Research Questions

Learner success is a key factor in any educational endeavor. The purpose of this research is to better understand, by exploration of perceptions and experiences, older-

adults' initiative-taking and responses to learning, including individual motivations, needs, and barriers. A local, older adult population from Taft and Bakersfield, California, were selected. The research questions are as follows:

1. For a given older adult population, what are their perceptions of lifelong learning? What are their motivations for learning; what are their learning needs; and what are their barriers to learning?
2. What best practices should instructional designers use to meet the motivations and needs, and minimize or eliminate barriers to learning for older adults?

Significance of the Study

As our population ages, there will be more people over the age of 65 who will continue their careers beyond retirement age. Studies have shown that a worker's half-life has decreased from seven to fourteen years to three to five years. This may suggest that in order to stay competitive in the workplace, they will need to acquire new knowledge and learn new skills (Dychtwald, 1999; Snyder 2006). Bass (1995) suggests that since older people in the United States are living longer, staying healthier, and leaving the labor force earlier than ever before, they have leisure time and are willing, able, and qualified to be productive members of society into their retirement years and beyond. One key aspect of the literature search for this research is presenting previous work in developing Lifelong Learning Institutes, paying particular attention to instructional design issues as they relate to older adult learners. The data, knowledge, and insight resulting from this study add to the somewhat small amount of literature on this segment of the learning population.

Definition of Terms

Andragogy. The art and science of helping adults learn (Knowles, 1984).

Baby boomer. Any person who was born between 1946 and 1964 (National Center for Education Statistics, 2004).

Elderhostel Institute Network. The Elderhostel Institute Network (EIN) provides resources to existing Lifelong Learning Institutes, and promotes the development of new Lifelong Learning Institutes.

EIN. An acronym for Elderhostel Institute Network (Elderhostel, 2006a, 2006b).

Heutagogy. The study of self-determined learning (Kenyon & Hase, 2000).

Geragogy. The techniques that enhance learning among older adults (Formosa, 2002).

Inquisitivism. An instructional design method that is a blended or hybrid adult learning approach from established instructional design and adult learning theories. (Harapnuik, 2004).

Lifelong learning. A term that refers to the process of learning on a chronological continuum (Mills, 1993).

Lifelong Learning Institutes. Independent learning entities, each created by a unique group of people, sponsored by a host campus with its own special character and mission, and functioning in a particular community (Elderhostel, 2006a, 2006b).

LLI. An acronym for Lifelong Learning Institute (Elderhostel, 2006a, 2006b).

Older adult. For this study, a person who is age 60 or older (author).

Pedagogy. The art and science of teaching (Knowles, 1975).

Assumptions and Limitations

Assumptions

Qualitative methods are used for gathering data through observations, interviews, and focus groups. A researcher's decision to choose a quantitative or a qualitative design is based on their own philosophy, research question(s) being asked, type of study, subjects or participants being studied, and their approach to data analyses (Gall, Gall, & Borg, 2003). Though occurring in both quantitative and qualitative, a potential disadvantage is researcher bias. Researcher bias occurs when one's personal views and perspectives affect how data are interpreted and how the research is conducted. Researchers must guard against selective observation and selective recording of information (Fleming, 2000). Researcher bias was mitigated as best as possible for this study. Data were collected and interpreted as they were intended to be communicated and understood by each research participant.

Limitations

For this qualitative research, a naturalistic, phenomenological approach was selected. As with many research projects, dissertations in particular, the research was limited by both time and money. Naturalistic research paradigms (i.e., real-world and workplace scenarios) are ideal candidates for the mix of quantitative and qualitative analyses. The strength of mixed method research lies in its ability to facilitate the study of complex phenomena in ways that cannot be fully accommodated within a single approach (Cherryholmes, 1992). Mixed method research is particularly strong when it is the goal of the research to seek convergent results (triangulation); explore interconnected and/or distinct aspects of a phenomenon (complementarily); examine similarities, contradictions,

and new perspectives (initiation); use methods in a ways that complement one another (e.g., interviews used to inform the development of a survey instrument); and add breadth and scope to a project (Green, Caracelli, & Graham, 1989). Finally, mixed methods allow the researcher to synthesize meaning in individuals and in particulars.

However, a mixed methodology approach may generate an inordinate amount of data, such that the researcher may not be able to recognize nuances or that the results were contradictory. Another concern is that mixed methods may yield incongruent results, such that the researcher may find himself/herself reporting seemingly conflicting findings to program staff, policy makers, and other stakeholders.

Nature of the Study

“Baby boomers, many of whom have devoted their adult lives to the advancement of their professional careers, will need to identify ways to successfully transition from previous roles to new and different ones” (Malami, 2002, Dissertation Abstract). This requires learner motivation as well as instructor and instructional designer understanding of learner styles. Upon reaching retirement age, older adults may not only desire to continue working, they will most likely be necessary for the infrastructure of our competitive workforce. Therefore older adult workers will continue to train, retrain, and upgrade their skills throughout their working lives, thus becoming older adult learners. “Because meaning-making continues to be an essential human need throughout the adult life span, those whose identities are tied to their vocations will need to reassess themselves and establish their post-retirement identity” (Malami, 2002, Dissertation Abstract).

The focus of this research was on the learning needs and motivations of older adults. Barriers to learning were also investigated. This study was qualitative; ten study participants were selected and in-depth interviews were conducted, analyzed, and synthesized. Participation in this study was voluntary; initial contacts were made through the Soroptimist International of Taft, California. The results from this study will assist instructional designers in creating learning materials for older adult learners.

In this naturalistic, phenomenological research approach, the researcher's goal was to construct a better understanding of the meaning and needs of aging, defined by those who are aging. Like Fleming's (2000) research, this study attempts to build on the previous research that asks the hard questions that relate to life satisfaction and self-actualization, where learning is one of the aspects of aging well.

Organization of the Remainder of the Study

The study is presented in five chapters. Chapter 1 presents the nature of the study, a description of the concerns that led to the study, a background and definition of terms, and the research questions addressed by the study. Chapter 2 consists of a review of literature pertinent to the study including adult learning theory, instructional design theory, background in Lifelong Learning Institutes and Elderhostel, and curriculum development and instructional design approaches for older adult learners. As well, gaps in the literature are discussed. The research methodology employed for the study including the design, approach to data collection, and data analysis techniques are in Chapter 3. Chapter 4 presents the individual case studies for each participant in the study. These cases highlight the motivations for learning, learning needs, and barriers to

learning as expressed by the study participants. Chapter 5 provides a summary, conclusions, and recommendations for further research.

CHAPTER 2. LITERATURE REVIEW

The only source of knowledge is experience.

—Albert Einstein

Introduction

This literature review focuses on adult learning theory and instructional design theory, providing an overview of the theoretical frameworks that have shaped these fields. Adult learning theory topics, including andragogy, self-directed learning, peer learning, heutagogy, and geragogy, are presented and are followed by the concepts of Lifelong Learning Institutes. Research in adult learning theory as it applies to an older adult audience is then presented. Next, the three primary theoretical perspectives that determine the instructional methods used in instructional design theories: behaviorism, cognitivism, and constructivism are outlined. The chapter concludes with a discussion of adult learning theory as it applies to instructional design.

Adult Learning Theory

Andragogy

The concept of andragogy had been around since the 1830s; however, Knowles (1975) popularized its usage. Andragogy is an attempt to develop a theory specifically for

how adults learn. The word *andragogy* has been adapted to refer to the art and science of helping adults learn. In contrast, the term pedagogy strictly denotes the art and science of teaching children. In practice, pedagogy has become synonymous with teaching or with teacher-centered or teacher-focused models, while andragogy has been broadened by some people to include any learner-focused model, with the age of the learner not being a factor (Brookfield, 1994; Cross, 1988; Knowles, 1975).

Dewey (1916, 1966) emphasized learning through various activities and experiences rather than traditional teacher-focused curriculum. He ascribed to a learner-focused education philosophy, and held that learning is life, not just preparation for life. Lindeman (1926, 1989) concerned himself with studying how adults learn. Like Dewey (1916, 1966), Lindeman (1926, 1989) emphasized the importance of experience to adult learners, going so far as to put experience on the same level as textbooks used in traditional classroom settings. He believed that, “Adults have a deep need to be self-directing; therefore the role of the teacher is to engage in a process of mutual inquiry” (Lindeman, 1926, 1989, p. 16). Skinner (1974) focused on the notion of positive and negative reinforcement as it affects human behavior in contrast to Knowles (1975) who, affected by humanist ideas (cognitive and affective processes), cultivated the term andragogy and the assumptions about adults as learners. Consequently, andragogy came to be understood that adults needed to be taught in a manner fitting the development needs of an adult, which is different from children's needs. Andragogy usually is cited in educational texts as the way adults learn. Cranton (1992) defines it as “... the set of activities or experiences engaged in by adults which leads to change in thinking, values

or behavior” (p. 3). Andragogy is now an accepted adult learning model (Brookfield, 1994; Cranton, 1992; Cross, 1988; Knowles, 1984).

Andragogy is defined by the following five characteristics of adult learners:

1. Self-concept: As a person matures his self concept moves from one of being a dependent personality toward one of being a self-directed human being.
2. Experience: As a person matures he accumulates a growing reservoir of experience that becomes an increasing resource for learning.
3. Readiness to learn: As a person matures his readiness to learn becomes oriented increasingly to the developmental tasks of his social roles.
4. Orientation to learning: As a person matures his time perspective changes from one of postponed application of knowledge to immediacy of application, and accordingly his orientation toward learning shifts from one of subject-centeredness to one of problem centeredness.
5. Motivation to learn: As a person matures the motivation to learn is internal (Knowles, 1984, p. 12).

Knowles (1975, 1984) conceded that four of the five andragogy assumptions apply equally to adults as well as children. Since children have fewer pre-conceived beliefs and experiences than adults, children have less to relate to and fewer biases. “Learners acquire new knowledge or skill by applying what they have learned and making meaning of their experience” (Rothwell & Kazanas, 1998, p. 229).

Self-Directed Learning

One of the fundamental assumptions of Knowles' (1975) model of andragogy is that adults have a need to be self-directed. Cranton (1994) indicates that this notion of

adults as self-directed is often interpreted as a characteristic of wanting to direct one's own learning. Mezirow (1985, 1991, 2000) understands self-directed learning as a process that leads to change and growth rather than as a technical task of designing a learning program. In reality self-directedness is a goal of the learner, rather than a characteristic. Cranton (1994) believes to work as an adult educator is to accept self-directed learning as an important responsibility. Instructors, facilitators, and instructional designers must develop practical approaches for dealing with difficulties in self-directed learning: difficult group dynamics, leader conflicts, too much material and too little time, and resistant learners. Knowles (1975) describes self-directed learning as, “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (p. 18). He also points out, however, that at times self-directed learners need to recognize that there will be occasions when they will need to be taught, known as pedagogy, and they can enter into these educational experiences without losing their self-directedness. Knowles (1975) developed the Knowles Self-Rating Scale: Competencies of Self-directed Learning. In this self-rating instrument, participants are given nine competency statements, and then asked to rate themselves to the following degree: none, weak, fair, or strong. The nine statements are as follows:

1. An understanding of the differences in assumptions about learners and the skills required for learning under teacher-directed learning and self-directed learning, and the ability to explain these differences to others.
2. A concept of myself as being a non-dependent and self-directing person.

3. The ability to relate to peers collaboratively, to see them as resources for diagnosing needs, planning my learning, and learning; and to give help to them and receive help from them.
4. The ability to diagnose my own learning needs realistically, with help from teachers and peers.
5. The ability to translate learning needs into learning objectives in a form that makes it possible for their accomplishments to be assessed.
6. The ability to relate to teachers as facilitators, helpers, or consultants, and to take the initiative in making use of their resources.
7. The ability to identify human and material resources appropriate to different kinds of learning objectives.
8. The ability to select effective strategies for making use of learning resources and to perform these strategies skillfully and with initiative.
9. The ability to collect and validate evidence of the accomplishment of various kinds of learning objectives (Knowles, 1975, p. 61).

Cross (1988) describes six factors that motivate adult learners to pursue educational endeavors:

1. Social Relationships. To fulfill a need for personal associations and friendships, to make new friends, to meet members of the opposite sex
2. External Relationships. To comply with instructions from someone else, to carry out expectations of someone with formal authority, to carry out the recommendation of some authority

3. Social Welfare. To improve their ability to serve mankind, to prepare for service to the community, to improve their ability to participate in community work
4. Professional Advancement. To receive higher status in their job, to secure professional advancement, to keep up with competition
5. Escape/Stimulation. To get relief from boredom, to get a break in the routine of home or work, to provide a contrast to the rest of my life
6. Cognitive Interest. To learn just for the sake of learning, to seek knowledge for its own sake, to satisfy an inquiring mind (Cross, 1988, p. 86)

Peer Learning

Brady, Holt, and Welt (2003) state, “Despite its importance in the growing field of senior adult education, there has been surprisingly little research thus far on the experience of peer teaching in Lifelong Learning Institutes” (p. 2). Lifelong Learning Institutes are organizations of older learners dedicated to meeting the educational needs of their members. Generally Lifelong Learning Institutes fall into two categories: institution-driven and member-driven. In the institution-driven model the curriculum is often planned by professional staff and taught by regular higher education faculty. In the member-driven model, courses of study are planned and taught by institute members. The use of peer teachers, in addition to the program being sponsored by a college or university, charging modest membership fees and tuition, being predominately age-segregated, and offering a wide range of liberal arts and cultural offerings, is considered to be a core ingredient in distinguishing a Lifelong Learning Institute from other

programs in adult or older adult education (Manheimer, Snodgrass, and Moskowitz-McKenzie, 1995; Manheimer, 1995).

The peer teaching model expresses several ideals in adult education practice including a voluntary spirit, andragogy and self-direction (Knowles, 1990; Merriam and Caffarella, 1991; Jarvis, 2001). Peer teaching is a learner-centered activity because members of educational communities plan and facilitate learning opportunities for each other. There is the expectation of reciprocity, e.g., peers will plan and facilitate courses of study and be able to learn from the planning and facilitation of other members of the community. Peer teaching is the rare and provocative model of education in which in the morning a person may teach a class for his/her peers, and that same afternoon have one of his/her “students” become the teacher.

Heutagogy

There is a renewed interest on implementing alternative approaches to learning. Kenyon and Hase (2000) discuss the need to shift from andragogy to heutagogy, a self-determined learning approach. A heutagogical approach can be compared to the self-directed strategies of an andragogical model. However, andragogy still has connotations of a teacher-learner relationship. Heutagogy attempts to encourage future learner autonomy. The discussion of how adults learn continues to be debated and whether andragogy is a desirable adult learning model remains an arguable issue (Shreeve, Willmott, & Barry, 2003).

Heutagogy is the study of self-determined learning. It can be viewed as a natural extension from earlier educational methodologies.

The distinction Knowles (1970) made between how adults and children learn was an important landmark in teaching and learning practices in vocational education and training, and in higher education. Andragogy, and the principles of adult learning that were derived from it transformed face-to-face teaching and provided a rationale for distance education based on the notion of self-directedness. There is, however, another revolution taking place in educational circles that appears to go one step beyond andragogy, to a new set of principles and practices that may have application across the whole spectrum of the education and learning lifespan. (Hase & Keyton, 2001, p. 2)

Heutagogy attempts to challenge some ideas about teaching and learning that still prevail in teacher-centered learning. One challenge is the need for “knowledge sharing.” In most anyone's formative learning the result was one of “knowledge hoarding”; sharing answers was not encouraged or even allowed. Heutagogy stresses the importance of knowing how to learn. Developing this is fundamental “life skill” is essential given the pace of technological innovations, changing structure of communities and workplaces.

Heutagogy recognizes the need to be flexible in the learning. The instructor or facilitator provides resources but the learner negotiates the learning and designs the actual course. The learner determines what is of interest and relevance to them and then negotiates further reading and assessment tasks. Assessment becomes more of a learning experience rather than a means to measure attainment. As instructional designers we should concern ourselves with developing the learner's capability, not just embedding discipline-based skills and knowledge.

Geragogy

Formosa (2002) makes the distinction between learners at the early and later ends of the adult with three major categories. Pedagogy is the science of teaching children or those with cognitive ability comparable to children. Andragogy is the principles of teaching adult learners. Geragogy is the techniques that enhance learning among older adults. Adult educational programs often use the methods and assumptions associated with andragogy (an approach to adult education advocating that instruction of adults should encourage self-directed learning) and use learning objectives related to life experiences and problems. In generalizing the population, Schuetz (1988, 1981) found older adult learners are composed largely of females, with a lower level of formal education when compared to younger learners. As well, she notes changing social interaction patterns and an increase in the number of health concerns and problems. Schuetz (1988, 1981), recognizing the unique assets and liabilities possessed by older adult learners, suggests that geragogy would be a better approach to use with this older population. Geragogy emphasizes the guided learning of older adults, comprised of instructor-directed learning, supervised decision making, and person-centered activities.

Lifelong Learning Institutes

The foundation of any Lifelong Learning Institute is its community of learners. Lifelong Learning Institutes offer a unique educational opportunity in which peer learning, collaborative leadership, and active member participation are

fundamental. Often learners participate in the design and development of non-credit, college-level curriculum according to their own needs and interests, intellectual curiosity, and the experience of their generation. Courses may be instructor-led as well as led by members. An individual Lifelong Learning Institute may or may not be affiliated with a support or sponsoring organization. Two of the most established affiliations are the Osher Lifelong Learning Institutes (OLLI) and Elderhostel, Inc.

Osher Lifelong Learning Institute

In the fall of 2000, the Osher Foundation began to consider programs targeted toward more mature students, not necessarily well served by the standard continuing education curriculum. Courses in such programs attract students of all ages eager to accumulate units to complete degrees or to acquire career upgrade skills. By contrast, the interest of more senior students, many of whom are at retirement age, is in learning for the joy of learning, without the pressure of having to complete homework or examinations. The Osher Foundation's primary interest areas are as follows:

1. Scholarships for Higher Education (Osher Scholars and Fellows Program);
2. Scholarships for University Reentry Students aged 25 to 50 (Osher Reentry Scholarship Program);
3. Programs addressing the educational needs of adults aged 50 and older at institutions of higher education (Osher Lifelong Learning Institutes);
4. Integrative medicine programs; and
5. Arts, cultural, and educational programs in San Francisco and Alameda Counties of California and the State of Maine (The Bernard Osher Foundation, 2006).

With a focus on programs addressing the educational needs of adults aged 50 and older, it was early in 2001 that the Osher Foundation gave its first endowment grant to the University of Southern Maine to improve and extend its already thriving older adult learner programs. By the fall of 2002, the Osher Foundation issued Requests for Proposals to campuses in the California State University and University of California system. Typically, grants of \$100,000 were made on the understanding that once an Osher Lifelong Learning Institute was launched, the Osher Foundation would consider the renewal of the grant for two additional years. Should the institute demonstrate potential for success and sustainability, the Osher Foundation was prepared to provide an endowment gift of no less than \$1 million. At present, the Osher Foundation is supporting 93 Osher Lifelong Learning Institutes on university and college campuses in 40 states.

Online Learning at Lifelong Learning Institutes

The literature search revealed one program of online delivery of learning materials for older adult learners that is thriving. In March 2001, philanthropist Bernard Osher awarded funding to universities in Maine, Vermont, and California, to develop educational programs for older adult learners of retirement age. The California universities funded by the Bernard Osher Foundation in 2003 include seven campuses of the California State University system and four in the University of California system (University of Southern Maine, 2006). Osher Lifelong Learning Institute Online (OLLIonline) at California State University, Dominguez Hills, is an innovative program that extends the benefits of traditional lifelong learning to all older adult learners who are interested in participating in learning communities without the requirement of traveling to class. OLLIonline attempts to recreate an experience of a brick-and-mortar Lifelong

Learning Institute community through television, telephone, and the Internet. OLLIonline, like a traditional learning group, features in-depth presentations by University faculty and noted authorities. These presentations are broadcast live on television, and learners are invited to phone or email questions to the expert or course facilitator during the broadcast, recreating a classroom discussion atmosphere. Finally, learners visit the course Web site to participate in a variety of activities associated with each presentation (California State University, Dominguez Hills, 2006).

Despite the success of OLLIonline at California State University, Dominguez Hills, in general there is not much of a presence of an online or virtual component in Lifelong Learning Institutes. Up until now, there has been little demand for one. However, as the technology proficient baby boomers approach retirement age and beyond, instructional designers and planners for future Lifelong Learning Institutes and OLLIonline programs, most likely, will experience an increasing demand for an online delivery option of the curricula they provide, therefore, creating a significant need for well designed online educational offerings.

Elderhostel

Elderhostel, Inc. is a not-for-profit organization dedicated to providing educational opportunities for adults, 55 and older. Elderhostel maintains an international network of 1,900 colleges, universities, conference centers, museums, and other educational and cultural institutions, offering over 10,000 educational programs, in more than 100 countries around the world (Elderhostel, 2006a). Elderhostel is different from other senior programs in that it combined travel with intellectually stimulating learning opportunities (Mills, 1993). In traditional Elderhostel programs, out-of-town learners visit

university and college campuses, taking one to three short-courses, usually lasting a week or more, and most often are taught by members of the faculty from the host campus.

In 1988, twenty-four Lifelong Learning Institutes collaborated with Elderhostel, Inc., to form the Elderhostel Institute Network (EIN). The mission of Elderhostel Institute Network was, and still is, to strengthen and support the effectiveness of their affiliated Lifelong Learning Institutes and spread the lifelong learning concept to new communities. Both EIN and Elderhostel share the goal of developing college-level educational programs for people of retirement age; both value the inherent strengths of older learners; and both foster the empowerment of people through education. EIN reports that there are more than 400 Lifelong Learning Institutes in the United States and Canada today (Elderhostel, 2006b).

In contrast to a traditional Elderhostel program, a Lifelong Learning Institute offers local adults the chance to be involved in ongoing (over several weeks or months) academic programs at the host campus that are geared specifically to the learner's interests, usually as determined by the learners themselves. Many college and universities are successfully sponsoring both types of programs: residential Elderhostel programs for the national audience and a Lifelong Learning Institute for the local community. Lifelong Learning Institutes have since been sponsored by institutions large and small, private and public, and in communities both urban and rural. Each LLI is a unique organization reflecting the needs and goals of its sponsoring campus and participants from the local community. However, LLIs affiliated with Elderhostel typically share a set of common goals and characteristics (Mills, 1993):

Educational purpose. College level-course work usually on a non-credit basis;

Member organization. Learners join LLIs. Organizational structures (by-laws, committees) create an entity with identity and purpose of its own;

Member leadership. Members are involved in all of the decision-making with respect to the LLI. In addition to determining some or all curriculum, learners may be active in recruiting new learners, financing the LLI, and developing social programs;

Open membership. LLIs encourage participation of older adult learners without regard to previous levels of formal education; and

Co-curricular programming. Since LLIs are social places, the activities typically include social events, membership meetings, and field trips.

Research in Adult Learning Theory

In applying adult learning theory concepts, andragogy means that instruction for adults needs to focus more on the process of learning and less on the content being taught. Knowles (1984) suggested that adult educators should consider the following seven concepts:

1. Set a cooperative learning climate;
2. Create mechanisms for mutual planning;
3. Arrange for a diagnosis of learner needs and interests;
4. Enable the formulation of learning objectives based on the diagnosed needs and interests;
5. Design sequential activities for achieving the objectives;
6. Execute the design by selecting methods, materials, and resources; and

7. Evaluate the quality of the learning experience while re-diagnosing needs for further learning.

Brookfield's (1994) treatment of staff development included principles of adult learning without explicitly identifying them as such. He provides four characteristics of adult learners: “their special orientation to learning, their experiential base, their particular developmental changes and tasks, and their anxiety regarding learning” (p. 30). It is Brookfield's (1994) belief that adult teaching should be grounded in the adult’s experiences, and that these experiences represent a valuable resource. Brookfield (1994) suggests that it is the instructor’s role in this adult learning process is that of facilitator to the learning and resource to the learner. Strategies for presenting adult learning materials may include case studies, role playing, simulations, and self-evaluation. Each of these strategies forces the adult learner to articulate their process for problem-solving.

Studies of andragogy and self-directed learning, for example, aim to identify the unique needs of adults as they relate to lifelong learning (Snyder, 2006). Self-directed learning, also known as discovery learning (Gearhart, 2002), is important from childhood through adulthood and occurs in everyday problem solving. Discovery learning refers to obtaining knowledge for oneself (Bruner, 1960). In the discovery learning process, learners are required to focus more on the process of learning rather than on the content being learned. Methods have evolved from the constructionists’ viewpoint that allow for these discoveries to occur. Hence, meaningful learning is promoted by the discoveries made. Current educational systems force students to move away from discovery learning and into guided forms of learning (Schank, 2005).

Adult learning theory practices can be applied in informal learning settings as well. To engage the adult visitor into a museum or an Elderhostel traveler effectively, educational programs use traditional adult education principles to enhance the experience for the purpose of learning (O'Connell, 1990). Elderhostel provides an ideal platform for studying adult learning theory, especially self-directedness, in older adults. Arsenault, Anderson, & Swedburg (1998), Brady & Fowler (1988), Edlow (1983), Kinney (1989), Knowlton (1977), Lamb and Brady (2005), Lamdin & Fugate (1997), and O'Connell (1990) have all taken advantage of the pool of human resources available through the popularity of Elderhostel programs. In each of their findings there are important implications for older adult learners.

Arsenault, Anderson, & Swedburg (1998) conducted a qualitative study looking at the decision-making processes older adults use when choosing non-formal educational experiences. Their study focused on 154 Elderhostel participants during a two-month period in 1996. Each participant was enrolled in one of ten selected Elderhostel programs in Canada. Arsenault, Anderson, & Swedburg (1998) reported that 14 predominant decision factors were revealed from the participants. The most noted decision factors included programs offered close to home, a balance between lecture/class time and time spent outdoors, practicing what is being taught, and the ability to offer different levels of learning challenges for varying individual knowledge of the subject matter.

Lamdin and Fugate (1997) investigated motivational issues related to older learners. Part of the research for their book included an "Elderlearning Survey Questionnaire," which had 860 respondents drawn from known educational organizations including Elderhostel. The survey included questions about whom they were, what,

where, why, and how they were learning, and what they viewed as barriers to learning. Lamdin and Fugate (1997) found that the overwhelming top reason for learning that they gave was “for the joy of it.” In the survey regarding college-learning, many said that they no longer needed a degree for a career, or felt the need to prove anything. Lamdin and Fugate (1997) concluded this older audience did not want the anxiety of tests, papers, deadlines, or instructor rewards. Lamdin and Fugate (1997) made the argument that colleges and universities should be making a concerted and creative effort at attracting older students. Much of these future challenges in making colleges attractive to older adult learners, and to ensure the success of this older audience, will lie in the teaching and learning techniques and strategies developed and implemented by instructional designers.

Brady and Fowler (1988) concentrated on the kinds of learning outcomes that result for older adult learners. In their study, 560 participants in 20 New England Elderhostel programs during the summer of 1986 were surveyed. The learning outcome questions were of two general categories: humanities/critical thinking and human relations/personal development. Brady and Fowler (1988) found that participants who had set clear goals for themselves and who had chosen programs based on the quality of the sponsoring colleges and the particular courses offered, despite their backgrounds, appeared to be the most satisfied with their actual learning experience.

Lamb and Brady (2005) conducted research on members of the Osher Lifelong Learning Institute in Portland, Maine, in order to investigate the perceived benefits of participation in a peer governed and peer taught older adult learning program. Forty-five long-term members of the program were interviewed by way of six focus groups. Four categories of benefits were reported: intellectual stimulation, experiencing a nurturing

and supportive community, enhancing self-esteem, and having opportunities for spiritual renewal. One of the compelling overall findings from the Lamb and Brady (2005) study is that the reasons for persistence in an older adult education program are complex and multifaceted. Just as “there is no single theory or model to explain or predict participation” (Merriam and Caffarella, 1999, p. 70), a similar statement may be made about older learners who choose to remain active participants in educational programs such as Lifelong Learning Institutes. Older learners persist in programs for intricate and multivariate reasons. Lamb and Brady (2005) found that belonging to a community is a core component in the successful Lifelong Learning Institute experience. They reported that much of the reason why older persons believe that participating in a Lifelong Learning Institute has enriched their lives is that their experience was situated in a safe and nurturing community.

Brady and Fowler (1988) noted that studies going back to 1971 are generally consistent in finding that cognitive interests, the desire to know or learning for learning's sake, are the reasons most often cited for participation in adult education. Lamb & Brady (2005) refined this concept further by citing survey results showing their older learners were most interested in the humanities or traditional liberal arts. Lamdin and Fugate (1997) “revealed that older people are learning in numbers and amounts of time expended at a rate far exceeding even [the researchers'] expectations” (p. 85). Respondents in this study spent an average of 27.86 hours per month in informal (nonclassroom-based or self-directed) learning, and 17.75 hours per month in formal (classrooms or other organized settings). A review of studies of participation in formal or organized adult education programs revealed that, although the “actual number and percentage of

participants [of older adults] is still rather modest,” it is expected to grow (Manheimer, Snodgrass, and Moskow-McKenzie, 1995, pp. 15-16). Currently, the largest percentage of individuals age 55 and over is in noncredit, continuing education.

McClusky (1976), a pioneer in educational gerontology studies and research, supported the notion that learner appropriate teaching strategies and instructional design play an important role in learner success.

Generally speaking ... good strategy is to create an environment that is supportive, and to learn techniques that can reinforce learning. For example, we should be very clear as to what we expect them to learn. We should give them techniques of imagination, combining both auditory and visual imagery. Self-pacing is another important procedure. We should allow the older person to pace himself and learn in his own way and in his own time, without too much pressure. (p. 121)

Wislock (1993) indicated that educators usually project their own preference into the course design, including selection of content, teaching materials, and strategies. He recommended measuring the perceptual preferences of the instructor as well as the learners to facilitate better course design. He also proposes that there are two strategies for modality-based instruction. The multi-sensory approach advocates the incorporation of teaching methods from all modalities for each lesson. The “Point of Intervention” approach sorts learners into groups, by modality preference, and delivery is directed to that style.

Older adult learners have experienced, or are in the process of experiencing, major changes in physical capacities; sensory capacities, including vision and hearing; changes related to speed and timing; attitudinal changes; learning capacity and performance; changes in memory; and changes in adjustment ability and morale (Glass, 1996). Learners who learn their perception style can better seek out information in the

format they process most directly, "... knowledge of one's own strengths can help one to choose courses that might be particularly congenial to one's learning style" (Gardner, 1993, p. 73). Since learners do possess varied learning styles and multiple intelligences, it can be deduced that they also vary in their preferred learning style(s). Instructional designers that pay attention to modalities to ensure educational and training programs strike all physiologic levels. "Now that we know something about teaching styles, learning styles, and individual intelligences, it is simply inexcusable to insist that all students learn the same thing in the same way" (Gardner, 1993, p. 73). Much of the literature pertaining to research on learning styles focuses on children, teens, and young adults (Malm, 2001). There is a lesser pool of knowledge based on the research findings in older adult learners (Gardner, 1983, 1993). As well, little research has been done on the learning style preferences and specific training needs of older workers. (Davenport, 1986). There is however a considerable amount of valuable data as to learning styles and preferences of older adults through discussions published on the Web sites of the AARP—American Association of Retired Persons (<http://www.AARP.org>), Senior Net (<http://www.SeniorNet.org>), and Elderhostel (<http://www.Elderhostel.org>). These Web sites each cater to adults 50 years and older.

Finally, since individual learners have their preferred learning style(s), instructional designers should respond to these needs by creating different instruction for different types of learners. Gardner (1993) stated,

The most comprehensive analysis of individual differences may need to chart both the styles and contents, in order to determine which styles seem yoked to specific contents and which may operate across the board, at least in the case of a particular individual. (p. 45)

Instructional designer must remember that no learner uses one learning style exclusively. While individual learners may favor a given cognitive tendency, there is usually significant overlap in learning methods. Therefore instructional designers need to vary their learning strategies and techniques when designing learning materials.

Instructional Design Theory

Behaviorism, Cognitivism, & Constructivism

During the 1950s and 1960s, behavioral learning theory was dominant in the educational community. The mechanics of the brain and how learning was achieved was not well understood. Behaviorists treated the brain as a “black box”; behaviorists could not see the processes of the brain while learning occurred, but they could observe behavior as a result of that which was learned. The theory of behaviorism concentrates on the study of overt behaviors that can be observed and measured. Here the goal in attaining new behavioral patterns is to have the learner repeat a behavior until it becomes automatic. Desired learner behaviors are achieved through the use of re-enforcements (Skinner, 1974).

Cognitive psychology emerged in the late 1950s. However it was not until late 1970s that cognitive science and learning theories began to have its influence on instructional design. Cognitivism began as a shift from behaviorism, emphasizing external behavior, to a concern with the internal mental processes (Wislock, 1993). The goal of instruction remained the communication or transfer of knowledge to learners in the most efficient, effective manner possible. However, learning theorists were focusing their attention on the mind and how it could be utilized in promoting effective learning.

Cognitivism is based on the thought process behind the behavior. Changes in behavior are observed, and used as indicators as to what is happening inside the learner's mind (Merrill, 1994). Perhaps the most dominant cognitive learning theory is based on an information-processing approach. Information-processing theories attempt to describe how information in the world enters through our senses, becomes stored in memory, is retained or forgotten, and is used. At the same time instructional design methods addressed component processes of learning such as knowledge coding and representation, information storage and retrieval as well as the incorporation and integration of new knowledge with previous information (Clark, 2003; Merrill, 1994). The breaking down of tasks into small steps worked for behaviorists who were trying to find the most efficient and fail proof method of shaping a learner's behavior. The cognitive scientist, however, would analyze a task, break it down into smaller steps or chunks and use that information to develop instruction that moves from simple to complex building on prior schema.

Just as cognitive learning began replacing behaviorism in the 1970s, constructive learning theory is now challenging the current cognitive approaches. Constructivism is an approach to teaching and learning based on the premise that cognition (learning) is the result of mental construction. Constructivists maintain that knowledge is not received from the outside, but that we construct knowledge in our heads. There are different schools of constructivists thought, one referred to as social constructivism, in that learning is inherently social. Since constructivism is based on the premise that learners construct their own perspective of the world, through individual experiences and schema, learners learn by fitting new knowledge together with what they already know.

Constructivists encourage a learner-centered environment that supports context-rich knowledge construction, not knowledge reproduction. Learners in these settings become empowered by gaining access to real data and work on authentic problems. Constructivists propose that learning environments should support multiple perspectives or interpretations of reality and experience-based activities (Jonassen, 1991a, 1991b). Constructivists also focus on preparing the learner to problem solve in ambiguous situations.

Believing in a constructivist philosophy does not automatically dictate using any particular set of teaching strategies. An educator could be a constructivist in philosophy without always using constructivist teaching methods. Different learning theories may suggest particular kinds of instructional strategies, but they do not determine them fully. According to Mann (1994), the use of new technologies in an educational setting has caused constructivism to receive new attention. The technological advances have enabled instructional designers to move toward a more constructivist approach to design of instruction. Constructivism poses a huge challenge for instructional designers. Constructivism supports individual learner knowledge construction, but as in all instructional design, it must be insured that a common set of learning outcomes exist.

Inquisitivism

Inquisitivism, proposed by Harapnuik (2004), is a blended or hybrid adult learning approach. Inquisitivism has been synthesized from elements of several learning strategies and theories including constructivism, discovery learning, active learning, functional context, and minimalism. Minimalism should be referred to as a descriptive approach to designing effective instruction. The minimalist goal is to get out of the way

of the learner and let them get more out of their training (learning) experience by providing a less overt training structure (Carroll, 1992; Clark, 2003).

Inquisitivism is not a static theory but a dynamic approach to the implementation of effective learning environments. Since inquisitivism is a synthesis of other learning theories and approaches, many of the key concepts have been borrowed. Harapnuik's (2004) instructional design method emphasizes 11 key components to successful learning: fear removal, stimulation of inquisitiveness, using the system to learn the system, getting started fast, developing real-world assignments, designing modules can be completed in any order, learning through discovery, exploiting prior knowledge, providing forum for discussions, supporting error recognition and recovery, and developing optimal training designs.

Fear

Learning can be a very emotional process. Fear, anxiety, and anger are emotional factors that negatively affect learning (Conner, 2004, 2005a, 2005b). As certain teaching strategies and instructional design methods motivate, others discourage. Harapnuik (2004) believes few things are more de-motivating than fear.

Older adults have fears too about returning to learn and there are well documented barriers of being seen as too old, having poor health, lack of time, cost, safety (being out at night), transportation, absence of a companion, lack of information about what is available, fear of competition with younger adults, fear of exposure of their background, and fear of the unknown and location. Older adults are more likely to attend institutions which are accessible and familiar (Price & Lyon, 1982). Purdie and Boulton-Lewis (2003) believed the largest barriers to learning were identified as cognitive and self

matters. The older adults identified such barriers as not being able to remember sequential procedures as well, not being able to concentrate for extended periods, and some had learning disabilities as youth that had never been addressed in their lifetime.

Discussion of Adult Learning Theory as Applied to Instructional Design

The three theoretical perspectives, that is, behaviorism, cognitivism, and constructivism, each treat learning from differing viewpoints, with different goals and approaches for instructional design (Ertmer, & Newby, 1993). Where behaviorism is based on observable changes in behavior, and focuses on a new behavioral pattern being repeated until it becomes automatic, cognitivism is based on the thought process behind the behavior. When changes in behavior are observed, these are used as indicators as to what might be happening inside the learner's mind. In contrast, constructivism is based on the premise that we all construct our own perspective of the world, through our individual experiences and schema. Constructivism focuses on preparing the learner to problem solve in ambiguous situations (Merrill, 1991, 1992).

What are the perceived strengths and weaknesses of using certain theoretical approaches to instructional design? In a behaviorist approach, learners are focused on clear goals and can respond automatically to the cues of that goal. Learners are conditioned to react to particular stimulates; the hope is that later they will respond automatically. However, learners may find themselves in a situation where the stimulus for the correct response does not occur, therefore the learner cannot respond. In a cognitivist approach, learners are taught to complete tasks the same way to enable consistency. Logging onto and off of a workplace computer is the same for all

employees; it may be important do an exact routine to avoid problems. Here, a learner learns a way to accomplish a task, but it may not be the best way, or suited to the learner or the situation. In a constructivists view, because the learner is able to interpret multiple realities, the learner is better able to deal with real life situations. If learners can problem solve, they may better apply their existing knowledge to novel situations. However, in a situation where conformity is essential divergent thinking and action may cause problems.

In both behavioral and cognitive instructional design, the learning materials developed have predetermined objectives and learning outcome. The design intervenes in the learning process to map a pre-determined concept of reality into the learner's mind. The constructivist designer maintains that because learning outcomes are not always predictable, instruction should foster, not control, learning (Jonassen, 1991a, 1991b).

Constructivism holds that learning is infinite and not subject to the sorts of analyses favored by objectivists. The role of education in a constructivist view is to show learners how to construct knowledge, to promote collaboration with others to show the multiple perspectives that can be brought to bear on a particular problem. Here learners arrive at self-directed position to which they can commit themselves, while realizing the basis of other views with which they may disagree (Knowles, 1975). Those who oppose a constructivists approach argue that specific learning objectives are not possible. They believe that meaning is always constructed by, and unique to, the individual and that all understanding is negotiated. There are situation where shared meaning is not only possible but necessary. The question needs to be asked, "Do we want students to have a 'self-chosen position' with respect to corporate goal and company policy?" In corporate

training it is required that learners committed to the standard objective view. Those cases cannot be dismissed casually (Merrill, 1994).

Cognitivism supports the use of instructional design models to be used in the systems approach of instruction development. Instructional design within a cognitive approach supports determining a learner's entry level skills, for efficiency and for certifying individual students' competency level (Dick, 1992; Tobias, 1992). However, in practice, the instructional designer's access to individual learners' cognitions is extremely indirect and limited (Wilson, 1997). Constructivism is not compatible with the present systems approach to instructional design. "The conundrum that constructivism poses for instructional designers, however, is that if each individual is responsible for knowledge construction, how can we as designers determine and insure a common set of outcomes for learning, as we have been taught to do?" (Karagiorgi & Symeou, 2005, p. 22).

Although in constructivism, learning objectives are not possible and that all understanding is negotiated, Jonassen (1991a, 1991b) believes it should be possible to provide more explicit guidelines on how to design learning environments that foster constructivist learning. Duffy & Jonassen (1992) addressed these challenges of constructivism for instructional designers. In their book, it was stated that purposeful knowledge construction may be facilitated by learning environments which:

1. Provide multiple representations of reality;
2. Avoid over simplification of instruction by representing the natural complexity of the real world;
3. Focus on knowledge construction, not reproduction;
4. Present authentic tasks (contextualizing rather than abstracting instruction);

5. Provide real-world, case-based learning environments, rather than pre-determined instructional sequences;
6. Foster reflective practice;
7. Enable context- and content-dependent knowledge construction; and
8. Supports collaborative construction of knowledge through social negotiation, not competition among learners for recognition.

A major issue of debate on constructivism deals with the pre-specification of a learner's knowledge. Instructional designers complain that in a constructivist view learning is a personal interpretation of the world. The evident autonomy of learners in knowledge construction makes it difficult to predict how learners will learn or how to plan instructional activities. Constructivists contest that learning objectives are not possible and that all understanding is negotiated. If each individual learner is responsible for his/her own knowledge construction, then how can instructional designers determine and ensure a common set of outcomes for learning?

Instructors and instructional designers must consider that adult learners possess the characteristics of self-concept, experience, a readiness to learn, an orientation to learning, and an intrinsic motivation to learn when designing, developing, and delivering their adult learning activities and materials. Andragogy has been an educational form for generations. Self-directed learning, a facet of andragogy, is based on the desire of individuals to expand their knowledge base and can be done formally or informally. Self-directed learning is widely practiced by adults. Gearhart (2002) stated, "From a human development perspective, self-directed learning is not considered as it should be in our educational system, nor do all schools foster self-directed learning. Through adult

learning, self-directed learning skills are pursued individually, formally or informally, at all educational levels” (p. 59). This researcher’s instinct on self-directedness is that it is an activity or approach to learning that requires the learner to participate as an individual. However, in comparing the Knowles (1975) and Cross (1988) models, the social rewards of learning play an important role in the success of the self-directed adult learner.

In recent years there has been discussions with respect to a shift from andragogy to heutagogy, a self-determined learning approach (Kenyon & Hase, 2000), where a heutagogical approach can be compared to the self-directed strategies of an andragogical model. Where andragogy still has connotations of a teacher-learner relationship, heutagogy attempts to encourage future learner autonomy. With every renewed interest in implementing alternative approaches to learning, new instructional design methods evolve. Learning styles have been studied for decades, where as inquisitivism is a relatively new instructional design approach. Lamdin and Fugate (1997) make the argument that colleges and universities should be making a concerted and creative effort at attracting older students. This requires that the learning materials match the learning needs of the older audience. Much of these future challenges in making colleges attractive to older adult learners will lie in the hands of instructional designers.

Gaps in the Literature

At this time there exists a gap in the literature of understanding the motivations, needs and barriers to learning for the older adult population. This gap needs to be addressed through further research. This study has been an opportunity to contribute to the body of knowledge in a meaningful way. Through the interview process in this study,

there was a free flowing, open discussion of what are the perceptions of lifelong learning, including the exploration of both positive and negative learning experiences from the past, a sharing of any previous online learning experiences, and uncovering any computer/technology/learning fears that exist for the participants. As well, for those who did not have the desire to learn online, a better understanding of their reservations and lack of interest was gained.

Conclusion

The literature review focused on adult learning theory and instructional design theory, providing an overview of the theoretical frameworks that have shaped these fields. Adult learning theory topics include andragogy, self-directed learning, peer learning, heutagogy, and geragogy. Research in adult learning theory as it applies to an older adult audience was presented. Next, the three primary theoretical perspectives that determine the instructional methods used in instructional design theories, behaviorism, cognitivism, and constructivism was outlined. The chapter concluded with a discussion of adult learning theory as it applies to instructional design.

As the population continues to grow older, older adult learners will be seeking a variety of educational opportunities (Malayter, 2004), including those that are offered online for older adults who do not want to travel to a physical location but still want the opportunities for social interaction. Instructors and instructional designers need to develop an awareness of their own philosophy and beliefs about older adult learners. They need to understand why older learners are continuing their education and have a sense of their learning processes. Developing a personal theory of practice can guide

educators, instructional designers, and program planners in making decisions about teaching and learning, and in creating a practice that flows from a deliberately conscious and informed approach.

CHAPTER 3. METHODOLOGY

Things should be made as simple as possible but not simpler.

—Albert Einstein

Introduction

This chapter outlines the purpose of the research that has been conducted as well as the research questions being asked. The research design, sources of data, population and sample size, data collection techniques and instrumentations are discussed. Limitations and assumptions to this research design are acknowledged. Finally the data analysis procedures implemented are presented.

Research Purpose

The impetus for this study was Fleming's (2000) doctoral research at the University of Wyoming. As Fleming stated,

This small, phenomenological study ... explored the meaning of lifelong learning in the lives of 11 selected individuals, aged 70 and older, called sages. Their success at aging and involvement in learning activities, reported by professionals, was confirmed by the subjects' self-reports. In-depth, semi-structured interviews allowed sages to discuss their perspectives on learning and late life. (Fleming, 2000, Dissertation Abstract)

The purpose of this research has been to further the knowledge and understanding of the learning needs and motivations of older adult learners. The question then needs to be asked, what is known about the learning needs, motivations, and barriers of these older learners? How can instructional designers best go about developing learning materials for this segment of the population?

Research Questions

A local, older adult population from Taft and Bakersfield, California, was selected for this study. The research questions were as follows:

1. For a given older adult population, what are their perceptions of lifelong learning? What are their motivations for learning; what are their learning needs; and what are their barriers to learning?
2. What best practices should instructional designers use to meet the motivations and needs, and minimize or eliminate barriers to learning for older adults?

Research Design

Introduction

The naturalistic, phenomenological approach was selected for this dissertation given that it offered the best opportunity to hear the learning experiences that have encouraged (and possible discouraged) the older audience interviewed for this study. Research participants have been given a platform to express their needs in seeking learning opportunities, to discuss their motivations for learning (and possible what de-

motivated them in the past), and finally to address their fear and perceived barriers in learning at this time in their lives.

Background in Qualitative Methods

Qualitative methods are used for gathering data through observations, interviews, and focus groups (Tashakkori & Teddlie, 1998, 2003). Qualitative research puts the researcher in touch with those who are most important to their educational or business endeavors. Qualitative methodologies enable the exploration of the thoughts, beliefs, and motivations behind behaviors (Creswell, 2002). The use of observation, focus groups, and in-depth interviews allows for personal interaction with those using particular products and services or with individual learning needs. This research approach is an excellent tool for organizations or individuals that desire a deeper understanding of their target audience. Ideal uses for qualitative research include gathering deeper understanding of quantitative data, collecting information prior to designing a quantitative study, understanding the motivations of specific customers, identifying potential responses to a new or existing product or service, and identifying potential reactions to a marketing campaign (Guba & Lincoln, 1994).

Qualitative methodologies allow the cognitive and affective components of learning to be explored in greater depth than quantitative methodologies. Qualitative approaches permit the identification of longitudinal changes in studies, whereas quantitative approaches tend to take a “snapshot” of behavior, cognition, or affect at the one time the research is conducted (Guba & Lincoln, 1994). The flexibility of qualitative methodologies is appropriate for research that may be exploratory in nature. Qualitative methodologies encourage the study of populations or groups to introduce concepts of

importance to them, rather than adhering to subject areas that have been pre-determined by the researcher, as in a quantitative study. It may be perceived that a weakness exists in qualitative research given the researcher interacts with those he or she studies (Creswell, 2002). Minimizing this distance is an attempt to minimize researcher influence on the participant(s), creating less of a chance for the skewing of the data.

Background of Research Design

The research design was based on two theories: the learner motivations determined by Houle (1961) and the learning needs as identified by McClusky (1976). These two theories were combined to discover what is known about the learning motivations, needs, and barriers to learning for older adults, and to better understand how instructional designers can develop learning materials for this older adult learner population.

Learning Motivations & Needs of Older Adults

Houle (1961) conducted one of the most famous studies on learner motivation. Houle (1961) argued that there are three main groupings of adults who continue to learn. These learner orientations are identified as goal-oriented, activity-oriented, and learning-oriented. Goal-oriented learners use education to achieve their learning aspirations through the accomplishment of fairly clear cut objectives. Activity-oriented learners take part in such activities because of an attraction in the circumstances of learning (i.e., for the social interactions) rather than in the purpose or content. Learning-oriented learners seek knowledge for its own sake.

McClusky (1976) studied the learning needs of older adults and developed the following five categories for needs-based learning opportunities:

1. Coping needs: adults engaged in physical fitness, economic self-sufficiency, basic education;
2. Expressive needs: adults taking part in activities for their own sake and not necessarily to achieve a goal;
3. Contributive needs: adults deciding how to be useful contributors to society;
4. Influence needs: adults becoming agents for social change; and
5. Transcendence needs: adults rising above age-related limitations.

Source of Data

For this qualitative research, semi-structured interviews have been conducted. All participants were volunteers, with the initial contacts being gained through the Soroptimist International of Taft, California. The research was conducted during the winter, spring, and summer of 2007.

Population and Sample

“The sample selection was purposeful, rather than random or representative” (Fleming, 2000, p.47). This technique is common to naturalistic studies in which the researcher attempts to describe, in depth, a specific subgroup of information-rich cases (Isaac & Michael, 1995). Small sample sizes are justifiable when the research involves in-depth case study, when the study requires methodology such as interview and where large amounts of qualitative data are forthcoming from each, individual research participant (Isaac & Michael, 1995).

The researcher investigated studies both qualitative and quantitative studies that focused on learning and/or baby boomers that were naturalist and phenomenological in nature, and elected to use 10 participants for the research (Archibald, 2004; Ginsberg, 2002; Lombardozi, 2004; Sweeney, 2004). As reported by Archibald (2004), 10 is an acceptable target range in phenomenological studies according to Sandelowski (1995) who stated that the sample sizes for phenomenological studies vary from 6 to 12 participants. “Further, Creswell (1998, 2003) and Dukes (1984) recommends 3 to 10 subjects in phenomenological studies” (Archibald, 2004, p. 85). According to Patton (2001), “There are no rules for sample size in qualitative inquiry” (p. 244). Kvale (1997) suggested that a researcher should “interview as many subject as necessary to find out what you need to know” (p. 101). Kvale (1997) continued with stating that interviews should be “conducted until the point of saturation, where further interviews yield little new knowledge. In current interview studies, the number of interviews tends to be around 15 plus/minus 10” (p. 102).

Ten (10) participants (4 men and 6 women) were interviewed for this study. Each of the participants was a member of the community of Taft or Bakersfield, California. Participants were of retirement age, 61 to 85 years old, but not necessarily retired. Each of the participant's names have been held in confidence; participants have been assigned pseudonym for all references, rather than using their actual names. However, the gender and the age of the participant are revealed in each individual case study.

Care has been taken in evaluating the results. It is anticipated that the final results of this study are representative of the general population of Taft, California, and the

surrounding communities, Bakersfield included. Any indication of atypical responses from the study participants during the interview process were noted.

Data Collection

Each study participant was provided with an explanation of the study and their role in this research, days before their interview (Appendix A). Study participant received a complete list of interview questions (Appendix B), prior to being interviewed. This allowed interviewees time to brainstorm and organize their thoughts. On the day of the interview, participants were asked to sign a consent form (Appendix C). The anticipated time required for each interview was 30 to 60 minutes; in actuality interviews lasted from 45 minutes to 2 hours.

The goal of the semi-structured interview was to establish a dialogue with each study participant and gain insight to the learning needs, motivations, and fears of this unique group of older adults. Care was taken as to not introduce any research bias while engaged in dialogue with the study participants. Research bias could have resulted in a participant changing their answers inadvertently or to please the researcher.

The interview process began with the introduction of categories of learner motivations as determined by Houle (1961). Participants were asked whether they believe themselves to be goal-oriented, activity-oriented, and/or learning oriented. Goal-oriented learners use education to achieve their learning aspirations through the accomplishment of fairly clear cut objectives. Activity-oriented learners take part in such activities because of an attraction in the circumstances of learning (i.e., for the social interactions)

rather than in the purpose or content. Learning-oriented learners seek knowledge for its own sake. Participants were asked to describe their motivations for learning.

The interview then moved to discussing categories of learner needs. McClusky (1976) studied the learning needs of older adults, which were assessed during a time when online learning was not even an option to consider, and developed five categories for needs-based learning opportunities: coping needs where adults engage in physical fitness, economic self-sufficiency, basic education; expressive needs where adults take part in activities for their own sake and not necessarily to achieve a goal; contributive needs where adults decide how to be useful contributors to society; influence needs where adults become agents for social change, and transcendence needs where the goal is to rise above age-related limitations. Research participants were asked as to which of these categories they believe that they belong in. Participants were not limited to choosing only one category.

Next the focus of the interview shifted to issues and concerns identified as barriers to learning, specifically what fears may a prospective learner have about “returning to class.” Some of the most innovative instructional design ideas, techniques, and strategies can be discovered and explored by asking this type of question: “Can you describe your most interesting/creative learning event, course, and/or instructor?” The hope was that this question would awaken rich stories of learning experienced in the past by the research participants. The discussion moved to each participant's interest in online learning. For those who were not technology savvy, it was anticipated that there would be less of an interest in online learning; those who did hold some computer experience may be more likely to participate in online course offerings.

Instrumentation

The goal of the semi-structured interview was to establish a dialogue with each study participant and gain insight to the learning needs, motivations, and fears of this unique group of older adults; from the transcripts of each interview, the researcher searched for words, phases, patterns, themes that reveal these needs, motivations, and fears.

The collective results are reported as individual case studies. Thick descriptions (Merriam, 1988) have been created for each of the study participants. Researchers have used the case study research method for many years across a variety of disciplines. Yin (1984) defines the case study research method as, "... an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (p. 23). Case study research brings an understanding of complex issues can extend experience or add strength to what is already known through previous research. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. Social scientists, in particular, have made wide use of this qualitative research method to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods (Yin, 1994).

Data Analysis Procedures

Each interviewee was recorded and notes were taken by the researcher. If clarification in the notes or the recording was necessary, the participant was contacted via

telephone, email, or in person. Every attempt has been made to preserve the real meaning intended by each statement from each research participant.

The collective results are reported as individual case studies, as synthesized by the researcher from the raw data. Participants were asked to read their individual case study for accuracy. At that time participants were invited to make changes, additions, or clarify any original statements. Fleming (2000) writes, “Conventional standards of rigor, which require criteria of validity and reliability, do not apply to naturalistic studies. Trustworthiness of the data instead can be measured using criteria suggested by Lincoln and Guba (1985)” (p. 60). These include credibility, transferability, dependability, and confirmability.

1. Credibility. Lincoln and Guba (1985) recommend a variety of strategies for improving the likelihood that findings and interpretations produced through naturalistic inquiry methods will be credible. Strategies include ensuring integrity of the observations, peer debriefing, and member checking.

2. Transferability. Naturalistic inquiry depends on a presentation of solid descriptive data, or thick description (Patton, 1990) to improve an analysis' transferability. In order to enable others wanting to apply the findings of this study to their own research to make an informed decision about whether to do so, thick description of the experiences and identity development of the participants, as well as the definitive exposition of the researcher is provided.

3. Dependability and confirmability. The criteria of dependability ask if the study could be duplicated with the same outcomes. The research design lends itself to duplication. Confirmability is the degree to which findings are grounded in substantive

data. The results of this study meet the tests of dependability and confirmability and may well serve as a guide to other researchers.

Conclusion

This chapter outlined the purpose of the research that has been conducted including the research questions being answered. The research design, sources of data, population and sample size, data collection techniques and instrumentations were presented. Limitations and assumptions to this research design were acknowledged. Finally, the data analysis procedures implemented were outlined.

This research adds to the somewhat small pool of knowledge on the learning needs of older adults. Results of this study contribute to a better understanding of the motivation to learn and fear that learning sometimes brings to this older learner age group. Each case presents a rich discussion formulated through an interview process. These data can then support the decisions made by administrators, instructors, and instructional designers when embarking on the design and development of learning programs, methods, and materials for the older adult learner. Naturalistic research paradigms (i.e., real-world and workplace scenarios) are ideal candidates for qualitative analyses. The advantage of the case study method is its application to real-life scenarios and human situations.

CHAPTER 4. DATA COLLECTION AND ANALYSIS

*No amount of experimentation can ever prove me right;
a single experiment can prove me wrong.*

—Albert Einstein

Introduction

The purpose of this research has been to further the knowledge and understanding of the learning needs and motivations of older adult learners. This chapter outlines the responses to the questions posed in this research study.

Research Questions

The research questions in this study were as follows:

1. For a given older adult population, what are their perceptions of lifelong learning? What are their motivations for learning; what are their learning needs; and what are their barriers to learning?
2. What best practices should instructional designers use to meet the motivations and needs, and minimize or eliminate barriers to learning for older adults?

In order to resolve these research questions, study participants were asked a series of questions as follows:

Learning Motivation

Which of the following best describes your motivation for learning?

- I am a goal-oriented learner. I use education to achieve my learning aspirations through the accomplishment of fairly clear cut objectives.
- I am an activity-oriented learner. I take part in such activities because of an attraction in the circumstances of learning (i.e., for the social interactions) rather than in the purpose or content.
- I am a learning-oriented learner. I seek knowledge for its own sake.

Learning Needs

Which of the following best describes your need for learning?

- Learning satisfies my coping needs: engaging in physical fitness, economic self-sufficiency, and basic education;
- Learning satisfies my expressive needs: taking part in activities for their own sake and not necessarily to achieve a goal;
- Learning satisfies my contributive needs: deciding how to be useful contributors to society;
- Learning satisfies my influence needs: becoming an agent for social change; and
- Learning satisfies my transcendence needs: rising above age-related limitations.

Learning Barriers

What would hinder you from learning?

Most Interesting Learning Event

Can you describe your most interesting/creative learning event, course, and/or instructor?

Interest in Online Learning

In what way do online courses interest you?

The Interviews

The naturalistic, phenomenological approach was selected for this dissertation given that it offers the best opportunity to hear the learning experiences that have encouraged (and possibly discouraged) the older audience interviewed for this study. Research participants were given a platform to express their needs in seeking learning opportunities, to discuss their motivations for learning (and possibly what de-motivated them in the past), and finally to address their fear and perceived barriers in learning at this time in their lives.

For this qualitative research, semi-structured interviews were conducted during the winter spring and summer of 2007 with eleven (10) volunteer participants (4 men and 6 women). Each interviewee was a member of the communities of Taft or Bakersfield, California. All were of retirement age, 61 to 85 years old, but not necessarily retired. Each of the participant's names has been held in confidence. However, the gender and the age of the participant are revealed in each individual case study.

Each interview was recorded and notes were taken by the researcher. Every attempt has been made to preserve the real meaning intended by each statement from each research participant. Once complete, participants were asked to read their individual

case study for accuracy, to make changes, and for additional clarifications to comments made. The collective results are reported as individual case studies below.

The Responses

The goal of the semi-structured interview was to establish a dialogue with each study participant and gain insight to the learning needs, motivations, and fears of this unique group of older adults. Words, phrases, patterns, themes that reveal these needs, motivations, and fears were noted from the transcripts of each interview. In the ten case studies that follow, the key points of each participant interview have been summarized. The complete case studies are included as Appendix D.

Case Study 1 Summary: Respondent 1's (R1) Perspective on Lifelong Learning

Learning Motivation

R1 was the oldest participant in this study. At 85, he was still a practicing pediatric physician. However given the changes in the profession, R1 said he would not be practicing pediatrics today. R1 did not define himself as a goal-oriented learner and did not pursue learning for the social aspect of it. R1 said he learns for self-identification, the desire for knowledge, learning for learning sake, and he added that to be in pediatrics you must keep up with one's proficiency and profession.

Learning Needs

R1 had an expressive need for learning. He enjoyed taking part in activities for their own sake and not necessarily to achieve a goal. R1 had a contributive need for learning. R1 believed if you go into this field, and don't keep up with the literature and

research you are likely to convict the innocent and overlook the evidence of the guilty. (R1 often is asked to testify in child sexual-abuse cases.) R1 had an influential need for learning. “It is important if you know something to preach it, to teach it, to prevent fallacy, and also to educate other people.” R1 had a transcendent need for learning. When asked if R1 was aware that he setting an example or standard, or a bar, or that for some he was role model, R1 stated that he believed that he was educating others in that “the chronological age of an individual should not be used as a determinant of the capacity to learn and transmit that education and be instructive at the same time.” This researcher said that, with an eloquent statement like this, it proves that older learners are wise. R1 responded, “Is it wise or egotism?!”

Learning Barriers

Learning, and specifically reading, for R1 was a much slower process than it once was, and therefore takes him more time. It seems that he was coming to terms with his age related deficits (barriers to learning). He said that he consciously tries not being frustrated of the changes in the process of learning that his age, vision, cognitive ability had instituted.

Most Interesting Learning Experience

The Chief of Pediatrics at Fordham Hospital, and the most brilliant man R1 has ever met, Dr. Gollum has had the most influence on the way R1 conducts himself as a physician and children's advocate. Dr. Gollum had the greatest impact on R1, and that still holds today.

Interest in Online Learning

R1 said he was not computer literate and has no interest in online learning. R1 said to this researcher:

I think what you are doing is important. Why? I think you'll motivate people my age to say, hey, so what if I am doing it slowly, that's what they tell me is going to happen. You are going to make me feel normal. You make me feel part of a concept. So I don't feel like an outsider, be afraid to say, yes, I am doing things, but you know it is awfully slow, so I don't say anything. But if it is the norm to do what you're saying, hey, it's my age, all of us this age are doing it, therefore this is normal for us, therefore, I fit in.

R1 finished with, "One thing for elderly people is that you must have support mechanisms." He did not care whom or what the mechanism was, but that there was one. He stressed the importance of this type of research being published so older folks do not feel guilty about needing help, and to inspire those who need help in accepting support in a positive vein, because it is normal.

Case Study 2 Summary: Respondent 2's (R2) Perspective on Lifelong Learning

Learning Motivation

R2 was 62 years old and had achieved the highest degree with formal education in her family. R2 described herself as a learning-oriented learner; she loves learning for learning's sake. She enjoyed learning new things and the process of learning. Sometimes the learning was directly related to her personal goals and objectives or her professional goals and objectives, and sometime not.

Learning Needs

R2 was, and always has been, very career oriented. She was not active in a hobby outside of the volunteer work. At home she liked to read, work a puzzle, cook, sew, but she did not participate in any other “consuming” hobby. R2 is planning on retiring in a couple of years “down the road.”

R2 described learning as it satisfied her contributive needs. She was a member of Taft Soroptimists. The mission of Soroptimist International is a global organization for women in management and the professions, working through service projects to advance the human rights and the status of women. Each individual Soroptimist club identifies the needs of its community, and works to establish or support specific projects to address these needs—strictly on a volunteer basis. R2 did not describe herself as an agent for social change. “Change happens, whether I am there or not.”

Learning Barriers

What would hinder R2 from learning? “If you are not learning, you are not living. Death would hinder me from learning.”

Most Interesting Learning Experience

R2 received her Ed.D. in Educational Management from the University of LaVerne, in LaVerne, California. R2 believed her program was a nice combination of group and individual work and real-world projects. And she has been able to implement some of the ideas that she learned in graduate school into her own classroom. R2 noted that she completed her teaching degree in the 1960's under a traditional education framework.

Interest in Online Learning

R2 has taken professional development courses online, as well as face to face. She was anticipating in retirement that she would continue taking online and classroom courses. R2 concluded with stating she loves the idea of lifelong learning, and that it has been a passion of hers for years. “I think that lifelong learning is important for anyone's total well being.”

Case Study 3 Summary: Respondent 3's (R3) Perspective on Lifelong Learning

Learning Motivation

R3 was 70 years old and described her motivations to learning as goal-oriented. She was extremely interested in genealogy and exploring family histories. She did love the social side of learning. She spent much of time on the computer exploring the Web.

Learning Needs

Learning satisfied R3's contributive needs: deciding how to be useful contributors to society. For the past 11 years she had been an active member of the Soroptimists of Taft. R3 also volunteered at the West Kern Oil Museum in Taft. The Museum, run entirely by volunteers, is dedicated to collecting, preserving, exhibiting and interpreting artifacts, books, and equipment that tell the story of oil in California, particularly in West Kern County. R3 has taught bible study at the Methodist church in Taft.

Learning also satisfied R3's influence needs: becoming an agent for social change. In the past R3 has been quite active in county politics, but mostly “behind the scenes.” When asked if she ever had aspirations to hold office she replied, “In high school it was that nice girls did not go into politics.” That seemed to stay with her even today.

Most Interesting Learning Experience

R3 described her most interesting learning as always about God, the church, and reading the bible. In the secular world, the most influential person R3 has ever known has been her father. R3's father took education very seriously. He gave scholarships to local kids and relatives.

Interest in Online Learning

R3 had not explored online course options. She was interested in exploring sewing classes available online and possibly learning some German to help her in her genealogy work and writing her family history.

Case Study 4 Summary: Respondent 4's (R4) Perspective on Lifelong Learning

Learning Motivation

At 61, with plans on retiring in four years, R4 described herself as a goal-oriented learner. "I want to learn what I need to know, when I need to know it." At this time, she was not so interested in the social-side of learning, but anticipated this need changing when she does retire.

Learning Needs

R4 said her work at the library and her volunteer work with the Taft Soroptimists, helped satisfy her need to contribute to the community around her.

Learning Barriers

When asked about hindrances to learning, with no hesitation, R4 replied "Technology, and I am serious about that, it changes too fast." R4 spoke of how seniors have trouble with how to turn the computer on and then they get stuck with a mouse. She

noted the beginners have trouble with the mouse, specifically, hand-eye coordination challenges. R4 explained more than once that she knows the basics of using a computer, but was no expert. Often when someone asked R4 for computer or Internet help, she looked around the library for a teenager and asked for their help.

Most Interesting Learning Experience

The experience of a great teacher in English literature course she took in college nurtured R4 to be a good reader and writer: looking for the twist, to recognize an argument, being able to argue well, and allowing for the development of good reading and writing skills. She now had the opportunity to pass these critical thinking, analytical skills onto those she meets at the library.

Interest in Online Learning

R4 was interested in distance learning, but at the time of the interview she found online course interfaces, in general, to be a hindrance. Without any technological challenge, R4 anticipated that online learning would be preferable to face-to-face, given the convenience of learning at your own speed and time (when possible), in the location that you choose to learn.

Case Study 5 Summary: Respondent 5's (R5) Perspective on Lifelong Learning

Learning Motivation

R5 was 66 years old and had taken a variety of courses, but never to earn a degree. One of the courses was accounting. Since accounting had been the foundation of R5's professional life, the interview was focused on how interesting it is to visit career-skills from a formal education perspective versus learning those skills in the workplace.

R5 described herself as an activity-oriented learner. She went to school “before computers.” When computers came into the workplace R5 was eager to learn.

Learning Needs

Learning satisfied R5's contributive needs: deciding how to be useful contributors to society. R5 ran a small bookkeeping business from home. She kept books for some non-profit organizations in Taft on a volunteer basis. R5 belonged to the First Baptist Church in Taft, California, where she had recently become the treasurer, and was maintaining their books. She also does the books for a non-profit, “The Needs Center,” a food-bank in Taft, where she sits on their Board of Directors, and at one time was their treasurer.

Learning Barriers

Learning for R5 was bound by geography. R5 did not drive outside the city limits of Taft alone. She was willing, however, to drive anywhere, if accompanied.

Most Interesting Learning Experience

R5 spoke of Hans E. Einstein, M.D., as being the most influential person throughout her life. She described Dr. Einstein, a physician in Bakersfield, California, as the smartest person she has ever known, and she was honored to be his friend.

Interest in Online Learning

R5's did express an interest in online courses. The first course of interest was learning to use MS Excel.

Case Study 6: Respondent 6's (R6) Perspective on Lifelong Learning

Learning Motivation

While in high school, R6 really did not consider going to college, nor did any of her friends. She said, in that day, girls were not generally encouraged to continue their studies; only girls from wealthier families set their sights on higher education. The middle-class girls usually had plans on marrying and starting families. At 67, R6 was maintaining two bookkeeping accounts in addition to her full-time job with Taft College.

R6 went to work at Taft College as an Adjunct Secretary. Later she became a Senior Secretary for the Counseling Center. She has been at Taft College for seven years. R6 has been required to learn the Taft College software: Condor and Sars. Condor is used to manage student enrollment and other information services the student may require; Sars is a scheduling system for Taft College staff. R6 is a goal-oriented learner.

Learning Needs

Learning satisfied R6's contributive needs: deciding how to be useful contributors to society. R6 encourages younger students to stay in school. She spoke of administrative jobs that come available at Taft College. She explained how she communicates to students that are interested in these jobs, and maybe not interested in continuing their courses, "You can always come back here, there will always be other jobs, but get your education."

R6 commented on how she loves it when older students sheepishly walk into her department and ask for guidance on continuing their studies. This researcher can't help but think that given R6's presence among the younger students and staff she must be

extremely instrumental in securing enrollment of those reluctant mature students who walk through Taft College's doors.

R6 was involved in a youth sportsman club, Taft Sportsmen's Club where volunteers teach kids how to fish and pheasant hunt. R6 was the acting treasurer of the club.

Learning Barriers

R6 could not see any barriers to her own learning. She was not thinking about retirement. She was in excellent health and enjoyed working, and felt lucky to have a job.

Most Interesting Learning Experience

R6 remembered being awe-struck and gained inspiration from the demeanor of Jackie Kennedy throughout the death and funeral of her husband. She had always been impressed with Mrs. Kennedy's composure throughout her very public life. But then R6 quickly added that her own mother was her mentor and greatest supporter.

Interest in Online Learning

R6 once took a MS Word class online at Taft College. She registered for the MS Excel class, but decided against taking it after all. She cited that her work commitment were too heavy at the time.

Case Study 7 Summary: Respondent 7's (R7) Perspective on Lifelong Learning

Learning Motivation

R7 was 69 years old, and retirement was no-where in sight. R7 had participated in numerous training courses related to the positions that she has held throughout her professional life. R7 described herself as a goal-oriented learner.

Learning Needs

R7 spoke to her need to contribute. She belonged to Christ the King Catholic Church in Oildale, and enjoyed being involved in their fund-raising events.

Learning Barriers

What would hinder R7 from learning? She simply answered, “If I dropped dead.”

Most Interesting Learning Experience

When asked what her most interesting learning experience was, R7 could not think of any example from her school days. She said she liked school, but indicated that she had a hard time focusing. At home, going to college was not a topic around the dinner table. Her grandparents had immigrated to the United States, had not gone to college, nor did her parents. R7 admitted, “I did not think I was smart enough to go to college and plus I did not have any money. So, she decided to go to work.” R7's father was a grape/raisin farmer, and being a farmer was the last thing R7 wanted to be. She got a job as a secretary for Union Bank in Los Angeles, when she was 17 years old, and stayed until she was 25 or 26. R7 described her manager as very nurturing and patient. She was very appreciative of having a “good boss” for her first job experience.

Interest in Online Learning

When R7 was asked if she had any interest in online course, she responded “Yes, if the course is short and interesting.” She continued the discussion exploring the possibility of taking a cooking course online; that seemed to spark her interest.

Case Study 8 Summary: Respondent 8's (R8) Perspective on Lifelong Learning

Learning Motivation

R8's was a practicing physician with a specialty in plastic and reconstructive surgery. He was 72 years old and had retired in 2000. But retirement only lasted three years; he returned to practicing medicine on a part-time basis. R8's part-time job had moved to seven days a week. He finished with acknowledging, "I'm not really part-time. I learned if you are a physician, especially a surgeon, you cannot be part-time. You either work or you don't work." R8 described himself as mostly a goal-oriented and activity-oriented learner, and, just slightly to a lesser extent, a learning-oriented learner. He added that he believed that most physicians were as such.

Learning Needs

This researcher first began the discussion of McClusky (1976) studies and the learning needs of older adults and the development of the following five categories for needs-based learning opportunities: coping needs, expressive needs, contributive needs, influence needs, and transcendence needs. R8 put learning needs into two categories: necessity and not out of necessity.

One category of learning is out of necessity and the other is the opposite of necessity. Sometimes you learn because you have to. You go to school; you go to grade school, high school, college; you learn so that you can make a living. But now I do not have to learn out of a necessity to make a living, whatever I am learning now is because I want to learn.

He also mentioned learning because of your own experiences and learning from his patients. R8 enjoyed Persian literature and poetry. He also liked gardening.

Learning Barriers

When asked about what he thought barriers to learning might be, R8's response was, "Nothing, unless you are physically or mentally unable to do it." This researcher mentioned that another interviewer said that death would be the only barrier to learning that she could see. R8 laughed and agreed that would be a serious barrier.

Most Interesting Learning Experience

When asked about his most interesting learning experience, R8 spoke of a 10th grade history teacher who taught the history of Iran. In addition this same instructor stressed that, "If you want to sharpen your memory, you should memorize poetry." R8 still memorized poetry, and he credits the exercise to his good memory throughout his life. R8 also mentioned Dr. Miller who had carefully showed him a surgery technique that R8 still uses. R8 remembered this technique in both theory and practice as being very sound. R8 next spoke of Dr. Thompson, a pediatric plastic surgeon in Toronto, Canada, who taught him how to do intricate surgical and operational procedures, from repairing cleft-palette to buying the best surgical tools. R8 said that Dr. Thompson believed that a physician can never settle for second best for their patient. R8 mentioned one time when a patient came into the hospital, and the hospital personnel were aware that the patient did not have insurance. Dr. Thompson demonstrated the importance of treating all the patients fairly and equally, regardless of their insurance status. Once when a parent of a child wanted to give Dr. Thompson more money, as additional compensation within the socialized medical system of Canada, Dr. Thompson refused.

R8 continued saying that one of his best teachers was his father. His father was a grape farmer. He came to the United States for 10 or 12 years where he was a bowling

bowling-pin boy (before the bowling allies were automated) and was also a waiter in a restaurant. Two phrases said by his father have stayed with R8, “If a thing is worth doing, do it well or don't do it at all” and, “Always depend on yourself; don't expect other to do things for you.”

Interest in Online Learning

When asked about his interest in online learning, R8 quickly replied, “Zero!” and that was the end of the discussion.

Case Study 9: Respondent 9's (R9) Perspective on Lifelong Learning

Learning Motivation

R9 obtained his Ph.D. in Educational Technology from Colorado State and was an instructional designer at Bakersfield College. R9 described himself as predominantly a goal-oriented learner. At age 67, R9 had undertaken a total change in direction with respect to his career. For the past eight years he had been working mostly with faculty to help them integrate technology into the classroom. Recently he had gone “back to the classroom” as a Basic Skills instructor. Given that an increasing number of high school graduates do not have the English and math skills adequate to pursue college level work, R9 plans on teaching Basic Skills, until he retires.

Learning Needs

R9's need for learning fell into the coping and contributive areas. He supposed there might be an expressive need as well. Part of R9's desire for things like piano-bar skills or recitation skills was to allow him to give back, possibly at old folk's homes or other care facilities.

I think my music and my energy can brighten a place. Some of what I want to learn is for my own pleasure, so I can do things I've never done and go places I've never been. I guess that is selfish, but it's amazing how learning new skills usually brings with it a new way to contribute in a sort of serendipitous way.

Learning Barriers

R9 believed that if he lost his eye sight or the use of his limbs, and obviously not exactly sure on how he would react to such a situation, there would be new ways to learn and hoped he could leverage his current love with learning.

He did not think that the lack of money would limit his pursuit of learning given there are so many free resources. And he did not believe isolation would hinder him because he can recite poems, and does, in the pitch black night. He concluded with, “But other than through some drastic, unforeseen catastrophe to me or to my world, I don't think I'll be hindered from learning.”

Most Interesting Learning Experience

R9's most interesting learning event was his participation in a human research project. He participated in a pre-spaceflight experiment when he was in the Army. He had just finished Basic Training at Fort Ord and was asked if he was willing to participate in a research project at the Presidio of Monterey.

There was a control group and an experimental group that was chosen at random from the entire group. R9 remembers 24 total participants, with eight in the treatment group. They spent a week getting oriented to the project, and getting tested for mental agility/facility. In the second week, eight participants were put in lightproof, soundproof rooms for six days. They were monitored by intercom at all times, even had some mid-week testing done (in the dark). They had water, liquid food, chemical toilet, and a bed.

They also had big mitts to put on their hands at all times that they weren't feeding or relieving themselves. The goal was to see what impact sensory deprivation would have on otherwise healthy, fit and bright young soldiers. Three of the eight participants did not make the full six days, apparently for walls closing in on them or not being able to stand the food. R9 on the other hand, to use his words, "I had a blast. I sang and recited and exercised and slept."

While the treatment participants were in the cells, which were just large enough for a single cot and the toilet, the controls participants were doing regular duty which included, commissary, access to movies, and the PX (the large department store-like shop) in the evening, but they were not allowed off post. After the six days research participants were debriefed, re-tested, and eventually sent on to their next post. R9 didn't think much about this except how much fun it was, until he started taking statistics. Years later R9 received a thank you from the U.S. Army for my participation in the project. The Army shared none of the findings.

Interest in Online Learning

Online courses interested R9 for two main reasons: one, he has taken probably a dozen of them, and two, he was at the time of the interview the trainer for those who want to use the online course management system at his college. R9 had never taught a course online but had learned how to use several different online delivery software packages. R9 indicated that he preferred regular face-to-face classroom settings. R9 was not so interested in teaching online either. As an instructor he preferred the face-to-face contact, seeing the expression of being lost or of "getting it" feedback to prompt him to try again or to move ahead.

Case Study 10: Respondent 10's (R10) Perspective on Lifelong Learning

Learning Motivation

R10 was 82 years old. His specialty was Internal Medicine. In his earlier years, his plan was to be medical missionary in Korea, however after one year he contracted polio, as did his son. In medical school R10 described life as “all about goal-oriented learning,” but that now it is “learning for learning sake.”

Learning Needs

R10 spoke to all categories of the need for learning: coping needs, expressive needs, contributive needs, influence needs, and transcendence needs. Going to the gym was very important to R10; for most of his adult life he has had to cope with the results of having polio. As he grows older, he can physically do less, and has less of a desire to be outdoors, he therefore finds more to do inside.

R10 was very involved in his church. He was Methodist. When he was in private practice and when he talked to his patients, he was always concerned in their both their physical well being and spiritual well being. He would ask about “the power greater than yourself.”

R10 spoke about developing his “influence skills” at Berkeley with his student activism and within his community, including fighting the development of a nuclear power plant. He reflected on the bombing of Pearl Harbor, and when two classmates were removed from his high school and placed in internment camps; R10 regrets not being more vocal and active in the protests of treatment of families and citizens. Now he spends much of his time influencing legislators in understanding the causes that interest him,

specifically the pursuit of developing a vaccine for Coccidioidomycosis or “Valley Fever.”

Learning Barriers

R10 blames his own tendency to procrastinate as his biggest barrier to learning. When asked what the remedy was, he responded, “Set a date and do it!”

Most Interesting Learning Experience

R10 was asked to teach Sunday school when he was in 10th grade. It was one of the greatest experiences of his life. It set him up for a lifetime of mentoring. R10 began to ponder the great influences in his life: Mr. Bessie and his math class, Ms. Johnson, another of his high school math teacher, “she made us think.” He continued, “Fresno State, Berkeley, USC, and Helen Martin.” R10 spoke of how Helen Martin was a strict disciplinarian and when one made hospital rounds with her you did not get away with anything.

R10 then mentioned Dr. Hans Einstein, a fellow Internist, and Dr. Norman Levan, a Bakersfield dermatologist, for their friendship and for what they have taught him both professionally and personally. R10 remembered a drive he took with Dr. Einstein. “You can know someone all your life, but if you have never spent two hours with them alone in the car, you may never know them at all.” Dr. Levan invited R10 to join an informal “think tank” with the goal of getting together and going on a two day retreat after all the invitees were asked to read four specific books. Dr. Levin graduated from the University of Southern California ten years prior to R10's graduation. He also completed a master's degree in Humanities after completing medical school. Dr. Levin was bothered that practicing medical doctors did not have enough experience in the humanities. He said the

humanities teach people to listen. He viewed the elderly patients he saw in his practice as needing more than just treatment; they needed a sympathetic ear. It was R10's feeling that young doctors need a solid education in the humanities to better treat their patients.

Interest in Online Courses

R10 spent quite a bit of time emailing and word processing, but not so much time “surfing” the Internet. He mentioned that one of his sons was studying an MBA online. R10 concluded with if his medical expertise was not needed now he saw himself at some obscure college teaching history.

Summary of Findings

Table 1 indicates the frequency of responses when the study participants were asked about their motivation to learn. As shown in Table 1, study participants (R3, R4, R6, R7, R8, R9 and R10) spoke to being goal-oriented in their learning as often as they spoke to seeing themselves as activity-oriented (R3, R5 and R8) and learning-oriented (R1, R2, R8 and R10) combined.

None of the participants in this study were retired. All are at, and in some instances well beyond “traditional” retirement age, but are not retired. A few spoke to retiring in the next few years, but never definitively. One participant had retired and, then not sure what to do with himself, returned to practicing medicine, part-time at first, but now works at least a 40 hour week. One participant spoke as though she was retired, but this researcher reminded her that she still works (for pay) out of her home.

Table 1: Summary of Participant Responses to Motivation to Learn

Participant Response	Goal-Oriented	Activity-Oriented	Learning-Oriented
R1			✓
R2			✓
R3	✓	✓	
R4	✓		
R5		✓	
R6	✓		
R7	✓		
R8	✓	✓	✓
R9	✓		
R10	✓		✓

Key: ✓ Participant spoke to this category

Learning Needs

Table 2 indicates the frequency of responses when the study participants were asked about their need for learning.

Table 2: Summary of Participant Responses to the Need for Learning

Participant Response	Coping	Expressive	Contributive	Influence	Age Transcending
R1		✓	✓	✓	✓
R2			✓		
R3			✓	✓	
R4			✓		
R5			✓		
R6			✓		
R7			✓		
R8	*	*	*	*	*
R9	✓	✓	✓		
R10	✓	✓	✓	✓	✓

Key:

✓ Participant spoke to this category

* Participant did not speak to the categories presented, but spoke to two of his own categories

Although each of the need for learning categories were addressed at some point by at least one of the study participants as shown in Table 2, learning with respect to the need to contribute was a response given by all of the participants. The need to contribute included continued career and expertise contributions, professional development, political and social activism, and volunteerism. R8 did not speak to any of the categories as presented by the researcher, but put learning needs into two categories: necessity and not out of necessity.

Learning Barriers

Table 3 summarizes the participant responses to perceived barriers to learning. When the study participants were asked about their perceived barriers to learning, their responses ranged from there being no barrier to learning (R6 and R9) to the ultimate barrier to learning—death (R2). Other responses included the participants anticipating physical and mental, age-appropriate barriers, for example, limited mobility or becoming visually impaired. R3 mentioned an art teacher that discouraged her from pursuing any interest in creating art given that the instructor felt that R3 had no talent. R7 found that her own shyness kept her from embarking on a career path that she might have otherwise have chosen.

Table 3: Summary of Participant Responses to Barriers to Learning

Participant	Response
R1	Current vision and memory limitations
R2	Death
R3	Discouraging art teacher
R4	Technology
R5	Driving limitations
R6	None
R7	Shyness; Lack of family encouragement
R8	Future age related limitations
R9	None
R10	Procrastination

Most Interesting Learning Event

Table 4 summarizes the participant responses to when asked about their most interesting/creative learning event, course, and/or instructor.

Table 4: Summary of Participant Responses to the Most Interesting Learning Event

Participant	Response
R1	Mentor (Dr. Gollum)
R2	Ed.D. program
R3	Spiritual guidance (God and faith)
R4	Mentor (English teacher)
R5	Mentor (Dr. Einstein)
R6	Role model (Jackie Kennedy)
R7	None
R8	Two mentors; Memorizing poetry
R9	Human study in Navy; Memorizing poetry
R10	Mentor (Dr. Levan)

When asked to describe their most interesting/creative learning event, course, and/or instructor, six (R1, R4, R5, R6, R8, R10) of the ten participants described the life-shaping relationship with a mentor or role model. For some, the mentor relationship was short-lived (for the semester of a course) and for others it was the beginning of a lifelong friendship. R2 describe her own graduate program and elaborated on how she implements the project-based learning that she was exposed into her own classroom with her own

students. R3 spoke the importance of God and her faith in her life and that spiritual guidance was the most interesting learning event for her. Finally R9 discussed a human study that he was involved in while in the Navy. He mentioned how he enjoyed the process, others involved did not, and the findings were never shared with him.

Interest in Online Learning

Table 5 summarizes the yes or no responses from the study participants when asked if they had an interest in online learning.

Table 5: Summary of Participant Responses to Interest in Online Learning

Participant	Response
R1	No
R2	Yes
R3	Yes
R4	Yes
R5	Yes
R6	Yes
R7	Yes
R8	No
R9	Yes
R10	No

Three participants (R1, R8 and R10) were quick to communicate their lack of interest in online courses while others brain-stormed out-loud as to what topics may be of

interest to them. The remaining seven (R2, R3, R4, R5, R6, R7, R9) of the ten participants said that they were interested in online learning, with a few having already having taken one or more courses. One participant (R4) could not stress enough her interest, but reluctance, in taking online courses for fear of the technology.

Conclusion

The purpose of this research has been to further the knowledge and understanding of the learning needs and motivations of older adult learners. This chapter outlines the responses to the questions posed in this research study. This research adds to the somewhat small pool of knowledge on the learning needs of older adults. The results presented offer additional material for understanding an older adult's motivation to learn and fear that learning sometimes brings. Each case study presents a rich discussion formulated through an interview process. These data can then support the decisions made by administrators, instructors, and instructional designers when embarking on the design and development of learning programs, methods, and materials for the older adult learner. Naturalistic research paradigms (i.e., real-world and workplace scenarios) are ideal candidates for qualitative analyses. The advantage of the case study method is its application to real-life scenarios and human situations.

CHAPTER 5. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

If A is a success in life, then A equals x plus y plus z.

Work is x; y is play; and z is keeping your mouth shut.

—Albert Einstein

Introduction

This chapter presents the discussion of the findings in terms of the research questions, implications for instructional design for older adult learners and lifelong learners, the limitations of the study as well as recommendations for future research.

Discussion of Findings

Learning Motivation

Participants were asked: “Which of the following best describes your motivation for learning?” Participants spoke to goal-oriented learning as often as they spoke to seeing themselves as activity-oriented and learning-oriented combined. It is the belief of this researcher that fewer participants spoke to the need for the social side of learning since they are so active in their continued work and volunteering activities they are not seeking out additional learning opportunities with socializing in mind.

None of the participants in this study were retired. All are at, and in some instances, well beyond “traditional” retirement age, but are not retired. A few spoke to retiring in the next few years, but never definitively. One participant had retired, and then not sure what to do with himself, returned to practicing medicine, part-time at first, but now works at least a 40 hour week. One participant spoke as though she was retired, but this researcher reminded her that she still works (for pay) out of her home.

It is the belief of this researcher that fewer participants spoke to the need for the social side of learning since they are so active in their continued work and volunteering activities. They are not seeking out additional learning opportunities with socializing in mind.

Learning Needs

Participants were asked: “Which of the following best describes your need for learning?” Although all the needs of learning categories were addressed at some point by at least one of the participants, learning with respect to need to contribute was a response from all of the participants. The need to contribute included continued career and expertise contributions, professional development, and activism and volunteerism.

Learning Barriers

Participants were asked: “What would hinder you from learning?” The responses to the barrier to learning were where there was the widest range; participants ranged from there being no barriers to learning -- to death: the ultimate barrier to learning. Other responses include the participants anticipating physical and mental, age-appropriate barriers, for example, limited mobility or becoming visually impaired.

Most Interesting Learning Event

Participants were asked: “Can you describe your most interesting/creative learning event, course, and/or instructor?” Many participants described the life-shaping relationship with a mentor. For some, the mentor relationship was short-lived (for the semester of a course) and for others it was beginning of a lifelong friendship.

As instructional designers are asked to introduce educational technology into their courses and courseware, it is important to consider where it is feasible to re-introduce the human elements as well. Instructional designers still need to consider the “human touch” in development and implementation stages of their educational materials and programs.

Zachary (2000) described mentoring as memorable process that can guide the mentee into self-discovery. This study has revealed that the mentoring process has had a memorable affect on the mentees (the study participants) and has guided them in each of their professional and/or personal practices, and still does today.

Interest in Online Learning

Participants were asked: “In what way do online courses interest you?” With this question, three participants were quick to communicate their lack of interest in online courses while others brain-stormed out-loud as to what topics may be of interest to them. Seven of the ten participants said that they were interested in online learning, with a few having already having taken one of more courses. One participant could not stress enough her interest, but reluctance, in taking online courses for fear of the technology. And, it is the belief of this researcher that for those participants who seek learning for the social engagement, online may not be the best option for them.

Implication for Instructional Design for Older Adult Learners

Instructional designers need to understand their audience -- to know whether their older adult learners are goal-oriented, activity-oriented, and/or learning-oriented, and if being retired or not makes a difference in their motivations for learning. Goal-oriented learners use education to achieve their learning aspirations through the accomplishment of fairly clear cut objectives. Activity-oriented learners take part in such activities because of an attraction in the circumstances of learning (i.e., for the social interactions) rather than in the purpose or content. Learning-oriented learners seek knowledge for its own sake. Identifying the motivations of learners can help instructors and instructional designers in identifying the types of educational materials and problems that will satisfy the learners' motivations (Wlodkowski, 1988). For example, self-study programs are not going to motivate activity-oriented learners unless the program contains some element of interaction; the more social the situation the better.

Instructional designers need to understand their older adult learners' need for learning; learning with respect to need to contribute was a response from all of the participants in this study. The older adult learners in this study were all active contributors to their respective professions, volunteer group, charities and/or churches. Learning and learning materials needs to support a learner's contributive aspirations.

Instructional designers need to be aware of their older adult learners' barriers to learning. What is perceived as a barrier for one, is not so for others. Although a number of the participants felt that age related issues and conditions could be barriers to one's learning, these same learners anticipated being able of overcome such barriers.

Instructional designers need to consider what it means to design for lifelong learning. This study has unexpectedly highlighted the importance of mentorship in these lifelong learners; the lessons learned earlier in life and the mentor-relationships formed were a huge influence in most of the study participants' lives. The love of learning and the motivation to be a lifelong learner is rooted in earlier mentorship experiences.

Online may or may not be of interest to an older adult population. Embarking on learning online (or even just sending email) is up to each individual and is highly dependent on how the older adult learner views technology: an asset, a challenge, a barrier, or a little of each.

It is this researcher's belief that as instructional designers are asked to introduce educational technology into their courses and courseware, it is important to consider where it is feasible to re-introduce the human elements as well. Instructional designers still need to consider the "human touch" in development and implementation stages of their educational materials and programs.

The two most significant findings in this study are the participants' need to contribute as an older adult and the importance of mentorship, specifically mentorship at an earlier age, since it can be a significant motivator for learning later in life. The findings in this study are consistent with the anticipated psychological development stages as describes by Erikson (1986) and Daloz (1999).

Erikson's (1986) concept of the life cycle delineates eight stages of psychological development through which an individual progresses. The last stage of the life cycle, old age, challenges the individual to rework the past while remaining involved in the present. Erikson's Psychosocial Stage 8 (Integrity vs. Despair) phase occurs during old age and is

focused on reflecting back on one's life. This phase involves reworking and resolution of those earlier conflicts which arise throughout the life cycle. Unsuccessful individuals during this phase will feel that their life has been wasted. They will be left with feelings of bitterness, experience many regrets, resulting in despair. Individuals who feel proud of their lifetime accomplishments will feel a sense of integrity. Successfully completing this phase means a general feeling of satisfaction, looking back with few regrets, and having the sense that the individual has gained wisdom. "It is through this last stage that the life cycle weaves back on itself in its entirety, ultimately integrating maturing forms of hope, will, purpose, competence, fidelity, love, and care, into a comprehensive sense of wisdom" (Erikson, 1986, p. 55-56). Finally, Daloz (1999) offers perspectives for understanding adult learners and suggests in concrete, practical ways based on current developmental theory how instructional designers, educators, and administrators can work more effectively to improve the quality of an educational experience.

Limitations of Results

Limitations

Limitations include the small number of interviews (n=10) used in this study, the quality of the data obtained was controlled by the interviewees, the participants interviewed were volunteered and therefore may have introduced their own biases, and the data obtained may have been misinterpreted by the researcher.

Reliability and Validity

The reliability and validity of the study were established by the instrument used, specifically the interview protocol, and the consistent manner employed by the researcher in conducting each interview. The strategy used for the interview was conversational, with an open-ended approach. An interview guide was used as a checklist, outlining the topics that were to be explored. Triangulation using multiple sources of data collection was used to confirm emerging themes (Gall, Gall, & Borg, 2003). For example, interviewees who described themselves as being goal-oriented learners but did not specifically say that they were goal-oriented, the researcher would ask directly if they believed they were goal-oriented. As well, when interviewees were asked to review their individual case studies, as the researcher synthesized from the data, they were asked if all of the information was true.

Future Research

At this time there exists a gap in the literature of understanding the motivations, needs and barriers to learning for the older adult population. This gap needs to be addressed through further research. This study has been an opportunity to contribute to the body of knowledge in a meaningful way. Through the interview process in this study, there was a free flowing, open discussion of what are the perceptions of lifelong learning, including the exploration of both positive and negative learning experiences from the past, a sharing of any previous online learning experiences, and uncovering any computer/technology/learning fears that exist. As well, for those who did not have the

desire to learn online, a better understanding of their reservations and lack of interest was gained.

Houle (1961) writes, “Effort to explore the reasons why some people become continuing learners has made it clear that there is no simple answer to this complex question. Each person is unique and his [or her] actions spring from a highly individualized and complex interaction of personal and social factors” (p. 80). Future research may include specific studies on the impact of mentors and mentorships in lifelong learners and lifelong learning. Additional investigation may include the study of the motivations, needs and barriers of an older study group (older than 85) or the same age group (61-85) but focusing on retirees only. Comparing the responses of an older or retired audience with the finding in this study, would further enhance the body of work and understanding of what it means to be a lifelong learner.

This study has been an opportunity to contribute to the body of knowledge of what makes a lifelong learner. This study recognizes the older adults’ need to contribute and has highlighted the importance of mentorship, specifically mentorship at an earlier time in the educational process; the lessons learned earlier in life and the mentor-relationships formed were a huge influence in most of the study participants’ lives. Instructional designers and program planners need to consider what it means to design for lifelong learning. At this stage in life, older adults want to make a contribution and “give back,” and fostering mentorship relationships throughout the learning process seems to instill a love of learning for a lifetime.

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The secret to creativity is knowing how to hide your sources.

—Albert Einstein

APPENDIX A

Research Study Participant Consent Form Explanation

Elizabeth Eve Einstein
4200 Boise Street, 10A, Bakersfield, CA 93306
Phone: 661.871.0578
Email: EinsteinE3@aol.com

Thank you for agreeing to be part of my research study participant group.

As mention at our first meeting, I am a doctoral student at Capella University (Minneapolis, MN) in the Department of Education, with an emphasis in Instructional Design for Online Learning. As a partial fulfillment of the requirements for my Ph.D. degree, I will be conducting research and writing my dissertation.

This research focuses on the learning motivations, needs, and barriers to learning for older adults. I am very interested in finding out whether online learning is of interest and what types of courses you would like to see in a local Lifelong Learning Institute. I am interested in interviewing ten people, all of retirement age—but not necessarily retired.

I have included the questions I will be asking you with this letter. Each interview should take 30-60 minutes, and there will only be one interview per study participant.

Before the interview begins, I will ask you if I can tape our conversation, which I will be transcribing at a later time. I will also be taking notes while we talk. I will ask you to read your transcripts later for clarification, and you are welcome to call or write me after the interview should you want/need to clarify, add, or delete any information from our discussion.

All data collected for this study will remain confidential, and you will remain anonymous throughout the study. Attached to this letter is a Consent Form. I need you to sign and date this prior to our interview.

Should you have any questions, please do not hesitate to call me anytime or you may contact my mentor, Dr. Dennis Mills at Dennis.Mills@Capella.edu. Thank you for sharing your time and information!

My Sincerest Regards,

Evie Einstein

APPENDIX B

Research Study Participant Interview Questions

1. Which of the following best describes your motivation for learning?
 - I am a goal-oriented learner. I use education to achieve my learning aspirations through the accomplishment of fairly clear cut objectives.
 - I am an activity-oriented learner. I take part in such activities because of an attraction in the circumstances of learning (i.e., for the social interactions) rather than in the purpose or content.
 - I am a learning-oriented learner. I seek knowledge for its own sake.
2. Which of the following best describes your need for learning?
 - Learning satisfies my coping needs: engaging in physical fitness, economic self-sufficiency, and basic education;
 - Learning satisfies my expressive needs: taking part in activities for their own sake and not necessarily to achieve a goal;
 - Learning satisfies my contributive needs: deciding how to be useful contributors to society;
 - Learning satisfies my influence needs: becoming an agent for social change; and

- Learning satisfies my transcendence needs: rising above age-related limitations.
3. What would hinder you from learning?
 4. Can you describe your most interesting/creative learning event, course, and/or instructor?
 5. In what way do online courses interest you?

APPENDIX C

Research Study Participant Consent Form

Elizabeth Eve Einstein
4200 Boise Street, 10A, Bakersfield, CA 93306
Phone: 661.871.0578
Email: EinsteinE3@aol.com

I agree to participate in this research project and I understand that:

1. The time required for the interview is 30-60 minutes.
2. My participation is entirely voluntary. I may terminate my involvement at anytime.
3. All my data are confidential.
4. All data are for research purposes only.
5. I have read the accompanying consent explanation sheet.
6. If I have any questions about the research or need to speak to the researcher after my participation in the study, I can contact the researcher by phone, mail, or email with the information provided above.
7. Once transcribed, I will be asked to read my individual case study for accuracy, to make changes, and for additional clarifications to comments made.

Signature

Date

PLEASE SIGN AND RETURN THIS COPY.
KEEP THE SECOND COPY FOR YOUR RECORDS.

APPENDIX D

Research Study Participant Case Studies

Case Study 1: Respondent 1's (R1) perspective on Lifelong Learning

Background

R1 was the oldest member of the interviewee group used in this research. At 85, he had been married for 58 years and was still a practicing pediatric physician. R1 was a specialist in pediatrics, with a sub-specialty in child sexual abuse and molestation. He was an expert in identification, examination, lecturing, and appearing in court on behalf of children's health and welfare.

R1 graduated from the Royal College of Physicians and Surgeons, Great Britain in 1942. In 1948 he completed his residency training program and on the staff Fordham Hospital in New York. It was at the Albert Einstein College of Medicine in New York that R1 became a Staff Pediatrician and was first exposed to physical and sexual abuse in children. There his foundation in molestation, identification, examination, research, lecturing, and appearing in court on behalf of children was developed. He practiced in Springfield, Illinois, before coming to Bakersfield to practice Pediatrics. R1 said he would not be practicing pediatrics today. He exclaimed,

Why not? I can't hug and I can't kiss. Its sexually molestation. That to me is frustration, rigidity, and coldness, which I don't believe play a part in a relationship of physician to patient. There has to be warm and compassion

which has gone out of it with sterility and rapidity of with six minute per patient.

Learning Motivation

R1 did not define himself as a goal-oriented learner. He was required to take 25 Continuing Medical Education (CME) units to maintain his medical license. However he averaged 75 hours per year. He noted that if he were specifically goal-oriented he would likely stop at 25 hours. He starts with American Academy of Pediatric Grand-round quiz (36 CME) and the American Academy of Pediatrics Update Exams (monthly for CME).

For his own informal continued education, but for no credit, he kept up with American Academy of Pediatrics, Pediatrics in Review (a monthly publication), and Pediatric Notes (a weekly publication), and subscribes to JAMA, the Journal of the American Medical Association. He also mentioned how much he learns from vendors at trade shows.

R1 did not pursue learning for the social aspect of it. Most of his CME is done at home through distance learning, correspondence courses. R1 said he learns for self-identification, the desire for knowledge, learning for learning sake, and he added that to be in pediatrics you must keep up with one's proficiency and profession. He said he finds his medical reading relaxing. He added the he did play golf once and thought it strange to chase a ball around.

Learning Needs

R1 had an expressive need for learning. He enjoyed taking part in activities for their own sake and not necessarily to achieve a goal. R1 had a contributive need for learning. R1 believed if you go into this field, and don't keep up with the literature and

research you are likely to convict the innocent and overlook the evidence of the guilty. “If you don't keep up with your literature you will persist in doing the mistakes I would have made way back.”

R1 had an influential need for learning. The concepts in the field of child sexual abuse have changed. The definitions of what is normal from abnormal in children have evolved. The definition of what is sexual molestation has changed. He has had to keep up with the literature and educate others. “It is important if you know something to preach it, to teach it, to prevent fallacy, and also to educate other people.”

R1 had a transcendence need for learning. When asked if R1 was aware that he was setting an example or standard, or a bar, or that for some he is a role model, R1 stated that he believed that he is educating others in that “the chronological age of an individual should not be used as a determinant of the capacity to learn and transmit that education and be instructive at the same time.” This researcher said that, with an eloquent statement like this, it proves that older learners are wise. R1 responded, “Is it wise or egotism?!”

Learning Barriers

When asked what hinders him from learning R1 responded as follows:

The capacity to learn which is, I believe very strongly, age limited, not intellectually, but it is limited by vision, is limited by the ability to continue short [term] memory, because you start a paragraph and by the time you read two pages, gee, I wonder what that said? And it necessitates my going back, and being sure that I read it correctly. If it doesn't make sense, I probably misread a word.

When asked what he meant by age being a barrier, R1 responded with, “The rate of learning and rate of reading changes tremendously. I could read a page and

almost quote it back to you photographically.” But, as R1 indicated, this was not the case today (at the time of the interview). Now he had to read it slowly, and often read it again. On first read, the words in the context do not always make sense.

Learning, specifically reading, for R1 today is a much slower process than it once was, and therefore takes more time. He mentioned exclaiming to his wife that he doesn't have his photographic mind anymore. It seemed that R1 was coming to terms with his age related deficits. He said that he must consciously try not to be frustrated by the changes in the process of learning that his age, vision, cognitive ability institute. He said he was first aware of it about one year prior to the interview. As he now adjusts to this, he explained how he reads his medicine and literature slowly as well as uses his finger to help track words, fingering sentences. He had trouble reading commercial print, but he did not read with a magnifying glass (yet). His ability to read was diminished because of fatigue of his eyes; he could not read as long as he used to and he planned on seeing his eye doctor about his vision.

Most Interesting Learning Experience

The Chief of Pediatrics at Fordham Hospital, and the most brilliant man R1 has ever met, was a man he referred to as Uncle Joe. Formally known as Dr. Gollum, he made the greatest impact and had the most influence on the way R1 conducted himself as a physician and children's advocate. R1 met Dr. Gollum when R1 was Chief Residence of Pediatrics at Fordham. R1 remembers Dr. Gollum instructing him to, “Ask the question given. Think telegraphically. Think your words are a dollar a word. Think clearly, if you are given a goal or a question, answer specifically to the question. Don't ramble. Think

clearly. If you have a question, answer specifically.” Dr. Gollum taught R1 that if you have question, you have to word it properly to get the answer you need. Be specific in your questioning. Don't be vague. A minimalist approach is the best approach, with no filler, be specific. R1 says this approach influences his lecture style. He says he telegraphically. When asked what he meant by telegraphically, R1 responded with, “Linear: A to B to C.” R1 continued, “If a mother asks a question, answer it, don't hedge. If you don't know the answer, say so. Don't insult the intelligence of your patients' parents.” Dr. Gollum emphasized honesty in medicine. He also bestowed maturity professionally, socially, and most importantly, ethically upon R1 and his wife. Dr. Gollum had the greatest impact on R1, and that still holds today.

Interest in Online Learning

When asked if he is computer literate, again, there was a quick response, “No. Not interested! R1 found the keyboard too challenging since he had arthritis. R1 said he enlisted the help of his daughter when he required sending emails.

R1 did however use the software Dragon Naturally Speaking, a voice recognition program used to dictate replies to emails. The summer before this interview, R1 took a course, three days a week, at Kern Regional Center to learn how to use the software. During that time, R1 read conversational material that was digitized allowing the computer to “learn” to recognition his voice and speech patterns. R1 has never taken any community-based courses, online or face-to-face.

Life and Learning Today

R1 was retired from Kern Medical Center in Bakersfield. At the time of this interview he was a Pediatric Consultant for California Children Services and worked 30

hours a week. He was a lecturer at Bakersfield College and a former lecturer at Taft College on child abuse. R1 said this to this researcher:

I think what you are doing is important. Why? I think you'll motivate people my age to say, hey, so what if I am doing it slowly, that's what they tell me is going to happen. You are going to make me feel normal. You make me feel part of a concept. So I don't feel like an outsider, be afraid to say, yes, I am doing things, but you know it is awfully slow, so I don't say anything. But if it is the norm to do what you're saying, hey, it's my age, all of us this age are doing it, therefore this is normal for us, therefore, I fit in.

R1's wife goes everywhere with him: to lectures, medical meetings and court appearances. His wife will nod to him when she thinks he needs to take a break. "My wife is playing an integral part in my ability to continue. She is my navigator." R1 finished with, "One thing for elderly people is that you must have support mechanisms." He does not care whom or what the mechanism is, but that there is one. He stressed the importance of this type of research being published so older folks do not feel guilty about needing help, and to inspire those who need help in accepting support in a positive vein, because it is normal.

R1 and his wife recently were part of a group who went down the Grand Canyon in a pontoon, a trip arranged by Elderhostel. This proved to be a bit too rigorous at this stage in his life. This will be their last Grand Canyon tour.

Case Study 2: Respondent 2's (R2) Perspective on Lifelong Learning

Background

R2 was married and was 62 years old. She had achieved the highest degree with formal education in her family. She notes, however, that within her family, her parents

and two siblings, are all very intellectually active. This includes her 84 year old father who had WebTV. (He likes to watch sailboat races!)

Learning Motivation

R2 described herself as a learning-oriented learner; she loved learning for learning's sake. She enjoys learning new things and the process of learning. Sometimes the learning was directly related to her personal goals and objectives or her professional goals and objectives, and sometime not.

When asked if she had taken courses related to her professional side or hobby side, or both, R2 responded that almost everything she has taken was somehow related to her profession, she added, "being a librarian that profession is pretty broad and encompasses all disciplines." This gave R2 a lot of variety in the kinds of things that she has studied; she was not limited to courses on how to be a librarian or how to select materials for college students.

R2 was, and always has been, very career oriented. She was not active in a hobby outside of the volunteer work. At home she liked to read, work a puzzle, cook, sew, but she did not participate in any other "consuming" hobby. R2 planned on retiring "a couple of years down the road."

Learning Needs

R2 described learning as it satisfied her contributive needs. She was a member of the Taft Soroptimists. The mission of Soroptimist International is a global organization for women in management and the professions, working through service projects to advance the human rights and the status of women. Each individual Soroptimist club identifies the needs of its community, and works to establish or support specific projects

to address these needs—strictly on a volunteer basis. R2 does not describe herself as an agent for social change. “Change happens, whether I am there or not.”

Learning Barriers

What would hinder R2 from learning? “If you are not learning, you are not living. Death would hinder me from learning.”

Most Interesting Learning Experience

R2 received her Ed.D. in Educational Management from the University of LaVerne, in LaVerne, California. The program was designed for professionals in the field, people meet in clusters, 20-30 in a group. There were course materials but with no formal instruction, and students were required to produce group and individual projects in the field. This design worked well for R2 in her learning. As a result of her positive experiences in her Ed.D. program, R2's own students are assigned projects, rather than traditional tests.

The University of La Verne Doctoral Program utilizes an extraordinary blend of “high tech” and “high touch” ensuring students the best of both. Technology is used to delivery content and allows students to interact and communicate across the program regardless of location. Students interact in virtual teams, participate in Webinars, and remotely access learning resources through the ULV library system. In addition, students meet face to face in practicums and local learning groups for skill development, research, reflection, learning, and coaching. Graduate students have a faculty adviser, a professional adviser, projects that are group projects, individual projects, (for example, cost benefits for keep a branch library open.)

R2 believed her program was a nice combination of group and individual work and real-world projects. And she had been able to implement some of the ideas that she learned in graduate school into her own classroom. R2 noted that she completed her teaching degree in the 1960's under a traditional education framework.

Interest in Online Learning

R2 had taken professional development courses online, as well as face-to-face. She anticipates in retirement that she will continue taking online and classroom courses. R2 concluded with stating she loved the idea of lifelong learning, and that it has been a passion of hers for years. "I think that lifelong learning is important for anyone's total well being."

Case Study 3: Respondent 3's (R3) Perspective on Lifelong Learning

Background

R3 was 70 years old, a widow, who had three children, and, sadly, one child was deceased. Throughout most of her life, R3 had lived in California and Wyoming.

Learning Motivation

R3 described her motivations to learning as goal-oriented. She was deeply interested in genealogy and exploring family histories. She has taken a formal learning course in Photoshop and would like to take a course in German to help her with her genealogy work. Many of the documents she has obtained about her own relatives are in German. R3 loved the social side of learning. She spent much of her time on the computer just looking around.

Ten years ago R3 attended Taft College for two years and earned a certificate in Early Childhood Education. More recently she took a sewing course at Taft College. Each of these courses was in a traditional face-to-face classroom setting.

Learning Needs

Learning satisfied R3's contributive needs: deciding how to be useful contributors to society. For the past 11 years R3 has been an active member of the Soroptimists of Taft. R3 also volunteered at the West Kern Oil Museum in Taft. The Museum, run entirely by volunteers, is dedicated to collecting, preserving, exhibiting and interpreting artifacts, books, and equipment that tell the story of oil in California, particularly in West Kern County. R3 has taught bible study at the Methodist church in Taft.

Learning also satisfied R3's influence needs: becoming an agent for social change. In the past R3 has been quite active in county politics, but always behind the scenes. When asked if she ever had aspirations to hold office she replied, "In high school it was that nice girls did not go into politics." That seemed to stay with her all of her life.

Most Interesting Learning Experience

R3 described that her most interesting learning is about God, the church, and reading the bible. In the secular world, the most influential person R3 has ever known has been her father and his most passionate discussions involved the U.S. Constitution. R3's father was an immigrant from Austria/Czechoslovakia. He was 12 years old when he came to the United States, and he learned English from the local kids, and never returned to school. He made his living as an auto mechanic and started a business, first in Los Angeles and then later he moved it to Taft. He created the Dobbro Guitar (from Dopyera

brothers) in the early 1920's; the Dopbro is still played today. R3's father took education very seriously. He gave scholarships to local kids and relatives.

Interest in Online Learning

R3 had not explored online course options, but she was interested in continuing in bettering her skills in Photoshop and MS Word. She was also interested in exploring sewing classes available online and possibly learning some German to help her in her genealogy work and family history writing.

Case Study 4: Respondent 4's (R4) Perspective on Lifelong Learning

Background

R4 was 61 years old and married with two grown sons. R4 was planning on retiring in four years. Her husband retired at the end of 2007. He was a pipe-fitter working in the Bay Area. There, he lived on a boat; originally it was to cut down on expenses, but now he wants to sail the world. R4 mentioned he wanted to go to the Galapagos. R4 expressed that she would much rather stay a little closer to shore. Likely a traveling compromise is in the future.

Learning Motivation

R4 described herself as a goal-oriented learner, "I want to learn what I need to know, when I need to know it." At this time, she is not so interested in the social-side of learning, but anticipated this need changing when she does retire. R4 attended the University of Rochester in upstate New York. She holds a Bachelor's of Arts in Anthropology. Professionally she worked for the Kern County Library, Taft Branch, as

the Branch Supervisor. R4 started her library career at the age of 45. R4 lived in Taft and is a member of the Taft Soroptimists.

Learning Needs

R4 said her library work, and her volunteer work with the Soroptimists, helps satisfy her need to contribute to the community around her. She especially enjoys planning and implementing activities that advance reading in children. A typical month at the library when R4 works may include Preschool Story Time for children ages 3 to 5, Grandma's Attic a story time for 5 to 8 year olds where older members of the community are the invited readers, Westside Friends of the Library monthly meeting where all of the Taft community is invited, Thanks a Bunch Lunch for library volunteers, and in the month of May for example, Family Night in Grandma's Attic celebrating National Library Week.

R4 was part of a two-woman program for teaching seniors with basic computer and Internet skills. Two days a week, one hour before the library opened, seniors were invited to join one of two groups: people who knew the basics and those who have some prior skills/knowledge about computers and the Internet. There were a total of 12 seniors that attended. R4 explained that the seniors did not necessarily come to this course with a goal. R4 and her cohort established a goal for the day. For example, on any specific day seniors focused on sending email, word-processing skills, or how to search the Internet.

Learning Barriers

When asked about hindrances to learning, with no hesitation, R4 replied “Technology, and I am serious about that, it changes too fast.” In order to participate in distance learning as a student, R4 explained that she finds the technology too much of a

challenge. “I hear the words, but I don't have a clue [what they are], like Bluetooth, IPODs, MP3 Players, I don't even own a cell phone.” R4 would like to participate in distance learning, specifically online courses. She added, “But in order to participate in distance learning, a student needs to learn the technology and learn a whole new way to learn.”

R4 has yearly library training requirement. Last year, for example, R4 needed to listen to a particular library skills-focused Webcast. Unfortunately, she put it off, and when it came time to watch it she could not get her computer to play it. She needed to have pop-ups enabled. Unable to figure out how to reconfigure her computer to allow the pop-ups, she quit trying. This year she is required to listen to last year's and this year's assigned Webcast.

R4 spoke of how seniors have trouble with how to turn the computer on and then they get stuck with a mouse. She noted the beginners have trouble with the mouse, specifically, hand-eye coordination challenges. R4 explained more than once that she knows the basics of using a computer, but is no expert. Often when someone asks R4 for computer or Internet help, she looks around the library for a teenager and asks for their help.

R4 spoke of the older learners that come into the library. One of the seniors recently discussed needing to go see a specialist macular degeneration. The good part is that the library has many books on tape. But for “readers” books on tape are not the same. R4 is looking forward to retirement to catch-up on her reading.

Most Interesting Learning Experience

R4's most interesting learning event was an English literature class in college; it was the way the professor chose to teach it. Students were asked to write a paper every week. Students had a reading assignment and a writing assignment. R4 said, "The professor encouraged students to go out on a limb, and then build their case. Take a risk on your opinions and your choices and subject matter." R4 said it gave her confidence in her ability to write, and to think, and this has stuck with her all of her life. R4 added, "He was encouraging, and open to the students' ideas." As a result R4 said she got the papers out with little problem, and enjoyed it. This invoked her critical thinking skills and synthesis skills. As an added reward, she got very good grades.

The experience in the English literature course set R4 up to be a good reader and writer, looking for the twist, to recognize an argument, being able to argue well, and allowing for the development of good reading and writing skills that she now has the opportunity to pass on to those she meets at the library.

Interest in Online Learning

R4 was interested in distance learning, but usually finds the courseware delivery interfaces a hindrance. Without that technological challenge, R4 anticipated that online learning would be preferable to face-to-face due to the convenience of learning at your own speed and time (when possible), in the location that you choose to learn.

A manager friend of R4's once suggested that she pursue a Masters in Library Science. R4 exclaimed, "I am thinking about retirement I do not want the stress of that now." R4 added that her husband "leaps" towards technology; he is self-taught and is an early adopted of technology. R4 explained that she waits until software has been on the

market for a while before purchasing and using it. She does not read directions; she likes it when someone tells her how to use something. “Show me what I really need to know: nothing more.”

Case Study 5: Respondent 5's (R5) Perspective on Lifelong Learning

Background

R5 was 66 years old, a mother, a grandmother, and a widow. R5 worked in a bank for 27 years. There she was constantly updating her skills, as required by the bank. The bank provided the training in-house. She did not plan to stay in banking. But she started relying on the salary, insurance for the family and the fact that she was vested all contributed to her decision.

Over the years, R5 has taken a variety of courses, but never to earn a degree. One of the courses was accounting. Since accounting has been the foundation of her professional life, we talked about how interesting it is to visit carrier-skills from a formal education perspective versus learning those skills in the workplace.

Learning Motivation

R5 described herself as an activity-oriented learner. She went to school “before computers.” When computers came into the workplace R5 was eager to learn. Her first courses were a Windows class and MS Word class. Within the last ten years, R5 has taken classes at Taft College.

Learning Needs

Learning satisfied R5's contributive needs: deciding how to be useful contributors to society. R5 runs a small bookkeeping business from home. She keeps book for some

non-profit organizations in Taft on a volunteer basis. R5 belongs to the First Baptist Church in Taft. She recently became treasurer, and is now doing their books. She also does the books for a non-profit “The Needs Center,” a food-bank in Taft, at one time she was their treasurer, and now she sits on their Board of Directors.

R5 has used Quick-Books for all her accounting needs. She learned how to use Quick-Books from her husband's sister. When she has trouble with Quick-Books, R5 uses the available help screen some, but she never picks up the manuals. She will also phone her sister-in-law for help.

Learning Barriers

R5 suffered from panic attacks. She cannot drive outside the city limits, alone. She was willing to drive anywhere, while with someone. She has lived with panic attacks all of her life and has learned to cope with them in her own way; she does not take, and has never taken, medication for this. She thought about going back to school, once, after the death of her of 18 year old daughter.

Most Interesting Learning Experience

R5 spoke of Hans E. Einstein, M.D., as being the most influential person throughout her life. She described Dr. Einstein, a physician in Bakersfield as the smartest person she has ever known, and she felt honored to be his friend. R5 said Dr. Einstein has been her consul and confidant both medically and personally, throughout the illness and death of her daughter and of her husband. They have been friends for thirty years. They speak regularly even today.

Interest in Online Learning

R5's expressed an interest in learning MS Excel online.

Case Study 6: Respondent 6's (R6) Perspective on Lifelong Learning

Background

R6 was raised in Taft, 67 years old, and married with two children. R6's father was a butcher as a young man, and later he started working for the oil company, General Petroleum, in Taft. After a career of 35 years in the oil business he took early retirement due to poor health issues.

When R6 was in high school, she really did not consider going to college, nor did any of her friends. She said, in that day, girls were not generally encouraged to continue their studies; only girls from wealthier families set their sights on higher education. The middle class girls usually had plans on marrying and starting families.

R6's first job was for Chevron in Taft. It was not until later (during her second marriage and second child) that R6 went to work her mother's bookkeeping company in Taft. During the war, SB's mother worked at the aircraft plant in Taft. R6 added, "She was a Rosy the Riveter." It was after the war ended that R6's mother started the business in town.

Today, R6 maintains two bookkeeping accounts in addition to her full time job with Taft College. She uses Quick-Books for her bookkeeping.

Learning Motivation

R6 went to work at Taft College as an Adjunct Secretary. Later she became a Senior Secretary for the Counseling Center. She has been at Taft College for seven years. R6 has been required to learn the Taft College software: Condor and Sars. Condor is used to manage student enrollment and other information services the student may require; Sars is a scheduling system for Taft College staff. R6 is a goal-oriented learner.

Learning Needs

Learning satisfied R6's contributive needs: deciding how to be useful contributors to society. When discussing her work at Taft College, R6 said:

I love what I do. I like to meet the public. I like to help people. We have a lot of older people that do come in to go to school. And they are so afraid, and unsure, and anxious, and I try to give them a little self-confidence. I tell them they are not the only older ones to have gone to school. Yes there are a little older, but they all have a common goal, to get an education, and that's good; that's the good part.

R6 encouraged younger students to stay in school. She spoke of administrative jobs that come available at Taft College. She communicated to students that are interested in these jobs, and maybe not interested in continuing their courses, "You can always come back here, there will always be other jobs, but get your education."

R6's mother dreamed that R6 would go to college; she wanted her to study music. However, when R6 was graduating from Taft High School, she was not interested in more studies. Later, after R6 had her first child, she went to Taft College with the intention of enrolling. The woman at the front desk in the Admissions' Office seemed to talk R6 out of registering. R6 remembers the woman suggesting that with R6's good job with the oil company in town and her family responsibilities, it would be best if she just stay working and forget about continuing her education. R6 agreed and says it was the last time she thought about going back to school. Luckily, she says she has never regretted her decision.

Ironically, today R6 holds essentially the same position as the woman who greeted her in the administration office at Taft College years earlier. R6 commented on how she loves it when older students sheepishly walk into what is now the Counseling

Center and ask for guidance on continuing their studies. This researcher can't help but think that given R6's presence among the younger students and staff she must be extremely instrumental in securing enrollment of those reluctant mature students who walk through Taft College's doors.

In addition, R6 and her husband were involved in a youth sportsman club, Taft Sportsmen's Club, where volunteers teach kids how to fish and pheasant hunt. R6 was the acting treasurer of the club.

Learning Barriers

R6 could not see any barriers to her own learning. She was not thinking about retirement. She was in excellent health and enjoys working, and feels lucky to have a job. R6's 92 year old mother still lives alone, and accompanied R6 around town and on trips.

Most Interesting Learning Experience

R6 remembered being awe-struck and gained inspiration from the demeanor of Jackie Kennedy throughout the death and funeral of her husband. But R6 quickly added that her mother was her most influential mentor and greatest supporter. R6 sees her mother three times a day, before work, at noon, after work, and then she calls before bedtime.

Interest in Online Learning

R6 took a MS Word class online at Taft College. She registered for the MS Excel class, but decided against it after all, due to work pressures.

Case Study 7: Respondent 7's (R7) Perspective on Lifelong Learning

Background

R7 was 69 years old, and retirement is nowhere in sight. She started her career as a secretary and soon thereafter worked for an attorney. It was then she took courses for learning court procedures. She notes that all of these courses were “before computers.”

R7 discussed when she first used the automated IBM type writers and when computers emerged in the workplace, she remembered learning the word processing program, Word Perfect. She enjoyed the challenge of learning the word processing programs. However, she did not have enough time to devote to learning the programs well. Later she learned MS Word and Excel, but unfortunately she was never given enough time to learn all of the available features.

At the time of this interview, most of R7's work was done with proprietary “land” programs. She used a program called OGSYS, an accounting program with a Land Program built in. R7 worked for Ivanhoe as a Staff Landsman, however she did not perform all the traditional Landsman duties; she is a Lease Analyst. Ivanhoe is an exploration and development drilling company. Ivanhoe bought Ensign which holds a patent to process heavy oil to light oil.

Soon R7 was to be moving to another company, soon. The company was to have the largest exploratory plays in California, with millions of acres. R7 noted that none of the oil and gas companies have the same computerized land programs. She had been told that the new company will have “people” that come in and train her on the new land software. She said this with a hint of reservation, but has great faith in her boss whom she is moving with. They have been working together for about ten years.

She is a notary, and enjoys going to notary conferences. She is an avid traveler; she has a “travel-buddy” that she travels with. They have gone alone and with travel groups. They have been to Germany, Switzerland, Holland, Belgium and Italy. R7 is also a fabulous Italian cook and baker.

Learning Motivation

R7 has participated in numerous training courses related to the positions that she has held throughout her professional life. She described herself as a goal-oriented learner.

Learning Needs

R7 spoke to her contributive needs. She belongs to Christ the King Catholic Church in Oildale and enjoys being involved in their fund raising events.

Learning Barriers

What would hinder you from learning? She simply answered, “If I dropped dead.”

Most Interesting Learning Experience

When asked what her most interesting learning experience was, R7 could not think of any example from her school days. She said she liked school, but she said she had a hard time focusing. When she reads for example, she gets distracted, starts thinking about sometime else, and realizes she doesn't remember what she just read. She blamed it on the female's ability to multi-task.

At home, going to college was not a topic around the dinner table. Her grandparents had immigrated to the United States, had not gone to college, nor did her parents. R7 admitted, “I did not think I was smart enough to go to college and plus I did not have any money. So, she decided to go to work.”

R7 had wanted to be a court-reporter. The College of Sequoias had a court-reporter program, but she said she was too shy to register. “I did not have a car or any money, and no one ever sat me down and say, you are smart enough to go to school and work, and we will find a way to get you back and forth to school.” Later, in 1996, R7 took a medical transcription course, but changed her mind on pursuing a career as a medical transcriber.

R7's father was a grape/raisin farmer, and being a farmer was the last thing R7 wanted to be. She got a job as a secretary for Union Bank in Los Angeles, when she was 17 years old, and stayed until she was 25 or 26. R7 described her manager as very nurturing and patient. She was very appreciative of having a “good boss” for her first job experience.

Interest in Online Learning

When R7 was asked if she had any interest in online course, she responded “Yes, if the course is short and interesting.” She continued the discussion exploring the possibility of taking a cooking course online; that seemed to spark her interest.

Case Study 8: Respondent 8's (R8) Perspective on Lifelong Learning

Background

R8's was a practicing physician with a specialty in plastic and reconstructive surgery. He was 72 years old.

R8 finished his undergraduate work at the University of Tehran, Iran, School of Medicine. He came to the United States in 1961 and interned at Samaritan Hospital in

Troy, New York. R8 stayed an additional year at Samaritan Hospital, an affiliate of Albany Medical College, and completed one year in Pathology.

R8 went to Detroit, Michigan, and completed four years in general surgery. In 1967-69 he was in Toronto, Canada, and trained in plastic and reconstructive surgery. During that time he spent 6 months at the Hospital for Sick Children where he was a Fellow in Plastic Surgery focusing his research on inhalation burns and scare contractures secondary to thermal burns.

In 1970, R8 returned to United States where he worked in the Marshfield Clinic in Marshfield, Wisconsin (near Mayo clinic in Rochester) for five years. In 1974, R8 came to Bakersfield and joined the office of another plastic surgeon. He stayed for one year and then went into solo practice for 26 years (1974-2000).

During his solo practice years R8 went to the emergency room nearly every night. He explained that since he was the only one in his practice, he was on call 24-hours, 7 days a week. Since R8 operated a solo practice he did not have anyone to take over for him. When he retired, he did not taper-off as many physicians do. R8 quit from one day to the next: "All of a sudden, I was working very hard, and the next day I was not working." R8 retired in 2000.

But retirement only lasted three years. And just as R8 had retired, from one day to the next, he started practicing medicine again. He joined the Centennial Medical Group with an original plan to work Tuesdays through Thursdays only. However, he slowly added hours and, at the time of this interview, R8 was working Monday through Friday with hospital rounds on the weekends; R8's part-time job was now seven days a week. He

finished with acknowledging, “I’m not really part-time. I learned if you are a physician, especially a surgeon, you cannot be part-time. You either work or you don’t work.”

Learning Motivation

R8 described himself as mostly a goal-oriented and activity-oriented learner, and, just slightly to a lesser extent, a learning-oriented learner. He added that he believed that most physicians were as such. R8 concentrated primarily on his own specialty, but in the process of participating in Continued Medical Education (CME) forums and medical conferences he noted that one is exposed to topics from other medical specialties.

Learning Needs

This researcher first began the discussion of McClusky (1976) studies and the learning needs of older adults and the development of the following five categories for needs-based learning opportunities: coping needs, expressive needs, contributive needs, influence needs, and transcendence needs. R8 put learning needs into two categories: necessity and not out of necessity.

One category of learning is out of necessity and the other is the opposite of necessity. Sometimes you learn because you have to. You go to school; you go to grade school, high school, college; you learn so that you can make a living. But now I do not have to learn out of a necessity to make a living, whatever I am learning now is because I want to learn.

He also mentioned learning because of your experiences and learning from his patients.

R8 enjoyed Persian literature and poetry; he also likes to “putter” in the garden. But living in a condominium, the garden space is limited.

Learning Barriers

When asked about what he thought barriers to learning might be, R8’s response was, “Nothing, unless you are physically or mentally unable to do it.” This researcher

mentioned that another interviewer said that death would be the only barrier to learning that she could see. R8 laughed and agreed that would be a serious barrier.

Most Interesting Learning Experience

When asked about his most interesting learning experience, R8 spoke of a 10th grade history teacher who taught the history of Iran. In addition this same instructor stressed that, “If you want to sharpen your memory, you should memorize poetry.” R8 said he still memorizes poetry today, and he credits the exercise to his good memory today. As an adolescent, R8 would go home and teach the poems to his younger brother. That same brother has been writing poetry all of his life.

R8 also mentioned Dr. Miller who had carefully showed him a surgery technique that R8 still uses today. He remembers this technique in both theory and practice as being very sound. He next spoke of Dr. Thompson, a pediatric plastic surgeon in Toronto, Canada, who taught him how to do intricate surgical and operational procedures, from repairing cleft-palette to buying the best surgical tools. He believed that a physician can never settle for second best for their patient. R8 mentioned one time when a patient came into the hospital, and the hospital personnel were aware that the patient did not have insurance. Dr. Thompson demonstrated the importance of treating all the patients fairly and equally, regardless of their insurance status. Once when a parent of a child wanted to give Dr. Thompson more money, as additional compensation within the socialized medical system of Canada, Dr. Thompson refused.

R8 said that one of his best teachers was his father. His father was a grape farmer. The grapes were made into raisins and exported to Russia. He came to the United States

for 10 or 12 years where he was a bowling bowling-pin boy (before the bowling allies were automated) and was also a waiter in a restaurant.

Two phrases said by his father have stayed with R8, “If a thing is worth doing, do it well or don't do it at all” and, “Always depend on yourself; don't expect other to do things for you.”

When asked who inspired him to go into medicine, R8 replied that he did not want to be a doctor. Because of his interest in poetry, he was more concerned in the spiritual being rather than the physical being. He thought doctors were only interested in the physical being, make people well physically, excluding their spiritual wellness. Also R8 did not have the greatest respect for his small-town family doctor, who worked in small room and treated people who had no money and paid in chickens, eggs, and cheese, for example. R8 dreamed of being an engineer. He wanted to build buildings and bridges. As a boy he thought this was a more worthy and valuable career goal and profession to be in.

Mathematics was not offered in elementary and high schools in Ormi, Iran, the small town where R8 grew up. Ormi schools offered only literature and natural sciences studies. Students took literature to prepare them to be teachers and science which prepared them to be doctors, dentists or pharmacists. R8 had other career limitations, as well. Since he was a Christian in a Muslim country, he was excluded from any government jobs.

Six thousand students compete for 275 medical school spaces; R8 passed (he was ranked 48th from the top). However, he still did not want to be a doctor. The news of his exam success, however, had traveled home to his parents. It was his father who

convinced R8 that he should go, and being from a generation that listened to their parents, he went. R8 now worried about the cost of medical school and the burden it put on his family. Once in medical school, R8 soon realized that not all doctors were like his funny family doctor in Ormi. R8 has one brother who is a veterinarian in the Iranian Army (If you are a doctor or veterinarian, the Army will overlook the fact that you are a Christian, but not so if you are Jewish).

Interest in Online Learning

When asked about his interest in online learning, R8 quickly replied, “Zero!” and that was the end of the discussion.

Case Study 9: Respondent 9's (R9) Perspective on Lifelong Learning

Background

R9 was 67 years old, married with children, and was an instructional designer at Bakersfield College. His Ph.D. was in Educational Technology from Colorado State.

Learning Motivation

R9 described himself as predominantly a goal-oriented learner. For instance, when he was in his forties he wanted to teach college. He started a graduate program when he was 48 and finished his doctorate when he was 61. Now R9 is teaching college. Currently, at age 67, R9 have undertaken to totally change directions in his career. For the past eight years he has been working mostly with faculty helping them integrate technology into the classroom: helping them with websites, video editing, using PowerPoint, and learning to use the Online Course Management System at Bakersfield College. At the time of this interview, R9 had chosen to go back to the classroom as a

Basic Skills instructor. An increasing number of our high school graduates do not have the English and math skills adequate to pursue college level work. So, until R9 retires, or finds another direction to pursue, he will be teaching Basic Skills.

Since, this was an entirely new area for R9, throughout the summer he was reading entry level novels and learning about critical thinking and how others in the local Basic Skills departments approach their classes. He planned on shadowing other professors in the fall who teach the same classes he will be teaching. He was also going to be supporting a Basic Skills interactive lab, called Plato, so he needed to learn how to use it. He replied, “Yes, I am a little anxious about this move back to the classroom, but I’m also very ‘jazzed’ about it. I believe I have a good way of relating to students, of helping students build good conceptual models, and of ‘how’ to do things.” Fall 2006, R9 enrolled in the entry level American Sign Language course. He didn’t continue on to the second course because of a schedule conflict in the spring but he was dedicating some regular time to keeping up with his skills by using an online finger-spelling tool, and by using ASL Flash Cards, and he confessed that he had not done as well with this maintenance task as he had hoped, but was still interested in learning more. When asked why he was interested in ASL, R9 responded as follows:

Like for many of use, I “bump into” something that seems interesting and so I learn more about it. In the case of ASL, I was helping a faculty member with her website and she started doing ASL signs right there in front of me. She was doing it because there was some ambience music in the background and she was signing the words. I’m a singer and thought it would be great to be able to sing and sign—notice the two words have the same letters—perhaps doing the National Anthem at my final graduation ceremony before I retire. So I signed up for ASL.

R9 teaches in a district where the Caucasian student proportion is less than half. Since he got here six years ago he thought it would be good to learn Spanish. He attended a week long Spanish intensive one summer at a nearby college. The Spanish didn't "stick." R9 purchased the Rosetta Stone Latin American Spanish Course, Levels 1 and 2; R9 was excited to continue with it. He thought that learning Spanish would help his students to understand that even at his age he is learning, or at least trying to learn, so learning can be and, in his opinion should be, a life-long process.

R9 was also interested in putting together an hour long program of recitations before he retires. He believed that memorizing poems and stories and famous speeches is fun and probably helps him prevent brain atrophy; this was not based on scientific research but rather on the "use it or lose it" axiom. Through the last fifteen years or so R9 has been gradually memorizing and re-memorizing and then re-re-memorizing a few items that he likes to share, such as, "The Cremation of Sam McGee." He says his next piece to work on is *The Country Bunny* and *The Little Gold Shoes*. He will use actor's language dialects and possibly even costumes to present his swan song.

This multi-tasking learning is perhaps not as goal-achieving as dedicated, focused learning but that's what seems to fit into R9's schedule. Three years ago R9 studied AutoCAD for a couple semesters and would actually need only one more class to earn a certificate. He thought he might want to fulfill the childhood dream of becoming an architect. But when he really got into it and realized it would be at least ten years until he could be a "real" architect, his own critical thinking intervened and suggested that was probably not a reasonable goal. He was not afraid to try and was pretty confident he

could have finished it all, but it just seemed more prudent to direct his energies in a differently.

R9's interest in goal-oriented learning is not limited to the purely intellectual. He has considered many options for his retirement years and they all involve learning and practicing a new skill, such as woodworking, piloting a ferry boat or other seagoing vessel, competing in Ballroom Dancing, competing in Barbershop Quartet Singing, becoming a competent piano bar pianist (he has already played some), or becoming a competent photographer/videographer. He finished with, "So many things to do, so little time. Ha!"

Learning Needs

R9's need for learning falls in the coping and contributive areas. He supposed there might be an expressive need as well. Three years ago he bought a Trikke, a scooter-like apparatus than requires skate-skiing motion to make it work. He learned how to do that and enjoy gliding along. He has thought about getting a row-bike to vary the kind of exercise he does, and five years ago he learned enough additional about swimming to do the Alcatraz swim. Three years ago he learned enough about dog sledding to spend a week in the winter in northern Minnesota sleeping on lake ice and driving dogs during the day. Two falls ago he spent a week learning how to sea kayak and did so in the San Juan Islands of Washington state. R9 expected there are more activities like those, even to the extent of climbing Mt. Kilimanjaro, in his future. In contrast, he went scuba diving for the first time two years ago, and liked it, but doubts he will ever do it again. He bought roller blades two years ago but never really learned to use them. "That's another candidate for my retirement year's physical activity."

Part of R9's desire for things like the piano bar skills or recitation skills is so he can give back, possibly at old folk's homes or other places where many have been discarded or forgotten about.

I think my music and my energy can brighten a place. Some of what I want to learn is for my own pleasure, so I can do things I've never done and go places I've never been. I guess that is selfish, but it's amazing how learning new skills usually brings with it a new way to contribute in a sort of serendipitous way.

Learning Barriers

R9 believed that if he lost his eye sight or the use of his limbs, and obviously not exactly sure on how he would react to such a situation, there would be new ways to learn and hopes he could leverage his current love with learning. He does not think that the lack of money would limit him given there are so many free resources. And he does not believe isolation would hinder him because he can recite poems, and does, in the pitch black night. He concluded with, “But other than through some drastic, unforeseen catastrophe to me or to my world, I don't think I'll be hindered from learning.”

Most Interesting Learning Experience

R9's most interesting learning event was his participation in a human research project. He participated in a pre-spaceflight experiment when he was in the Army. He had just finished Basic Training at Fort Ord and was asked if he was willing to participate in a research project at the Presidio of Monterey.

There was a control group and an experimental group that was chosen at random from the entire group. R9 remembers 24 total participants, with eight in the treatment group. They spent a week getting oriented to the project, and getting tested for mental agility/facility. In the second week, eight participants were put in lightproof, soundproof

rooms for six days. They were monitored by intercom at all times, even had some mid-week testing done (in the dark). They had water, liquid food, chemical toilet, and a bed. They also had big mitts to put on their hands at all times that they weren't feeding or relieving themselves. The goal was to see what impact sensory deprivation would have on otherwise healthy, fit and bright young soldiers. Three of the eight participants did not make the full six days, apparently for walls closing in on them or not being able to stand the food. R9 on the other hand, to use his words, "I had a blast. I sang and recited and exercised and slept."

While the treatment participants were in the cells, which were just large enough for a single cot and the toilet, the controls participants were doing regular duty which included, commissary, access to movies, and the PX (the large department store-like shop) in the evening, but they were not allowed off post. After the six days research participants were debriefed, re-tested, and eventually sent on to their next post. R9 didn't think much about this except how much fun it was, until he started taking statistics.

A control group, random selection for the treatment, etc., etc., etc. I certainly had a different appreciation for the real part of an experiment because I had been a guinea pig in one myself. Years later I received a thank you from the U.S. Army for my participation in the project. They shared no findings with us, just sent the thank you.

Interest in Online Learning

Online courses interest R9 for two main reasons: one, he has taken probably a dozen of them, and two, he is currently the trainer for those who want to use the online course management system at his college. Several years ago R9 completed the Online Teaching Certificate offered through a nearby college. He found it a bit disappointing; the students in the course were all teachers but they didn't do their assignments, at least their

group assignments; there had been no explanations about how to do online group projects, and the participants did not know in concept on how that may be accomplished. R9 has also participated in a couple dozen one-hour, online training seminars online. He felt some of those were great and some not so great. The not-so-great ones were not well organized, did not have handouts and the instructors, in some cases, did not seem to know/understand their topics.

R9 has never taught a course online but has learned how to use several different online delivery software packages including Prometheus, Etudes Classic, and Etudes-NG. He is currently the only “anointed” Etudes-NG trainer at Bakersfield College. The Etudes-NG training is 12 hours, usually in four sessions of three hours each. R9 indicated that he prefers regular face-to-face classroom settings, adding, “There are effective online teachers and others who aren't so effective. Some teachers bring in a lot of media and variety to their online classes and others post boring, vanilla lectures and assignments, and give boring multiple-choice tests.”

R9 was not so interested in teaching online either. As an instructor he prefers the face to face contact, seeing the expression of being lost or of “getting it” feedback to prompt him to try again or to move ahead.

Perhaps a good use of the online classroom is as a supplement to a face-to-face class. Image, motion or audio media as well as documents can be posted in the online portion (or on a related website). These can be accessed by the student if they miss class or if they want extra resources. Some instructors audio pod-cast their lectures. As band width improves, lectures could be captured and video-cast. One advantage of these 'hybrid' courses is that they enable a college to double enrollment without creating new brick and mortar classrooms. I think some students do well in the fully online environment but others need to personal contact that a classroom can provide. This is all pretty much boilerplate, generic

feedback about my interest in online, but it's been so well stated by others, and I don't have direct online teaching experience, so I'll leave it at that.

Case Study 10: Respondent 10's (R10) Perspective on Lifelong Learning

Background

R10 attended California State University, Fresno for two years before being drafted into the Navy. After two years in the Navy he finished his pre-med studies at University of California, Berkeley. R10 spoke of not wanting to be doctor; he thought he wanted to be an aerospace engineer. R10 was an 82 years old, husband, father, and grandfather.

He went to Medical School at the University of Southern California (USC), and graduated in the class of 1952. His specialty is Internal Medicine, interned in Los Angeles, and he completed his General Practice residence in Bakersfield (1952-1953). R10 then went to Yale to study Far East Languages to study Korean. His plan was to be medical missionary in Korea, however after one year he contracted polio, as did his son. He and his family then returned home in Fresno.

R10 then took a residence at Barlow Hospital in Los Angeles. Barlow was originally designed to treat Tuberculosis patients since it was comprised of small cottages that allowed patients to be separated from one another. R10 was well studied in Tuberculosis in preparation for his work in Korea, and the layout of Barlow allowed for him to work since now he had to use a wheel chair and crutches.

Learning Motivation

In medical school R10 described life as “all about goal-oriented learning,” but that now it’s “learning for learning sake.”

Learning Needs

R10 spoke to all categories of the need for learning: coping needs, expressive needs, contributive needs, influence needs, and transcendence needs. Going to the gym was very important to R10; for most of his adult life he has had to cope with the results of having polio. As he grows older, he can do less and less outside, he does more inside.

R10 was very involved in the Methodist church. When he was in private practice and when he talked to his patients, he was always concerned in their both their physical well being and spiritual well being. He would ask about “the power greater than yourself.”

R10 spoke about developing his “influence skills” at Berkeley with his student activism and within his community, including fighting the development of a nuclear power plant. He reflected on the bombing of Pearl Harbor, and when two classmates were removed from his high school and placed in internment camps; R10 regrets not being more vocal and active in the protests of treatment of families and citizens. Now he spends much of his time influencing legislators in understanding the causes that interest him, specifically the pursuit of developing a vaccine for Coccidioidomycosis or “Valley Fever.”

Learning Barriers

R10 blamed his own tendency to procrastinate as his biggest barrier to learning. When asked what the remedy is, he responded, “Set a date and do it!”

Most Interesting Learning Experience

R10 spoke of a Sunday school story. He was in 10th grade and the 4th graders need a Sunday school teacher. He was asked to do it. He exclaimed, “I did not know a tenth grader could teach.” The response was, “you know more than they do, and here is a book.” It was one of the greatest experiences of his life. It set him up for a lifetime of mentoring. R10 then told a story of asking his 17-year-old granddaughter what she thought about something. She responded, “Gee grandpa, I'm just a kid, you're the grandpa.”

R10 began to ponder the great influences in his life: Mr. Bessie and his math class, Ms. Johnson, another of his high school math teacher, “she made us think.” He continued, “Fresno State, Berkeley, USC, and Helen Martin.” R10 spoke of how Helen Martin was a strict disciplinarian and when one made hospital rounds with her you did not get away with anything. R10 described one harrowing night on call:

Two a.m., a diabetic coma goes bad, and then went from bad to worse. I gave the patient plenty of insulin, sugars came down, but the patient still died. Eight a.m. Helen Martin's first question, “What was the patient's serum potassium?” I responded that I did not know. Her response was, “You killed him with insulin and not enough potassium. Insulin brings down the serum potassium; the consequences of not administering potassium can be, and in this case were, lethal.”

R10 concluded with, “Ms. Martin was very direct and to the point.” That particular case has stayed with R10 all of his life, and so does the memory of Helen Martin.

R10 then mentioned Dr. Hans Einstein, a fellow Internist, and Dr. Norman Levan, a Bakersfield dermatologist, for their friendship and for what they have taught him both professionally and personally. R10 remembered a drive he took with Dr. Einstein. “You

can know someone all your life, but if you have never spent two hours with them alone in the car, you may never know them at all.”

Dr. Levan invited R10 to join an informal “think tank” with the goal of getting together and going on a two day retreat after all the invitees were asked to read four specific books. Dr. Levin graduated from the University of Southern California ten years prior to R10's graduation. He also completed a Master's degree in Humanities after completing medical school. Dr. Levin was bothered that practicing medical doctors did not have enough experience in the humanities. He said the humanities teach people to listen. He viewed the elderly patients he saw in his practice needing more than just treatment; they needed a sympathetic ear. It was R10's feeling that young doctors need a solid education in the humanities to better treat their patients.

In 2006, Dr. Levan made history with donating \$5.7 million to Bakersfield College for the creation of a lifelong learning program for seniors, a center for the humanities and medicine, and scholarships. The gift is the largest private individual donation to a community college in California. Dr. Levan practiced medicine in Bakersfield for more than 50 years (Bakersfield College Foundation, 2007).

Interest in Online Courses

R10 was spending quite a bit of time emailing and word processing, but not so much time “surfing” the Internet. He did mention that one of his sons was studying an MBA online. R10 concluded with if his medical expertise was not needed now he sees himself at some obscure college teaching history.