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Preface

The maturing of self-directed learning knowledge and literature can be seen as scholars think about the topic in increasingly varied ways. This issue of the journal reflects such variation as six authors in five articles present a myriad of ways to address self-directed learning. It is my delight to serve in a guest editor role and bring these articles to you.

In the opening article Scott moves us to think about self-directed learning in some new ways as she describes congruous autonomy in terms of unusual capability and a commitment to extraordinary involvement. She shares the voices of eight people who demonstrated outstanding commitment in the pursuit of personal development.

Johnson, too, interviewed a group of people, 24 training professionals. He discovered the processes trainers use to obtain the knowledge needed to prepare for the training required on topics for which they have no or limited prior expertise. The themes and categories he derived will be useful in planning future educational efforts.

From time to time, each of us faces the dilemma of having too many choices from which we must make a viable decision in moving forward. In the third article, Brockett uses his many years of experience in self-directed learning to help us think about how the freedom to choose among many options can actually hinder our choices.

Canipe and Fogerson continue the ongoing effort to better understand ourselves as scholars through content analysis of our published material. They examine selected dissertations pertaining to self-directed learning over a 22 year period. Using charts and tables they report on several trends and frequencies pertaining to the nature of self-directed learning research.

The pervasiveness of the Internet impacts much of how we now gather and use information. Hiemstra (in an article accepted under previous editorship) reports on the use of the Internet in rural areas. In a mixed mode research effort, he uses graphs, tables, and the "voices" of numerous people living in rural areas to tell a story of how the Internet has impacted their lives.

Roger Hiemstra, Guest Editor

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SELF-DIRECTED LEARNERS' CONCEPT OF SELF AS LEARNER: CONGRUOUS AUTONOMY

Karen Wilson Scott

This study explores how self-directed learners over age 50 employ congruous autonomy to exercise control over self-selected learning endeavors. This analysis of their voices revealed that learners pursuing self-selected endeavors follow inner cues, engage positive lifetime patterns, and experience an impelling "pull" of identity with and commitment to their pursuit and personal development.

In 1991, Candy suggested that ". . . much research on autodidaxy has tended to compartmentalize existing and new understanding, to uncouple learners' intentions from their approaches, and to submerge or ignore how people construct meaning in their lives and interpret and define their actions (p. 173). He further claimed that "In the case of an autodidactic project, one rarely encounters descriptions of what the learner feels or what he or she thinks as the project takes shape . . . [and that] examining the attitudes and intentions of learners is essential to gaining full understanding of their actions" (p. 438). Candy challenged the research community to investigate learners' concepts of themselves as learners and report findings in learners' voices.

> Researchers should examine learners' concepts of themselves as learners. This would include trying to ascertain both generalized and subject-specific images of their learning competence; the origins of such notions in their past; how they change or consolidate their self-concept as a learner during the course of a learning endeavor; the particular points in learning experiences (both autodidactic and instructional) where they felt either especially blocked and incapacitated, or else especially competent and capable; and the cues embedded in the learning situation that they believe inhibit or release their potential for exercising control over the learning situation. (p. 448)

In 1999, Merriam and Caffarella recommended building a richer research agenda as critical to understanding self-directed learning (SDL). They specified unaddressed questions, including disregard of previous researchers' observations and recommendations and a predominant use of a quantitative or positivist paradigm in data-based studies, suggesting that SDL can benefit from a variety of paradigms including qualitative (pp. 311-315). Most recently, in an analysis of the SDL literature in the United States, Guglielmino, Long, and Hiemstra (2004) suggested that Merriam and Caffarella's questions and Candy's recommendations remain open.

PURPOSE

Both Candy (1991) and Merriam and Caffarella (1999) recommended seeking substantive theory through a qualitative design. A grounded theory study (Scott, 2002), positioned in the self-efficacy literature, indirectly addresses Candy's *Recommendation Seven* (p. 448). The study focused on a dual purpose: (a) to understand the lived experiences of highly self-efficacious adults persevering in new challenging life pursuits; and (b) to discover the central theory for the processes, beliefs, and strategies of high self-efficacy and perseverance in self-selected pursuits at a time when their cohorts are viewing their age as an obstacle to capabilities. The present analysis juxtaposes the 2002 interview questions with Candy's recommendations to describe self-directed learners' concepts of themselves as learners through their own voices.

The 2002 study focuses on high self-efficacy and perseverance in new challenging pursuits, and describes self-directed learners over age 50. Houle presented the notion of SDL to the research community with his 1961 text, *The Inquiring Mind*. Tough (1971) advanced understanding of the self-directed learner by developing an interview protocol with which he collected descriptions of the number, duration, and scope of learning projects of numerous self-directed learners. Knowles (1975) offered a widely accepted definition of SDL:

> In its broadest meaning, "self-directed learning" describes 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)

Knowles' definition describes a self-directed learner's approach to his or her learning, but does not suggest parameters for a learning project. Tough (1971) designed an interview script, which has been adopted by many researchers of SDL, defining a learning project as either initiated by another or self-initiated and approximately 7 hours in duration. The 2002 study investigated learners' self-initiated, self-directed endeavors of much greater duration including learning to sail around the world, write mystery stories, play jazz piano, and speak a nearly-extinct language. This paper also describes their self-concepts as competent learners.

METHODOLOGY

The constructivist grounded theory tradition of the study on which this analysis is based (Scott, 2002) stresses the importance of understanding participants' realities (McCaslin & Scott, 2003) and the meanings they give those realities (Charmaz, 2000; Weimer, 2002). Constructivism is relevant to understanding learning through the learner's perspective (Pratt, 2002). The methodology led to a substantive theory that moved beyond self-efficacy, to focus on participant autonomy and the congruence of their interactions within personal contexts (Scott, 2002, 2004a). The study adhered to traditional grounded theory rigor (Glaser & Straus, 1967; Strauss & Corbin, 1990, 1998) beginning with purposefully selected participants. The initial 2002 data collection will be described first, followed by a description of the current thematic analysis and findings.

Participants

At the time of data collection, four of the eight participants had just completed their pursuits. Karen, age 59, had left her job, learned to sail, sold her house to purchase a 36-foot boat, and became the first American woman to sail solo around the world. Nancy, 58, had galvanized inner strength to move from being a single-parent of six with a subsistence income to being an entrepreneur of a business (recently sold to an international firm) assisting employees affected by a corporate downsizing. Richard, 68, began bicycle racing at age 60, and won two world championships. Patricia, 70, retired at age 65 to pursue Master's degree research investigating the revival of ancient Cornish, which she learned to speak in order to interview her study participants.

The other four participants were continuing their pursuits. Robert, age 68, a tenth grade dropout with no engineering training, invented a framing system for one- to three-story buildings at age 60, and invested his life savings in patenting and testing his invention. Lou, 65, retired from sales at 62, out of shape and needing nine knee surgeries, won over 30 gold medals in cross-country competitions, then began training for national decathlon competition. Floyd, age 56, purchased his first piano and course of instruction at age 50, and then left a state agency position to learn to play, compose, and record improvisational jazz. RT, 58, left a career as a federal drug-enforcement agent at 56 to write mysteries, has published many short stories in the prestigious *Alfred Hitchcock Mystery Magazine*, and is seeking his first novel publication.

Instrument

The interview protocol, nine semi-structured questions, was vetted with two prospective participants and piloted with one. Interview questions were designed specifically to address the dual grand tour question: *What is the deep, rich, lived experience of persevering in new life pursuits for an adult population over age 50; and what is the central theory that explains how high self-efficacy and perseverance are experienced and exercised by adults committed to new challenging life pursuits after age 50?* Candy's (1991) recommendation, calling for learners' concepts of themselves as learners, parallels the 2002 study's purpose of understanding of lived experience of persevering in a new life pursuit. Candy's sub-recommendations specifically call for examining cues for exercising control over the learning situation and of learner competence. The second element of the dual question calls for explaining how high self-efficacy [exercise of control] (Bandura, 1997) and perseverance are experienced and exercised in new challenging life pursuits. The 2002 study questions paralleled Candy's recommendations with purposefully selected, highly self-directed (Guglielmino, Asper, Findley, Lunceford, McVey, Payne, Penny, & Phares, 2005) adult learners over age 50. Table 1 aligns Candy's sub-recommendation and Scott's corresponding 2002 interview question(s), numbered in the original order.

Table 1. Candy's (1991) Recommendation and Scott's (2002) Corresponding Interview Questions, Numbered in the Interview Protocol Order

Candy's Recommendation	*Scott's Corresponding Interview Questions*
Origins of learners' notions of their learning competence	1. How did you choose your pursuit? 5. What were your beliefs and values when you began this pursuit? What are they now? What does persevering in this pursuit say about you?
Cues embedded in learning situation that learners believe inhibit or release their potential for exercising control over the learning situation	3. What thoughts, games, sayings, strategies helped sustain your resolve with your pursuit? 6. What is it about you that enables you to persevere? 7. Do others help with your pursuit or do they get in the way? How has that affected your progress?
Particular points in learning experiences where learners felt either especially blocked and incapacitated, or else especially competent and capable	2. How do you measure success? How do you know you are achieving it? How does achieving it or not affect what you do or think? 4. Have you ever hit a wall and you didn't know how to get over, under, around, or through it? What did you do?
How learners change or consolidate their self-concepts as learners during the course of a learning endeavor	8. How has your vision of your pursuit changed as you continued? What caused those changes? Were there unexpected twists or turns that affected you or your goals? 5. What were your beliefs and values when you began this pursuit? What are they now? What does persevering in this pursuit say about you? 9. How has your experience so far affected how you will continue to pursue this challenge or approach your next phase? Is age a factor?
Subject-specific images	Informed by all interview questions
Generalized images	Informed by all interview questions

Delimitations and Limitations

Eight participants over age 50 were purposefully selected as a theoretical sampling for the 2002 study according to pursuit-specific criteria. Each pursuit was a personally compelling, self-selected endeavor that changed the participant's life direction. The pursuit had been ongoing for at least two years prior to their selection. Each participant had demonstrated commitment to the pursuit despite adversity. Participants resided in the Western United States. While

transferability is the onus of the reader in qualitative research (Creswell, 1998; Lincoln & Guba, 1985; Merriam, 1998), findings may be limited due to the small number of participants and their age. As researcher bias is a concern, several verification methods were employed.

Initial Data Collection and Analysis

Purposefully selected participants satisfying the delimiting criteria received a study description, involvement expectations, and the human subjects informed consent form. Confidentiality was rigorously maintained. As the researcher, I conducted audio-taped interviews (90-minutes average) with the participants. Interviews took place in their homes to foster candor and to observe each participant in his or her ecology. Each contributed a reflective journal.

Verification

Recognizing the interaction between participant and context and striving to convey the participants' reality is incumbent upon a responsible qualitative researcher and important in this and the 2002 study. To establish an audit trail sufficient for another researcher to follow, interviews were transcribed verbatim and validated against original tapes. Participants were included in verification via a crystallization approach (Richardson, 2000). Participants validated the story line for relevance and fit. The adjusted story line was validated across related literature. Participants then validated the emergent theory for trustworthiness, and rich, thick description.

Data Analysis

Rigorous grounded theory procedures (Strauss & Corbin, 1990) proceeded through the traditional open, axial, and selective coding phases. Coding followed an iterative constant-comparative process, categorizing and relating the concepts derived across participants, and capturing them in a database linking each passage to the original transcript. During axial coding, a Conditional Relationship Guide (Scott, 2004b) established the core category by relating *structure* with *process* (Strauss & Corbin, 1998). Selective coding and the process phase determined conditions of the emergent theory, where the core category was confirmed as *commitment to extraordinary involvement.* Interactions were then clarified among categories.

Findings

The emergent theory explains a form of autodidactic learning termed *congruous autonomy*. Congruous autonomy is an enduring, self-efficacious belief in personal capability and compelling rightness and identity, inspiring commitment to extraordinary involvement in a pursuit (rich in lifetime patterns and trends), despite sacrifice and risk, to develop one's highest potential (Scott, 2002). Congruous autonomy answered the 2002 question: *What is the central theory that explains how high self-efficacy and perseverance are experienced and exercised by adults committed to new challenging life pursuits after age 50?*

DATA RE-ANALYSIS AND FINDINGS

The present study re-examines the 2002 data for themes describing participants' concepts of themselves as learners. Using Table 1 as a guide, I coded responses to the interview questions aligned with the following categories:

- Origins of Learners' Notions of Competence
- Embedded Cues that Inhibit or Release Control
- Points Blocked or Especially Competent
- Learners' Consolidated Self-Concept
- Specific Images of Learning Competence.

Origins of Learners' Notions of Competence

Origins of learner's notions of their competence were categorized into these themes: (a) *Lifetime Patterns and Trends; (b) Follow the Direction that Inspires Me; and (c) Open to Possibility.* Quotations excerpted from 2002 study transcripts are theme exemplars.

Lifetime Patterns and Trends. [*Nancy*] Two major trends I noticed in my life were medicine and healing and being outside. I also liked to build things. . . . I also was very interested in photography. . . . I need the sense of freedom and variety. I've noticed trends going through my life that seem . . . consistent and strong.

Follow Direction that Inspires Me. [*Floyd*] I allowed myself to follow that and to get interested in new kinds of music that I was drawn towards . . . I like the concept of expression and communication . . . I liked the tactile sense of my fingers on the keyboard . . . It's really finding the voice. . . . to explore your own expression. I've always been attracted to things that have no limits.

Open to Possibility. [*Richard*] Never had raced a bike. Didn't ride very much. . . . I wasn't trying to be a racer. It's just I wanted to get better. . . . You have to not limit yourself . . . Be a possibility thinker.

Learners' beliefs and values expressed in terms of *Self-efficacy* were foundational for perceived learning competence. Efficacious locus of control varied individually, internal to external.

Self-efficacy. [*Karen*] Even though I knew I wanted to sail around the world, I didn't have the knowledge, the experience; I didn't even have a boat. . . . So, the first thing I had to do is [*sic*] learn how to sail. . . . I certainly didn't know how to skipper a boat. The electrical systems, the weather, the navigation, I didn't have any of those skills. But one by one I acquired them.

[*Lou*] The first year I started competing, I got beat about every event. . . . I knew I was just as good as some of them, better than some. So, I just worked at it, and just started winning medals. It's in your blood. I'm one of these persons you don't have to push.

Embedded Cues That Inhibit of Release Control

Belief systems seem to point to the cues that release potential. Participants described conviction galvanized by these themes: (a) A strong *Sense of Autonomy;* (b) an age-related *Sense of Urgency;* and (c) *Epiphanies* that *Sacrificing Ordinary* aspects of life was worth the risk to gain a desired *Extraordinary* aspect.

Sense of Autonomy. [*Nancy*] I've learned how to trust myself.

[*Karen*] I wanted to sail around the world. I wanted to do it solo.

Epiphany/Sense of Urgency. [*Karen*] No American woman had done this. I really wanted to be out there on my own . . . to be very intimate with the ocean, with the world. . . . I said, "Why would I want to do this partially; I'll just do this all on my own. . . . I've got to do it now or I won't ever do it. I'll just sell everything." . . . I realized that the biggest fear I had was not being able to try.

Sacrificing Ordinary for Extraordinary. [*Floyd*] If I want to be a good jazz piano player, I'm not going to do it by sitting down at the piano every once in a while. I have to understand that somehow I've got to make that time, and that in a normal situation people don't make that time. That's an extraordinary thing to do, to make that kind of commitment. We can only do that if we're willing to make . . . I don't necessarily want to call them sacrifices, but those adjustments in how we spend our time.

Participants developed *Learning Strategies* to advance their pursuits. The strategies varied widely: some were highly specific, self-imposed plans and others broad attitudinal principles.

Learning Strategies. [*Lou*] Every day I run 3 miles in the morning, then at noon I go play basketball for an hour and a half. And then late in the evenings I lift weights for an hour and a half. And then sometimes I go over to the high school and go through my events. . . . 9:00 or 10:00 at night. I practice on the long jump, the triple jump, and you know sprints. That's my life.

[*Nancy*] So, my strategies are to be aware. What am I feeling right now? And if it doesn't feel resourceful, then I shift it. What am I meant to be learning from this?

Participants also described the following: (a) A *Commitment* to their pursuits; (b) these were strongly linked to having the *Ability to Adapt*; and (c) they held a view, too, that *Obstacles Are Part of the Process.*

Commitment. [*Floyd*] It has a lot to do with the commitment to the undertaking. . . . what am I willing to sacrifice or exchange or give up to pursue that. If I say, "Well I want to do this because this is what I want to do," and I know it's not all going to be wonderful, when that happens that doesn't change the fact that I want to do it. . . . If those reasons continue to be fulfilled, then it's not a matter of perseverance so much as just you are getting out of it what

you expected and what you wanted, so you keep doing it. . . . The most important thing is that you enjoy the process.

Ability to Adapt. [*Robert*] You become very adaptive. And so adversity is a friend, if you use it well.

Obstacles Are Part of the Process. [*Karen*] It's business as usual down there in the Southern Ocean. That's just the way it is. . . . The storms happen, the winds happen, the waves happen, the birds, the sea creatures – it's just the way it is. And you're a guest.

[*RT*] You need to get beyond [*rejection of stories*], because after you've been in writing long enough you find out it could be a good story, but that particular editor can't use it. . . . You have to learn, it's part of business.

Participants discussed avoiding cues that inhibit progress, specifically *Negativity from Others*.

Negativity from Others. [*RT*] Some friends . . . were not very supportive of writing. They considered it to be an artsy-fartsy occupation, and they were more into *manly* things.

[*Karen*] I just didn't want to share and hear any negative. I was too convinced that was where I was going. I just didn't want to hear that.

Points Blocked or Especially Competent

Like Candy (1991), I was particularly interested in points within learning experiences where learners felt especially blocked or especially competent. Surprisingly, participants reported that they never "hit the wall" with respect to their pursuits. The theme noted above, *Obstacles Are Part of the Process*, related to learners' belief systems, indicating a strong sense of competence facing challenges. Learners described competence and capability as beginning with these thematic areas: (a) *Progressive Realization of Worthwhile Goals*; (b) moving to a *Sense of Accomplishing*; and (c) resulting in a *Sense of Self-worth.*

Progressive Realization of Worthwhile Goals. [*Robert*] Progressive realization of worthwhile goals. . . . [*is*] always a moving target. . . . That's why it is important to recognize small successes, because without small successes there's no motivation to go to the next one.

[*Floyd*] To me music . . . is a growth process; it's a series of small accomplishments.

Sense of Accomplishing. [*Karen*] There were unbelievable levels of success. . . . The stormy nights at sea, the landfalls, the departures, the people you meet, all the emotional stuff. You can't possibly imagine that wonder, that amazement, that thrill, that immense peace of accomplishing something . . . all alone.

Sense of Self-worth. [*RT*] It's self-satisfying just me. . . . and the recognition of self-worth.

[*Floyd*] There are certain things that I have to do in order to feel worthy as a human. I see . . . a personal responsibility to maintain . . . extraordinary involvement with things. Music exists as part of the natural world. There's a purity that deals with our emotions and our feelings and our expression. That is important.

Learners' Consolidated Self-Concept

The learners consolidated self-concepts as learners through evolving both their visions for their pursuits and personal self-competence in attaining those visions. Personal rightness and positive lifetime patterns appear to coalesce into two themes: (a) An *Identity With the Pursuit;* and (b) a *Belief in Personal Potential*, such that the learner feels urgently compelled to autonomously pursue it. This consolidated image appears to be central to commitment to a self-directed pursuit.

Identity With the Pursuit. [*Karen*] I love sailing. And I love adventure and the romance of the distant horizon. The challenge of all that. . . . came down to one thing: and that's what I wanted – one enormous adventure in my life. . . . There was always something more to reach for. . . . 'Cause it was for me.

[*Patricia*] I'm a scholar. A scholar is someone who loves to learn. I've always been a scholar. The things you do portray who you are.

Belief in Personal Potential. [*Floyd*] There has to be a belief, and there is, that the commitment and the effort and the belief that I can develop my potential, and that potential is high enough that I can express what I want to express. If I follow the direction that my expression takes me, that I can do that in a way that is going to, at least in my own sense, justify the effort, and provide me with the satisfaction that I am doing . . . an extraordinary thing.

Specific Images of Learner Competence

The study participants each provided vivid images of learning competence specific to the pursuit. Following are two who continue their pursuits even four years later.

[*RT*] I had read a bad story and I said, "Well, I can do better than that." I thought all I had to do was write a story. At that point I didn't know the proper format and all the elements that needed to go into a story. That story . . . got sold. It was a false belief that I knew how to do it. So, then I had to spend a lot of years…to find out how . . . it worked. It was, "Hey, let's just see if I can get a story written and get it in print." And now it's, "Let's see how far up the professional writers' ladder we can go." . . . I want to get the series of short stories pretty well established, and then…get seven or eight novels out on the bookshelves.

[*Floyd*] I wanted to learn how to play jazz. I couldn't find anybody that I wanted to take lessons from, so I signed up for this video course. . . . One of the things that really intrigues me is I can come up with the concept, I can write the music, I can record it, I can produce it. . . . And yet it needs to be something worth doing. Right now I am focusing on learning the

language. . . . The most important thing is the mastery, certainly in terms of a contribution . . . and to go in the direction that is uniquely my own. I've learned things I've got to learn. It's an ongoing process.

CONCLUSIONS

Self-directed Learning Pursuits and Contexts

The participants in this study preferred the term *pursuits* rather than *projects*, connoting their ongoing involvement with their SDL. Unlike many studies of self-directed learners who report completing 15 or more projects each year (Guglielmino, et al., 2005; Tough, 1971), these learners each had one primary pursuit ongoing for a minimum of two years. As Tough defined projects in terms of hours, each learning pursuit in this study could be viewed as comprising many learning projects, all aimed at advancing the primary pursuit. When one project is faced with a barrier, learners holding a perspective that obstacles are part of the process step back and view the entire pursuit.

[*Floyd*] If you focus all your energy on what's not working, then you're stuck. But other things are still working. If you think of a troop of ants marching across the desert, some of them are going to run into logs, and others are going to climb over them and around them, and so the troop is going to continue to make progress. A pursuit is sort of like that. I've got lots of ants.

Pursuits varied widely from sailing to music. Learners described engaging in their pursuits due to a confluence of positive lifetime patterns of experiences and preferences, uniquely compelling contexts. Hanson, Hanson, and Juechter (2003) claim people inevitably repeat motivational aspects of their positive experiences, which over time can create recognizable patterns, a basis for fulfilling productivity. The notion of competence originated as learners noticed the domain-specific fit (Ponton, Derrick, & Carr, 2005), and transformed as a congruous context uniquely compelled commitment to their pursuits. Merriam, Caffarella, and Baumgartner (2007) note understanding the extent context contributes to autonomy in SDL is important. Congruous context appears central to self-directed autonomy.

Autonomy in Autodidactic Self-directed Learners

Candy (1991) and Cranton (1996) suggest that it is personal autonomy and autodidaxy that lead to SDL and transformative processes. Autonomy in learning requires that students take responsibility for their learning beyond responding to instructors (Boud, 1981). These learners directed their learning without benefit (or hindrance) of a formal instructor. While masters student Patricia was in a formal program, learning Cornish language was self-directed.

Drawn by the fit of competence with context, participants autonomously exercised intrinsically-motivated choices (Boud, 1988; Deci & Ryan, 1987) to engage in their pursuits. Influencing autonomy, these learners who began their pursuits after age 50, experienced age-related urgency.

[*Robert*] Yeah, [age is] a propeller. . . . It speeds up the schedule.

High self-efficacy, a resilient, perseverant belief in one's capabilities, is unusual at any age (Bandura, 1995). Self-efficacy theory postulates that beliefs contribute to motivation by influencing the goals people set for themselves, the effort they expend accomplishing those goals, how long they persevere in the face of adversity, and their resilience to failure (Bandura, 1997). Bandura (1986) has argued that whether or not people will undertake particular challenges, attempt to perform tasks, or strive toward specific goals depends on whether or not they believe they will be efficacious in performing those actions. Bandura (1997) claims, "One does not find many pragmatic realists in the ranks of innovators and great achievers" (p. 74).

[*Richard*] The fact that I didn't know I couldn't do it enabled me to do it.

Self-efficacy beliefs are considered to be domain-specific (Bandura, 1977), and may be stable in that domain through late life (Heckhausen, 1992), though they are modifiable by experience (Bandura, 1997). Ponton, Derrick, and Carr (2005) claim perceived competence is similarly domain-specific, and this study would indicate modifiable by experience.

Consolidated Learners' Images of Competence

The learners' approaches to their pursuits held many common elements, despite varied means of expression. For example, the learners held a common reliance on a strong system of beliefs and values which varied widely (e.g., Christianity, Buddhism, and New Age philosophy). The learners each identified strategies of sorts. For some, the strategy was a detailed plan, while for others it was invoking specific principles to be applied in given circumstances. Three overlapping principles were identified by every participant as a default position for maintaining *commitment* to the pursuit whenever inevitable barriers are encountered: (a) *ability to adapt*, (b) *obstacles are part of the process,* and (c) *progressive realization of worthwhile goals*. Many who facilitate self-directed learners advocate that instructors teach learners to self-evaluate (Shapiro & Levine, 1999; Weimer, 2002). Wiggins (1997) claims, "Self-adjustment is the goal" (p. 35). Guglielmino, et al. (2005) reporting on barriers, interrupters, and restarters in adult learning projects, noted that highly self-directed learners evidence "persistence and conscious redirection of learning projects to meet learner's needs" (p. 90).

The persistence demonstrated by these learners might suggest that the aforementioned elements alone account for their commitment to their pursuits. The notion of competence originated from congruous lifetime patterns of experiences and preferences, then transformed into efficacious identity with the pursuit experienced by the learner as compelling and personally right.

[*Nancy*] My own experience is that once the brain has a compelling image of a desired outcome, the brain will . . . give continual self-corrective feedback to keep it on course. You just need to be aware of your internal responses, "Am I on the right track?"

A consolidated image of the learning competence of this study's eight participants would not be complete without emphasizing the learners' commitment to developing personal potential.

Generalized Learner Image: Congruous Autonomy

A generalized image of these learners is the definition of congruous autonomy. Congruous autonomy is an enduring, self-efficacious belief in personal capability and compelling rightness and identity, inspiring commitment to extraordinary involvement in a pursuit (rich in lifetime patterns), despite sacrifice and risk, to develop one's highest potential (Scott, 2002).

The learners in this study painted clear images of their competence as autonomous, self-directed learners, meeting Candy's 1991 recommendation. They further revealed the importance of congruous context, efficacious beliefs, and developing potential as important to learning competence and pursuit commitment.

RECOMMENDATIONS

Based on the findings of this study, further research is recommended. The following questions can guide the future efforts of researchers who desire to pursue the findings from the 2002 study and the notion of congruous autonomy developed in the current study:

1. How do self-directed learners identify congruous patterns among their lifetime experiences and preferences?

2. To what extent does congruous context affect commitment in autonomous self-directed learning?

3. How does congruous autonomy shift in direction or commitment as a self-directed learner moves through different phases of a pursuit?

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THE KNOWLEDGE ACQUISITION PROCESSES TRAINERS USE TO ACHIEVE CONTENT EXPERTISE

Daniel P. Johnson

Training professionals often face situations that require them to develop and present training programs on subjects for which they have limited or no previous content expertise. This occurs even though the literature stresses the need for trainers to be experts on the material they present. Although there is considerable literature on the roles and responsibilities of trainers, self-directed learning, and developing training programs, very little research links these areas with the knowledge acquisition process trainers use. This paper describes a phenomenological inquiry into the processes trainers use to acquire the knowledge necessary to develop and present training programs for which they have little or no previous content expertise. A population of 24 trainers was selected for semi-structured interviews and constant comparison analysis. Twenty-six common themes were identified and grouped into six categories. The study results have implications for the adult education, self-directed learning, program planning, human resource development, and training literature.

OVERVIEW

Eduard Lindeman (1926) stated, ". . . the approach to adult education will be via the route of *situations*" (p. 8, emphasis in original) and this holds true for the field of training (Fenwick, 2000; McCain, 1999; McLagan & Suhadolnik, 1989; Tobin, 2000; Watkins, 1989; Zielinski, 2001). As situations in society and the economy change, so must organizations (Bernthal, Colteryahn, Davis, Naughton, Rothwell, & Wellins, 2004; Bierema, 2000; Blanchard & Bowles, 1998; Blomberg, 1989; DePree, 1989; Johnson, 1998; Long, 1983; McLagan, 2002). As a result, training professionals are often confronted with situations that require them to develop and present new training programs when they know little about the subject. Caffarella (1988) provides an example of this type of situation: "George, a technical training specialist, has just been asked to teach a three-week short course on interpersonal skills to new, entry-level supervisory personnel. He doesn't really know the subject matter very well . . ." (p. 109).

The situation George found himself in isn't unique. Trainers often find themselves in situations in which they are required to teach topics for which they have limited or no previous content expertise (Long, 1983; Spear, 1988; Watkins, 1989). Compounding the problem is the fact that trainers are expected to be content experts when presenting the material (Brookfield, 1990; Draves, 1984, 2000; Galbraith, 1990; Houle, 1984; Long, 2002; McArdle, 1993; Slusarski, 1994; Wlodkowski, 1999), so they must first gain sufficient knowledge about the subject.

PROBLEM STATEMENT

How do trainers who find themselves in the situations Caffarella (1988) discussed acquire the knowledge they need to develop and present training programs on a subject for which they have limited or no previous knowledge? Is there any process they can use to acquire that knowledge? These questions have yet to be researched and addressed in the adult education literature and serve as the problem for this study.

Spear (1988) conducted the initial research into trainers having to develop training without previous content expertise. He interviewed ten corporate trainers and staff development professionals to determine if and how they used self-directed learning (SDL) to assist them in developing training programs in areas which they had limited prior knowledge. According to Spear (1988), these professionals were selected because "typically such professionals are called upon several times a year to develop and present training programs in subject matter in which they themselves have not been trained. In developing such a training program, they must first become adequately proficient themselves before they are able to instruct others" (p. 211). Tobin (2000) indicated that in his review of dozens of human resource development (HRD) and training articles over the previous 10 to 15 years, he had yet to find one that discussed how trainers could prepare themselves for their new roles.

PURPOSE

This paper reports on a study that was conducted to examine the processes trainers use to acquire the knowledge necessary to develop and present training programs for which they had limited or no previous content expertise (Johnson, 2005). The following research questions guided the study.

1. What is the nature of those processes trainers use to acquire any knowledge they need to develop training programs when they possess insufficient knowledge about a subject?

2. What common factors facilitate this acquisition of the knowledge on subjects in which trainers are not already knowledgeable?

3. How do any common factors influence a trainer's acquisition of knowledge?

BACKGROUND

Roles and Responsibilities of the Trainer

Trainers were once selected and assigned to specific training positions, such as leadership, skills, or safety, based upon their knowledge and expertise in a specific area (Bernthal et al., 2004; McLagan & Suhadolnik, 1989; Nadler & Nadler, 1989; Patten, 1971; Senge, 1990; Watson, 1979). However, initial downsizing efforts to begin with training departments because they are often seen as marginal enterprises, expendable in times of financial cuts (Merriam &

Brockett, 1997). In recent years, therefore, as global competition has increased and downsizing has become more common, trainers have been confronted with situations that require them to broaden their knowledge and perform training outside their field of expertise. The current emphasis on Six Sigma, lean manufacturing, quality improvement, and customer focus are examples of training programs that have created increased learning opportunities for trainers (Bernthal et al., 2004).

Regardless of the type of training, or the reason for the training, trainers are essential, because they are most directly involved with designing and delivering learning. Zielinski (2001) summed up the challenges facing today's trainers when he said, "Welcome to the 21st century training organization, where time-honored titles are slowly disappearing, responsibilities are shifting, stand-alone jobs are melting into far broader roles and new career ladders are emerging" (p. 31).

Gaining Expertise through Knowledge Acquisition

The literature in adult education discusses in some detail the planning, development, and presentation of training programs (Caffarella, 2002; Houle, 1972; Kowalski, 1988; McLagan & Suhadolnik, 1989). Additionally, information on self-directed learning processes used by adults to gain knowledge and skill can be found in previous issues of this journal. Unfortunately, limited work has been done on how trainers acquire knowledge of a content area.

Based upon various views of knowledge acquisition, trainers can acquire the knowledge they need by following three steps. The trainers begin by determining the following: (a) what they need to learn to be able to teach the subject, (b) what they already know about the subject, and (c) what they need to do to acquire the knowledge necessary for closing the gap between the two (Boyatzis, Cowen, Kolb, & Associates, 1995; Danis, 1992; Grice & Skinner, 1998; Knowles, 1980; Verderber, 1997).

Program Planning/Training Program Development

Once trainers have the expertise, they begin the next part of their job: planning the program. Numerous program planning models can be found throughout the adult education and training literature (Bergevin, Morris, & Smith, 1963; Caffarella, 2002; Houle, 1972; Knowles, 1980; McArdle, 1993; Pike, 1994; Sork, 2000; Sork & Buskey, 1986; Sork & Caffarella, 1989).

Sork and Buskey (1986) conducted an analysis of ninety-six publications containing different program planning models. Their analysis of the different models identified nine generic steps of program planning: (a) analyze planning context and client system; (b) assess needs; (c) develop objectives; (d) select and order content; (e) select and design instructional processes; (f) select instructional resources; (g) formulate a budget and administrative plan; (h) design a plan for assuring participation; and (i) design program evaluation. Especially significant to this study was their finding that most of the models ignored the specific roles and proficiencies required of adult educators in the planning process.

Much of the literature assumes trainers already have the knowledge they need to develop training programs (Caffarella, 2002; Houle, 1972; Kowalski, 1988; Sork, 2000). With the exception of Spear's (1988) study and Wlodkowski's (1999) questions for determining whether someone knows something well enough to instruct others, there is little information in the adult education and training literature about the knowledge acquisition process trainers use to prepare, develop, and present training programs. Additionally, a paucity of literature links the roles and responsibilities of trainers (McLagan & Suhadolnik, 1989; Nadler & Nadler, 1989; Zielinski, 2001), self-directed learning (Candy, 1991; Knowles, 1975; Merriam & Caffarella, 1999; Tough, 1979), or program planning (Caffarella, 2002; Long, 1983; McCain, 1999; Sork 2000), with the knowledge acquisition process used by trainers.

METHODOLOGY

Sample

The sample of trainers consisted of 16 women and eight men located within the central United States geographical area. Their ages ranged from 28 to 67 years old. Seventeen had graduate degrees, five had bachelor's degrees, and two had less than an associate's degree. The graduate degrees consisted of one PhD, one DBA, 3 MBAs, and 12 master's degrees, with eight of those in adult education. Four of the participants had authored or co-authored books on communications, facilitation, leadership, management, supervision, team building, or training. Their individual experience ranged from one to 40 years, with a total of nearly 456 years. Their areas of expertise included fiber optics cable installation, customer service, homicide investigation, banking, manufacturing, hotel operations, and religion. All of the participants except one became trainers after achieving expertise in a discipline.

The training programs that participants completed to acquire their content knowledge reflected the diversity of not only their backgrounds, but also the wide variety of programs trainers are expected to develop or present. Seventeen participants described programs that were people-oriented, or soft-skills-oriented, and the other seven talked about skills-oriented programs. The programs ranged from a one-hour class on sexual harassment to a comprehensive training program for a major ground transportation organization. The other programs were on business writing, computer skills, customer service, ethics, fiber optics, leadership, manufacturing, project management, sales, sex-related murders, and Train-the-Trainer.

Procedures

The phenomenological inquiry research tradition was used for this study, because there was little research on the topic and it was process-oriented (Patton, 1990). It is a qualitative design that uses purposeful sampling to find information-rich participants for the study. This design allowed for an in-depth understanding of the meaning and essence of trainers' experiences and provided them with the opportunity to speak for themselves. The researcher was the primary instrument for both data collection and analysis. To ensure investigator competence, the interview protocol was tested and the types of proposed purposeful sampling procedures were determined appropriate through a pilot study. Minor changes were made to the semistructured interview guide as a result of the pilot study.

Criterion, snowball, convenience, and maximum variation purposeful sampling were used to identify 24 information-rich participants for the study. Personal interviews were held with the trainers using a semi-structured interview guide. The trainers were asked to describe the process they used to acquire the knowledge necessary for developing and presenting a training program on a subject for which they had limited or no previous content expertise. Each interview was tape recorded and transcribed by a professional transcriber.

Data analysis began with the first interview, using the constant comparative method to identify common themes and patterns emerging from the data. This allowed subsequent interviews to be more productive by enabling the researcher to probe areas mentioned by earlier participants. Participants interviewed early in the data collection process were interviewed again to explore thematic areas that emerged in subsequent interviews. Final interpretation of the data collected and implications of the results began once thematic saturation had occurred and all of the interviews were completed.

According to Lincoln and Guba (1985) trustworthiness in a qualitative study establishes credibility, transferability, dependability, and confirmability. Member checks, referential adequacy, and peer reviews were used to ensure the credibility of the findings. Member checks consisted of providing each participant with a copy of her or his transcribed interview and the researcher's interpretation. The participant then had the opportunity to clarify, correct, or enhance the transcript and the researcher's interpretations to ensure the participant's perspective was properly represented.

Referential adequacy was achieved by tape recording all interviews so that they could be examined later and compared with the written data. Peer reviews were conducted with four other researchers. One peer reviewer continued throughout the research and interview process. Each of the other three reviewers examined five randomly chosen transcripts. The reviewers analyzed, categorized, and coded the transcripts based upon the themes they identified. Themes, categories, and meanings were discussed. The themes identified by the researcher were comparable with the findings of the reviewers. Extensive descriptions were provided to allow readers the opportunity to make decisions for themselves regarding the transferability of this study to their own situation (Creswell, 1998; Lincoln & Guba, 1985; Merriam & Associates, 2002).

To ensure dependability and confirmability, accurate files, including the researcher's journal, the audiotapes of the interviews and discussions, transcripts, materials from the data analysis process, and the researcher's field notes will be maintained.

MAJOR FINDINGS

Generally, people go through their daily lives without ever giving much thought to the processes they use until someone asks about them. Therein lies the problem for the trainers in this study. They admitted that before receiving the phone call asking them to participate, they really hadn't thought about the process they used to prepare themselves for developing and

presenting classes – they just did it. They were not consciously aware of the processes they were using.

Once the trainers began describing how they acquired knowledge, their passion for learners and their profession came through as they shared their learning experiences. As a result, twenty-six common themes emerged during the study. The common themes were categorized into six different categories: (a) self-directed learning; (b) the training and development process becomes part of the trainer's life; (c) needs assessment is part of knowledge acquisition; (d) knowledge acquisition is a continuous part of the trainer's life; (e) understanding the importance of adult learning principles; and (f) reflection.

Self-Directed Learning

The most common theme that emerged from the interviews was the presence of self-directed learning. It was an integral part of the trainers' lives.

A Plan for Learning

Brockett and Hiemstra (1991) suggested that self-directed learning frequently lacks any guiding model or plan, which did indeed characterize the learning plans of the trainers who participated in this study. When Martha (a leadership and diversity trainer) was asked if she had a plan for her learning, she said, "My plan is to learn everything I can." Martha's comments reflected the descriptions most of the trainers gave for their learning plans. All of the trainers could describe in vivid detail how they obtained the information they needed to develop training programs, but when it came down to it, there was no indication that any of them had what could actually be called a plan.

As the interviews progressed, it became apparent that the trainers' learning plans and training development processes were almost one and the same. This substantiated Spear's (1988) assertion that learners tend to describe their learning "in the chronological order in which events took place even though they are not sequentially related" (p. 218).

The Self-Directed Learning Processes

The SDL literature focuses primarily on the linear (Knowles, 1975, Tough, 1979) and interactive (Berger, 1990; Danis & Tremblay, 1985, 1988; Spear, 1988; Spear & Mocker, 1984) models. *Linear* is a term taken from Knowles' (1975) and Tough's (1979) and original work on self-directed learning and represents a clearly deliberate, well-planned, and step-by-step series of episodes with a linear pattern (Merriam & Caffarella, 1999). *Interactive* is the term used by Mocker and Spear (1982), who postulated that rather than preplanning, learners tended to select from limited alternatives that occur fortuitously within their environment and that structure their learning. The results of this study indicated that the trainers actually used a combination of both the linear and interactive models in their pursuit of knowledge. Their processes were either linear-interactive-linear, or interactive-linear.

Linear-Interactive-Linear Learning Process. Six of the participants indicated that they thought their learning was linear in nature. The process was typified by structure in the beginning, a chaotic middle, and a structured ending. It could be depicted by two funnels put together with the large ends touching and the two small ends facing in the opposite direction (Johnson, 2005). The participants indicated that although they preferred a linear process, they realized that it wasn't a very realistic expectation. They said that once the process began, it would invariably send them in another direction, because they would soon find out that one factor affected another, and that one affected another, etc. Consequently, they would try to take the new information and put it to the side until it fit into their process. Their process gained more structure closer to when they were to teach the class. Will, (a law enforcement trainer) who preferred the comfort of a linear process, said when new information is presented, "you have to absorb it, and it may cause you to rethink, backup, revise, [or] modify what you've done to that point, but that's the whole purpose, to insure that you have the most accurate information." As Spear (1988) suggested, fortuitous occurrences in the environment divert the learner along the way.

Interactive-Linear Learning Process. Eighteen trainers indicated that they preferred a more interactive learning process. The interactive-linear approach was typified by what appeared to be a nonsensical "grass catcher" gathering of knowledge followed by a funneling of the information into a logical order (Johnson, 2005). The interactive-linear oriented trainers said that they enjoyed the challenge of gathering and processing large amounts of information all at once and some who were extremely random in their learning admitted that they forced themselves to put information into a linear form at some point during the process. When these trainers described how their learning process worked, they said that if they were learning something about the first part of a program and new information came in that affected the last part of the program, they had no problem taking the new information and working on it right then, and then going back to the first part when they were finished with the new information. This was in contrast to the linear-oriented trainers who would write a note to remind themselves to work on the new information later and continue with what they were originally doing.

Most of the interactive-oriented trainers said that they weren't very good at comprehensive things that required them to stay focused on a single area for a long time. Thus, they would read something in one place, then in another place, then in still another place, and eventually the light bulb would come on. They said that things didn't always make sense at first because they were taking in information from so many places. But, eventually, after they had processed the information, everything would come together and make sense. In some cases, assimilation occurred very quickly, but in others, the trainers reported that it could take a couple of years before what they had learned made sense. As Cheryl (the president of a training and consulting company) said, "You'd memorized it, you['d] know what you were supposed to do, but the why and the why it worked the way it did, did not make sense until later. And I'd sit there and go, 'Wow, that's why that does that. How cool is that?'" In general, interactive-linear oriented trainers were more expressive in their thoughts than the linear-oriented trainers.

Knowledge Acquisition - Part of the Program Planning/Training Process

All of the participants suggested that their learning occurred simultaneously with the program planning/training process. Two participants actually used a copy of a program-planning model to describe the manner in which they acquired knowledge. One associated the discovery phase of her company's model as the point where learning took place. The other used the Analyze, Design, Develop, Implement, and Evaluate model and said his learning occurred in the analysis phase. Both went on to use the other steps of their respective model to explain how they processed knowledge after it had been acquired.

Use of a Variety of Resources

Contrary to the myth that SDL is an isolated event, Brookfield (1986) asserts that, "no act of learning is fully self-directed if this is taken to mean that the learner is so self-reliant that he or she can exclude all external sources or stimuli" (p. 48). This was the case for the self-directedness of trainers in this study. They used a variety of resources for learning. Subject matter experts (including more experienced trainers) and printed material (especially the latest books by the most respected authors in the field) were relied upon more often than any other resources. The Internet was identified as an integral tool that was used throughout the learning process to locate other resources.

The Training and Development Process Becomes Part of Your Life – You Live It!

The beginning of the SDL process is characterized by reaction to a triggering event or situation (Danis, 1992; Spear, 1988; Wlodkowski, 1999), and for the trainers, such triggering events caused such a change in them that they would think about the training program all the time. Shirley (a training consultant/trainer) admitted, "The subconscious is certainly at work, because when I'm thinking of a new program, developing it, it's churning. I know it is." According to Rose (1985), this phenomenon is beneficial because "a high proportion of all learning takes place at the subconscious level" (p. 2). Perhaps the best example of how significantly the training development process affects trainers' lives can be seen in David (a professor and training consultant). He said this:

> When I'm developing a program, "I live with it!" I don't turn it off. If it's gonna be a two-week period or a three-week period, or a four-week period, it's gonna be on my mind pretty darn constantly. I'll spend windshield time with it, all the rest. I'm not able to turn it off very well.

Other participants also indicated that they thought about a training program while they were in the shower, in meetings, while driving, and were even awakened by them in the middle of the night. They "lived" the program and couldn't "just turn it off." Tape recorders, leaving messages on voice mail, having a pen and paper by the bed, and writing on the backs of papers and receipts were the most common means identified for holding on to ideas that would pop into trainers' minds.

The Needs Assessment is Essential to Knowledge Acquisition

Numerous participants discussed how they gained knowledge while conducting their needs assessment. They said that was because many times in the training development process, they wouldn't know what they do know, don't know, or even need to know about a subject.

Knowles (1980) suggested that one of the things program planners do is diagnose the needs for learning. The trainers indicated that they diagnosed their needs for learning through an assessment process, but as George (a professor and training consultant with more than 40 years of training experience) suggested, "it is not a traditional needs assessment." It is an assessment that provides insight into the organization's context or culture and the needs of its learners; but, more importantly, it assists trainers in acquiring the knowledge they need to develop successful training programs. In order to determine the organization's culture and make meaning out of it, Greta (the director of a manufacturing oriented training organization) said, "You need to talk to the people that are going to be doing the learning. That's more critical than talking to the people that hired you to do it." All of the trainers said that they used their needs assessment to both gain knowledge for themselves and improve the training programs for their learners. Chris (a strategic planner and training consultant) suggested that the needs assessment should begin with the question, "What is it that people want that's not happening now?"

Knowledge Acquisition is a Continuous Part of the Trainer's Life

The trainers in this study were continuous learners. Their learning manifested in several ways, but pursuit of expertise and concerns about competence and confidence were the most prevalent.

Continuous Pursuit of Expertise

When the participants were contacted, most said that they didn't feel like experts. All of them were continuous learners and spent as much as 20% of their day in the pursuit of new knowledge. Their desire for learning was so ingrained that they even stayed abreast of new material on subjects they no longer presented. Participants used terms such as "dangerous," "deadly," and "fatal" to describe the failure to continuously learn. As Shirley said, "the best students are teachers . . . the best teachers are students, as well." She also said that training development consisted of a triangulation of three different types of expertise: content, context, and process. The use of the triangle analogy suggested that without any one of these types of expertise, the training would fail.

Competence and Confidence

The trainers understood the importance of competence and confidence and were continuously pursuing them. They knew that when they were presenting training, their own knowledge, skills, and reputation were on the line. As Houle (1972), stressed, ". . . the entire career of the educator is judged by some balancing out of the relative successes and failures of all the programs he designs and conducts" (p. 34). The trainers' concern was seen in the amount of time they spent preparing for the classes that they described for this study. Their preparation

times ranged from four hours to 34 hours per classroom hour, with an average of 14 hours. Overall, the more experience the trainers had in the profession, the less time it took them to acquire the knowledge they needed to develop and present a class.

Understanding of the Importance of Adult Learning Principles

Most of the participants talked about their trainees as adult learners; however, those who spoke about the importance of using adult learning principles tended to have either more experience in the field, a degree in adult education, or both. Terms such as facilitation, learner-centered teaching, and experience of the learner were repeated throughout the interviews. The participants stressed the importance of being able to reach out and touch the learners so that learners would use the material when they leave the classroom. Process expertise and style enabled the trainers to "reach out and touch their learners."

The participants also passionately said that "delivering a training program doesn't mean you're a trainer." They said the "professional trainer" is much different from someone who merely delivers or presents a training program – they do more than just read off of project slides or handout material. They relate with their audience and know their material well enough to change it mid-stream to meet audience needs. As Shirley said, it is building upon the students' abilities so that when learners walk out of the classroom, they say, "Wow, look how much I learned today!" instead of, "Wow, look how smart that trainer is."

Reflection

The trainers indicated they had never really reflected on how they acquired knowledge or developed training. Their participation in the study forced them to actually think about their profession, how they learned, and the processes they used to develop training. For some, it was an awakening. Their reflective comments could be categorized into the areas of process, coaching, expertise, self-awareness, and the impact being in the field has on the trainer's life.

CONCLUSIONS WITH IMPLICATIONS FOR PRACTICE

Self-directed learning was critical in the trainers' pursuit of expertise; however, none of them mentioned the term. It wasn't even mentioned by the trainers who had a degree in adult education. As Spear and Mocker (1984) suggested, it was their environment that led to their self-directed learning. Because SDL is so prevalent, more emphasis should be placed on providing learners with a better understanding of the related processes. They should be discussed at all levels of education, in Train-the-Trainer programs, and as part of the certification process for pre-packaged training programs. Grow's (1991) Staged Self-directed Learning or Hammond and Collins' (1991) instructional models could be used to help teachers share knowledge about SDL.

Kowalski (1988) suggested that the most significant finding of Sork and Buskey's (1986) comprehensive analysis of 96 different program planning models was the neglect of the specific roles and proficiencies required of adult educators. There is evidence to suggest that such neglect continues almost 20 years later. With the exception of Wlodkowski's (1999)

questions for determining whether an instructor knows something well enough to instruct others, no consideration in any of program planning models investigated focused on adult educator's pursuit of content expertise. The findings of this study suggest that knowledge acquisition is an integral part of the program planning process; therefore, the models should be modified to include the acquisition of knowledge. It should either be listed as a primary step or as a sub-category of the needs assessment step.

The trainers identified understanding the context or culture as one of the three important aspects of expertise for trainers, but McCain (1999) and Sork (2000) were the only authors found who included the consideration of context, or culture, in their program-planning model. Therefore, determining the context or culture in which the training will be provided needs to be added to the program planning models where it is not already present.

The concept of the triangulation of content, context, and process expertise needs to be more widely distributed throughout educational and training environments and professional organizations.

"Although needs assessment is accepted universally as a critical element of adult education programming, a good bit of the professional literature continues to be devoted to detailing how this process can be effective and to encouraging practitioners to use it" (Kowalski, 1988, p. 121). In contrast, the trainers in this study tended to use means for determining what they needed to know that were not traditional in nature. It is possible that they lack an understanding of the value of more formal needs assessment approaches in acquiring knowledge and planning programs or have simply found alternative approaches that work for them. At the very least, a focus on understanding both context and culture should be added to existing program planning models.

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SELF-DIRECTED LEARNING AND THE PARADOX OF CHOICE

Ralph G. Brockett

Choice is one of the hallmarks of self-direction in learning and in life. Ironically, however, unlimited choice may actually have the potential to put into motion a whole set of concerns. In his recent book, *The Paradox of Choice*, Schwartz argues that too much choice can actually have a detrimental impact on a person's quality of life. This article addresses the question, "Are there times when freedom of choice can actually hinder self-direction in learning and in life?" Several strategies are described that educators can use to help learners negotiate the paradox of choice.

Choice is one of the hallmarks of self-direction in learning and in life. Rogers (1961) once suggested that to be "self-directing means that one chooses–and then learns from the consequences" (p. 171). Similarly, the notion of choice was embedded in Tough's (1979) research on adults' learning projects, which focused on the process of planning and making decisions about such projects. Both Rogers and Tough make the point that freedom to choose is essential to self-direction.

Throughout my professional life, I have encouraged learners to recognize the importance of taking the lead in making choices regarding their own learning. For me, this is what self-directed learning (SDL) is about. However, today we live in a time like no other. Technology has created opportunities that even 20 years ago were not possible. We live in a time where opportunities for choice are virtually unlimited in nearly all aspects of life including learning. Ironically, however, unlimited choice may actually have the potential to put into motion a whole new set of concerns. The purpose of this article is to look at issues of freedom and choice and to consider circumstances under which they can potentially have a negative impact on SDL. Specifically, the focus will be on an examination of the following question: "Are there times when freedom of choice can actually hinder self-direction in learning and in life?" While my main intent is to explore choice relative to learning, it is important to locate the question within larger issues related to choice that permeate life.

TOO MANY CHOICES? THE TYRANNY OF FREEDOM

Reich (2000) argues that in today's economy we are moving into what he calls "the Age of the Terrific Deal." This is "where choices are almost limitless and it's easy to switch to something better" (p. 13). Because of vast technological innovations that are having a tremendous impact

on our ability to communicate in ways not possible only a few years ago, we now have a "global bazaar of almost infinite choice and possibility" (p. 15). Reich goes on to say that it is easier today to find and switch to something better than it has been at any time in history. Yet this unlimited choice comes at a cost: According to Reich the "rewards of the new economy are coming at the price of lives that are more frenzied, less secure, more economically divergent, more socially stratified" (p. 8). Another consequence of the new economy has been a loss of loyalty: loyalty to product brands, organizations, and even communities. Because product brands come and go so quickly and because of widespread company mergers and takeovers, it is often difficult to know with whom one is doing business. While Reich is not writing specifically about learning and the education enterprise, his ideas certainly ring true in this context as well. Today, one can earn a degree from a university without setting foot on a campus. In fact, some colleges and universities that offer distance education programs do not even have a campus.

In his recent book, *The Paradox of Choice*, Schwartz (2004) argues that in today's society, we are overwhelmed with a multitude of choices about everything from buying toothpaste or deciding what to watch on television to major life choices about schooling, careers, life partners, and so on. The crux of the argument presented by Schwartz is that while it is certainly good to have choices in most situations, the sheer number of options that pervade nearly all facets of today's world can actually have a detrimental impact on our overall happiness, well-being, and life satisfaction. Schwartz refers to this problem as "choice overload." According to Schwartz, "the fact that *some* choice is good doesn't necessarily mean that *more* choice is even better" (2004, p. 3).

So, while choice is often liberating, it also has the potential to be restricting and even debilitating. In an earlier article, Schwartz (2000) suggested that when self-determination is overemphasized as a process of rational choice, it can lead to confusion, frustration, and even depression. He notes that "when self-determination is carried to extremes, it leads not to *freedom* of choice but to *tyranny* of choice" (pp. 80-81). In other words, when we do not place some form of parameters on what we perceive to be viable choices, we can become overwhelmed by the options and, consequently, reduce the likelihood of making a good choice. As Schwartz (2004) describes such situations, "choice no longer liberates, but debilitates" (p. 2). In other words, we can become controlled by the choices that surround us rather than the other way around. Herein lies the tyranny that can accompany choice overload.

This is not a new idea. In his classic work, *Future Shock*, Toffler (1970) wrote about the concept of "overchoice." Toffler stated that "there is an almost ironclad consensus about the future of freedom. Maximum individual choice is regarded as the democratic ideal. Yet most writers predict that we shall move further and further from this ideal" (p. 263). He goes on to make the following observation: "The buyer's problem of choice has become far more complicated, the addition of each option creating the need for more information, more decisions and subdecisions" (p. 269). Thirty-five years later, in his bestselling book, *The World is Flat,* Friedman (2005) offers a thought-provoking argument about how forces such as information technology, outsourcing, offshoring, supply-chaining, insourcing, and in-forming have created a "flat" world, where countries such as China and India are playing key roles in the global economy and, in doing so, bringing huge changes in how businesses in western

countries, such as the U.S., operate. The importance of choice is implied throughout the book in that Friedman writes about how this "flattening" affects the way in which goods and services are supplied, which in turn implies that consumers have more choices readily available to them than ever before.

Most of us can think of examples of situations where we or others have had difficulty sorting out major decisions from trivial ones. An extreme example of this might be a person who places comparable emphasis on deciding what to eat for breakfast as on handling a work-related problem that could have long-range consequences. Schwartz believes that "we make the most of our freedoms by learning to make good choices about the things that matter, while at the same time unburdening ourselves from too much concern over the things that don't" (2004, p. 4). Sometimes, then, it is possible that a good choice is to ignore some of the options available to us. By making a conscious decision to focus most of our energy on areas that we value the most, we can avoid feeling overwhelmed by the multitude of choices within our grasp and the realization that there is no way we could (or would want to) try to do everything.

The other side of this "tyranny of freedom" issue is that we can go to the opposite extreme and choose not to look beyond a limited range of choices based on our past experiences. A person may like to vacation at the same location year after year. For this person, there may be comfort in the familiarity of regularly returning to a special place. But at the same time, by ruling out the possibility of vacationing in other locations that could afford new, untried experiences that the person might well enjoy equally or almost equally as the usual location, the possibility of new opportunities for growth and an expanded perspective may limit the excitement and sense of wonder that can come from a new opportunity. It seems to me that a key to resolving the tyranny of freedom is to find a sense of balance between the tried and true and that which will push us outside our more normal expectations or experiences.

A major aspect of the paradox of choice pertains to crucial distinctions Schwartz makes between "choosing the absolute best" and "choosing something that is good enough" (2004, p. 77). Here, Schwartz distinguishes between two types of people: "maximizers" and "safisficers." Maximizers are those who seek and accept only the best. They "need to be assured that every purchase or decision was the best that could be made" (p. 77). This is done by checking out all possible alternatives, weighing the evidence, and then making a decision. The problem is that most often, maximizers find themselves second-guessing their decision and, after the decision has been made, dwelling upon whether they really made the best possible choice. By contrast, satisficers tend to be content with that which is good enough and do not worry that there might be a better choice. This does not mean that safisficers are willing to settle for an inferior choice. What it does mean, however, is that once satisficers have considered options and weighed evidence, they are able to make decisions and not look back with regret about the choices that were not made.

According to Schwartz, maximizing and satisficing are general orientations, and while most people tend toward one of the two orientations, these are in fact situational. In other words, there are times when a maximizer will satisfice and times when a satisficer will maximize. However, the more one is able to move toward a satisficer orientation, the more likely one is to be happier and more satisfied in life. This is because a person who can only be happy with the

very best choice is destined to live life being dissatisfied and unfulfilled. If there is only one best option, the time and energy that go into seeking that choice, and the doubt and questioning that follow once the choice has been made, will inevitably be exhausting and will lead to much uncertainly. In other words, it will be hard to find true happiness because there might be a "bigger, better deal" out there somewhere.

By contrast, satisficers are not as prone to this on-going search for perfection. It is important to recognize that satisficing does not mean simply accepting an inferior choice. Rather, it means that a person is satisfied with the "merely excellent" rather than the "absolute best" (p. 78). Both maximizers and satisficers are seeking to make the best choice, and they do so by considering options, arriving at conclusions, and acting on those conclusions. The difference is that for the maximizer, the best choice is illusive and almost always unattainable while for the satisficer, the best choice typically leads to a good outcome and frees the person from lingering doubt and regret.

While Schwartz believes that most people tend to be oriented toward one of the two approaches, there is a degree of maximizer and satisficer in each of us, which can vary depending on the situation. For example, people who are habitual television or radio channel surfers (like me) can satisfice effectively in other situations such as making decisions in one's personal relationships or professional life. I believe that sometimes what appears to be maximizing behavior is actually a form of curiosity. It is quite normal to seek and wander out of curiosity. In such cases, maximizing need not be a bad thing. But the key here is whether such curiosity eventually leads to making a decision or simply wandering aimlessly from one choice to another.

Most of us have known of students who change majors or schools throughout their college years. In many instances, these people never find what they thought they were looking for. Likewise, a high percentage of doctoral students complete all course and comprehensive exam requirements, but never finish the dissertation. In my years of experience, a key reason for this is that a student seems unable to select a topic that will be satisfying and at the same time make at least some contribution to knowledge and practice. In other words, these individuals exhibit maximizing characteristics. So what can educators do to help learners negotiate the paradox of choice? The remainder of this discussion centers on addressing this question, with particular emphasis on how an ability to negotiate and manage the paradox of choice is vital for effective self-directed learning.

NEGOTIATING THE PARADOX OF CHOICE: AN IMPERATIVE FOR SELF-DIRECTED LEARNING IN THE 21st CENTURY

In the past, facilitating SDL was about helping people identify and recognize the range of choices available to them. Today it needs to be more about helping people to (a) focus, determine priorities, and identify parameters around which they will make decisions; and (b) not carry emotional baggage associated with inertia once a choice has been made.

The paradox of choice notion is very relevant to SDL. Although Schwartz does not write specifically about adult learning or self-directed learning, it is not difficult to make such connections. For purposes of this discussion, I focus on two ideas pertaining to helping self-directed learners negotiate the ever-exploding range of choices they are likely to face: (a) helping self-directed learners make good decisions; and (b) recognizing that there are times when choosing not to learn is a viable option.

Making Good Decisions

In a world where choice overload abounds, Schwartz believes that the ability to resolve the paradox of choice centers on the ability of a person to make good decisions. Here, Schwartz outlines a series of steps typically involved in making good choices. These steps include the following:

1. Figure out your goal or goals.

2. Evaluate the importance of each goal.

3. Array the options.

4. Evaluate how likely each of the options is to meet your goals.

5. Pick the winning option.

6. Later use the consequences of your choice to modify your goals, the importance you assign them, and the way you evaluate future possibilities (2004, p.47).

Those readers familiar with program planning processes or curriculum development in adult education will likely recognize parallels between these steps and what is described in sequential planning models found in the literature: setting goals; identifying options that will be helpful in meeting goals; determining which options are most important or urgent; implementing corresponding decisions; and evaluating outcomes. The process outlined by Schwartz, however, is aimed at helping individuals sort out the range of options in a given situation and arrive at priorities about which choices are most important to them.

What is relevant to those who facilitate SDL is that the key to making good decisions is how well one is able to set priorities and follow through on these priorities. For instance, in the example of doctoral students who are unable to identify a dissertation topic, the above steps may be helpful in facilitating the kind of give and take between student and advisor necessary to help them make choices that will lead to a successful dissertation. Thus, the facilitator's role in helping learners negotiate the paradox of choice is a proactive one. Yet facilitators need to keep in mind that ultimately it is the learner's responsibility to select and be satisfied with the choice of topic.

Choosing Not to Learn

Schwartz (2004) makes the point that a key to good personal decisions is a willingness to make tradeoffs. He says that in order to deal with an overabundance of choices, "we must decide which choices in our lives really matter and focus our time and energy there, letting many other opportunities pass us by" (p. 222). So, too, it goes with opportunities for self-directed learning. At first, this may appear to contradict the spirit of free and open inquiry, and a vision of the adult learner as a renaissance person who pursues knowledge for the sake of learning and expanding horizons. However, it can be argued that setting parameters around what people choose to learn can actually be liberating because it affords the opportunity to concentrate on priorities.

Facilitators of SDL can help learners deal with feelings of guilt and inadequacy that may come with having to face that they sometimes may not be interested in learning about a particular area. Learners are no less proactive with inquiring spirits if they make a conscious decision to eliminate certain options. For instance, not everyone is interested in the history of Roman civilization, playing the piano, painting, or Charles Dickens. Does this make them less self-directed as learners? No. Rather than pushing people to believe they need to learn it all, we need to help them focus on priorities while at the same time accepting that some things are just not of personal interest or relevance.

THE POTENTIAL OF POSITIVE PSYCHOLOGY

I would like to share one final point. As was pointed out earlier, the crux of Schwartz's argument is that excessive choice, or choice overload as he calls it, can have a negative impact on a sense of well-being and overall life satisfaction. Within the field of psychology, an exciting development over the past several years has been the emergence of positive psychology. Whereas psychology historically has been concerned with addressing psychopathology, mental illness, and other kinds of deficits in human conduct, positive psychology shifts the focus toward understanding those concepts that may contribute to one's subjective well-being. Actually, positive psychology mostly appears to be a way of bringing together areas of study that have often been around for quite some time. Examples include happiness, life satisfaction, self-determination, creativity, flow, emotional intelligence, learned optimism, perceived control, love, wellness, resilience, mindfulness, and religiosity and spirituality (Compton, 2005). Like the examination of the paradox of choice, the emphasis of positive psychology is on ways to enhance subjective well-being.

It is not hard to imagine a potential linkage between self-directed learning and positive psychology. Various researchers have studied links between self-directedness and many of the variables associated with positive psychology. For example, nearly 25 years ago, I found a significant, though weak, correlation between self-directed readiness and life satisfaction in a sample of older adults (Brockett, 1982). Several of my own students have found relationships between self-directedness and positive psychology concepts such as creativity (Cox, 2002), resilience (Robinson, 2003), self-determination (Stockdale, 2003), and wellness and coping with chronic illness (Nelson, 2000; Owen, 1996). Thus, there appear to be many parallels

between what is studied in positive psychology and what is of interest and importance to those of us working in the area of self-directed learning. For me, it is a connection worth exploring further.

CONCLUSION

In a world where choice and change are so pervasive, it can be easy to want to throw up your hands and just give in. However, the cost of doing so is great. In this article, I described the paradox of choice and how it can impact almost every aspect of our lives. An ability to negotiate the way through the maze of choices we face in our lives, from the simple and routine to the long-term and life-altering, is more important today than at any time in the past. The vast array of choices that await us at every turn make it necessary to set parameters and rule out less viable choices, while at the same time not becoming tied to a routine that negates the possibility of being open to new ideas and experiences. Being able to find this balance has important implications for happiness, well-being, and quality of life. Self-directed learning is about freedom, autonomy, and choice. It also is about doing. The challenge facing those who seek to understand and resolve the paradox of choice is great, but so too are the possible rewards.

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THE LITERATURE OF SELF-DIRECTED LEARNING: DISSERTATIONS

James B. Canipe
Dewey L. Fogerson

This article continues content analysis work initiated by the University of Tennessee self-directed learning research group several years ago. It focuses on a content analysis of dissertations written about self-directed learning during the years 1980 through 2002. Research results indicated that during the years 1980 to 1990 the average yearly number of dissertations written about SDL trended upward, but during the years 1991 to 2002, though the average number of dissertations per year was higher than the previous decade, the trend line remained basically level. In addition, the most frequent type of research employed in the dissertations was correlational/ex post facto.

Self-directed learning (SDL) has become a major topic within adult education literature. Broadly speaking, SDL as defined by Knowles (1975) "describes 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). Brockett and Hiemstra (1991) saw the instructional methodology and the learner's personal characteristics coming together in an event where the learner assumes personal responsibility for the educational experience.

Furthermore, Brockett and Hiemstra (1991) suggested that SDL research had its roots in Houle's (1961) study in which he interviewed adults engaged in continuing education. Knowles (1975) made many contributions to the knowledge base of SDL, particularly when he delineated learning by adults from that of children. In addition, Tough (1979), who studied the learning projects of adults, was a major contributor to the concept of SDL.

PERSPECTIVES

Several perspectives from the literature on SDL have emerged over the years. Piskurich (1993) stated that SDL is primarily a training design methodology. He narrowed the concept of SDL from being a learning process and/or a personal learner attribute to being "a training design in which trainees master packages of predetermined material, at their own pace, without the aid of an instructor" (p. 4). However, the concept is usually viewed more broadly as a "process of learning in which people take the primary responsibility or initiative in the learning process, and . . . a personal attribute of the learner" (Stockdale, 2003, p. 1). Additionally, the terminology used to describe it is diverse. Brockett and Hiemstra (1991) noted that such terms

as "self-planned learning, self-teaching, autonomous learning, independent study, and distance education" (p. 18) are often used interchangeably with SDL. "These terms offer varied, though often subtly different, emphases" (p. 18).

These perspectives were variously expressed by Brockett and Hiemstra (1991), Candy (1991), Garrison (1997), and Grow (1991). Candy believed that self-direction comprises both process and product. He referred to four distinct, but related, phenomena: (a) a personal attribute, (b) the willingness to conduct one's own education, (c) learner-control in the learning setting, and (d) "the individual, non-institutional pursuit of learning opportunities in the 'natural societal setting' " (p. 23).

Grow (1991) viewed self-direction as a learner characteristic and "the degree of choice that learners have within an instructional situation" (p. 128). Grow noted that his Staged Self-Directed Learning Model did not address theory, but focused on SDL and the teacher/learner relationship. He proposed "that learners advance through stages of increasing self-direction and that teachers can help or hinder that development" (p. 125). He further stated that good teaching involves a perception of students' levels of self-direction and helping them advance to greater self-direction in learning situations. His model contains four stages of self-direction ranging from Dependent to Self-Directed. At each stage, Grow described the role of the teacher and instructional techniques best suited to assist a student in becoming more self-directed.

Brockett and Hiemstra (1991) suggested that SDL can be understood as *both* a teaching/learning transaction and as a characteristic of the learner. This distinction formed the basis of their "Personal Responsibility Orientation" (PRO) model. An additional element of the dynamic in which SDL occurs is the authors' conviction that the social context is also crucial. Self-direction is an amalgam of varying degrees of these three variables.

Much of the study of SDL has emphasized the external control and management of learning tasks. However, Garrison (1997) contended that not enough attention had been given to the psychological dimension of SDL. He viewed the fully self-directed adult learner as one who "has moved beyond simple task control and has learned to think critically and construct meaning in ill-defined and complex content areas" (p. 21). Garrison designed a model that included three overlapping dimensions: (a) motivation (entering and task), (b) self-management (task control), and (c) self-monitoring (cognitive responsibility). The challenge for teachers is to create an environment which can facilitate learners tapping into personal motivations and resources in order to construct their own deep meaning in a learning situation.

The varying perspectives of SDL have created a fertile climate for discussion, debate, and research. This study focuses on doctoral dissertation research during the years 1980 to 2002.

CONTENT ANALYSIS

Content analysis has been recognized as a valuable research tool for studying documents (Adams & Schvaneveldt, 1985). It allows the researcher to gather and analyze data in an unobtrusive manner. Content analysis is not subject to the bias that may arise due to

phenomena, such as the Hawthorne effect, the John Henry effect, and the experimenter effect (Ary, Jacobs, & Razavieh, 1996). Moreover, content analysis assesses data in documents "by using objective, systematic, and typically quantitative criteria," thus increasing its validity and reliability (Adams & Schvaneveldt, p. 306).

Content analysis provides a systematic approach using quantitative data to identify themes and enumerate data within selected categories. Some studies (Brockett, 1982; Dickenson & Russell, 1971; Rogers & Brockett, 1989) have demonstrated the success of such an approach. Long and Agyekum (1974) utilized this approach to describe the content of *Adult Education* (now *Adult Education Quarterly*) from 1964 to 1973. Also, Confessore and Long (1992), Confessore, Long, and Redding (1993), and Long and Confessore (1992) analyzed SDL literature that included journal articles, dissertations, and proceedings of Self-Directed Learning Symposia occurring up to the early 1990's. More recently, a research group at the University of Tennessee (Brockett, Stockdale, Fogerson, Cox, Canipe, Chuprina, Donaghy, & Chadwell, 2000) analyzed 122 articles from 14 mainstream adult education journals published between the years 1980 and 1998.

Finally, with content analysis documents may be analyzed for content in categories other than those originally intended by the documents' authors. Adams and Schvaneveldt (1985) referred to this feature as sensitivity to context and symbolic forms. Furthermore, content analysis characteristically permits researchers to analyze large volumes of data, a process made considerably more manageable given the advent of the Internet and computer software.

This research with dissertations represents an additional piece of the ongoing study examining SDL literature by members of the SDL research group at the University of Tennessee. This content analysis examines dissertations written on SDL during the years from 1980 through 2002. Therefore, the purpose of this study is to expand the examination of literature on SDL by including collegiate scholarly research based on studies reported in the *Dissertation Abstracts International* database.

Although analysis of the research described in the abstracts is necessarily different from that presented in the previous content analysis by the UT group, some themes from that study are pursued here. These similar themes are expressed in the following research questions:

1. What is the frequency with which research on SDL was produced in the identified years?

2. Are there identifiable trends in terms of time intervals when research on SDL was most prevalent?

3. What are the most frequent research methods utilized to study SDL?

4. Which are the most frequently identified institutions producing dissertations on SDL?

5. Who are the most frequently identified advisors for dissertations on SDL?

PROCEDURE

By accessing the *Dissertations Abstracts International* database and doing a keyword search using the descriptor "self-directed learning" with no limitations as to years, nearly 1200 dissertations were located. It was decided to narrow the search to restrict "self-directed learning" to the title and find only those dissertations written from 1980 to 2002. When a search was done using these parameters, 207 dissertations were found. By strictly adhering to the descriptor "self-directed learning" (by encasing it in quotation marks), some titles which included terms such as "self-directed continuing learning" were excluded. This reduced the total number of dissertations considered by this analysis to 171.

It can be readily seen that this study is focused on a narrow, yet important aspect of what has been written about SDL in dissertations. Plans are to eventually capture more data by expanding the search parameters and thus broadening the database. Nonetheless, the data gathered revealed interesting patterns and trends.

The framework for conducting this study utilized a quantitative approach. Data from pre-selected categories were analyzed to describe the SDL literature found in dissertations from 1980 to 2002. After the dissertations were selected, the researchers reviewed and classified each dissertation. The data were classified according to the following categories: title, author, advisor, date, accession number, degree awarded, type of research, instruments used, demographic information of participants, setting of the study, institutional affiliation of the author, and further research recommended. One of the researchers prepared an on-line form whereby all of these data could be submitted via the Internet into a central database. Then, the on-line reporting of data resulted in a synthesis, whereby the data were categorized and graphed according to the analysis which follows.

Classification of Dissertations

The dissertations reviewed were classified according to the type of research they reported. The research types utilized in this study were defined by Gay and Airasian (2003).

- Correlational/Ex post facto – Correlational research involves collecting data to determine if a relationship exists between variables. Ex post facto research attempts to determine the cause of differences among variables.
- Experimental – In this type of research one variable is manipulated, while other variables are controlled and the effects are observed.
- Survey – This type of research describes educational, psychological, and sociological characteristics, as well as distributions and frequencies.
- Methodological – This type of research considers the method and instrumentation as a guide to inquiry.
- Qualitative – A type of research that is non-numerical, which draws upon natural settings and narrative data to conduct inductive analysis.
- Historical – This style of research involves collecting and evaluating data relating to past events.

LIMITATIONS

For this study, the search for dissertations was limited by the search term "self-directed learning" in the title. The search was further limited to dissertations published between the years 1980 and 2002. Due to these limitations there are undoubtedly other dissertations about SDL that were omitted.

The dissertations source was *Dissertation Abstracts International*, which contains the dissertation title and abstract, but not the body of the dissertation. As a result, the analysis of dissertations for this study was based solely on the abstracts. The researchers assumed that the abstracts provided enough information to determine that the dissertation focused primarily on SDL.

DATA MANAGEMENT

The aforementioned data were collected and stored in an electronic database. Each reviewer submitted the completed on-line forms via a website prepared by one of the researchers. Since this formative study of SDL literature in dissertations is limited, much of the data will not be used in this analysis. The researchers anticipate expanding the analysis in subsequent, more comprehensive studies.

Having the data stored in a Microsoft Access™ database facilitated its security and distribution. This assisted in maintaining the integrity of the study. Furthermore, it allowed for efficient use of the Microsoft Excel™ software in performing the analysis.

RESULTS

The results of analyzing data gathered from *Dissertation Abstracts International* are reported under the following subtitles corresponding to the five research questions. They are as follows: (a) frequency of research on SDL; (b) trends in research frequency; (c) frequency of research types; (d) frequency of institutions producing SDL dissertations; and (e) frequency of advisors.

Frequency of Research on SDL

From years 1980 to 2002, the researchers found, using the descriptor "self-directed learning" in the title, that 171 dissertations were published in *Dissertations Abstracts International*. These dissertations serve as the basis from which the following frequency analyses were completed.

Trends in Research Frequency

From 1980 to 2002, the average number of dissertations per year trended upward (see Figure 1).

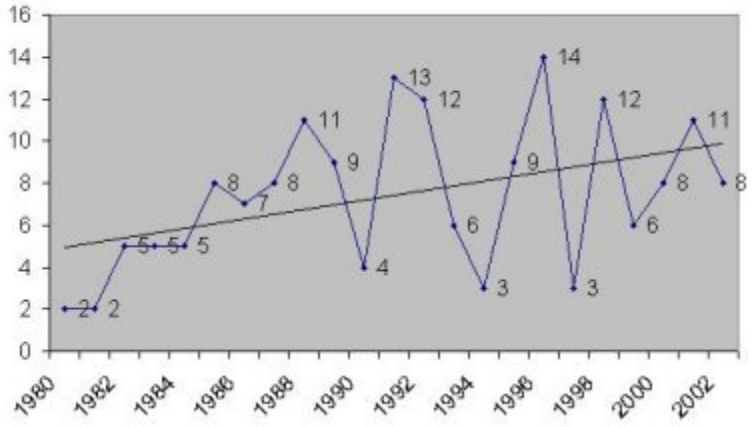

Figure 1. Number of Research Abstracts by Year

From the years 1980 to 1987, the average number per year was six. During those years a low of two was recorded in 1981 and a high of eight was recorded in 1985 and 1987. The trend line for this period is decidedly upward (see Figure 2).

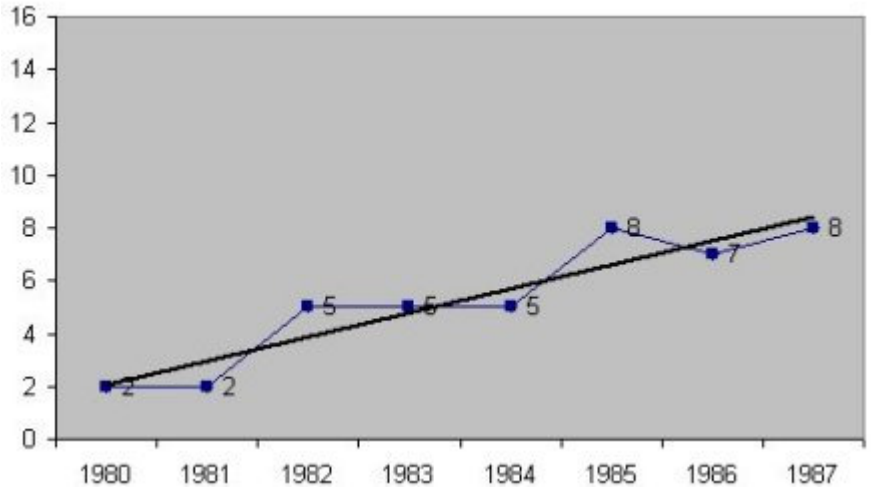

Figure 2. Number of Abstracts from 1980-1988

For the years 1988 to 2002, the average number of dissertations was nine per year. During those years a low number of three was recorded in 1994 and 1997. A high number of 14 was recorded in 1996. However, the trend line was basically level for the time period (see Figure 3).

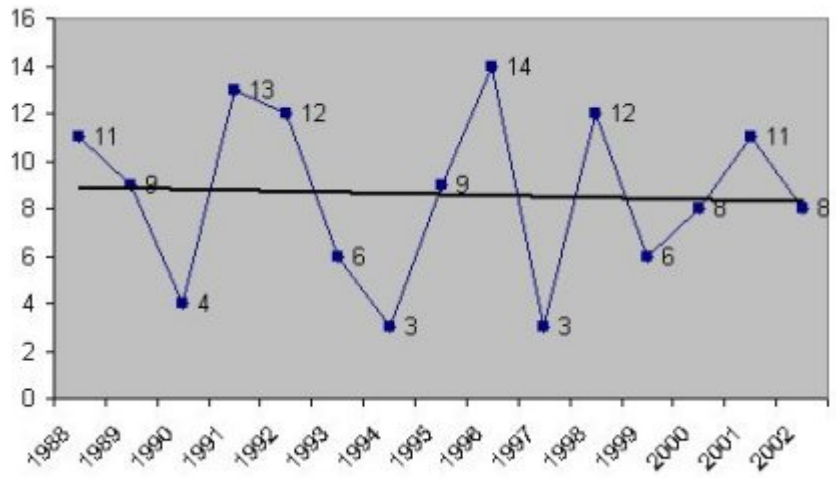

Figure 3. Number of Abstracts from 1988-2002

Frequency of Research Types

Of the six research design types, correlation/ex post facto was the most frequent with a total of 91 dissertations. The next most frequent design was qualitative with 39 dissertations, followed by experimental with 18 dissertations. Finally, survey, historical, and methodological research designs were represented by ten, four, and nine dissertations respectively (see Figure 4).

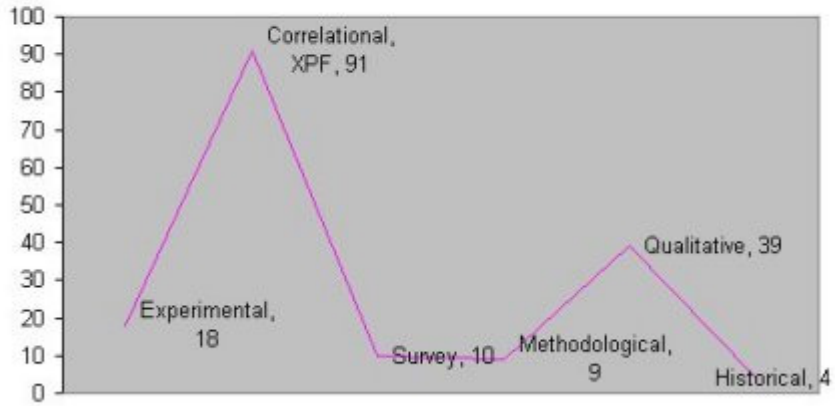

Figure 4. Frequency of Research Types

The trend lines for the number of correlational/ex post facto and qualitative designs for each successive year were upward and parallel (see Figure 5).

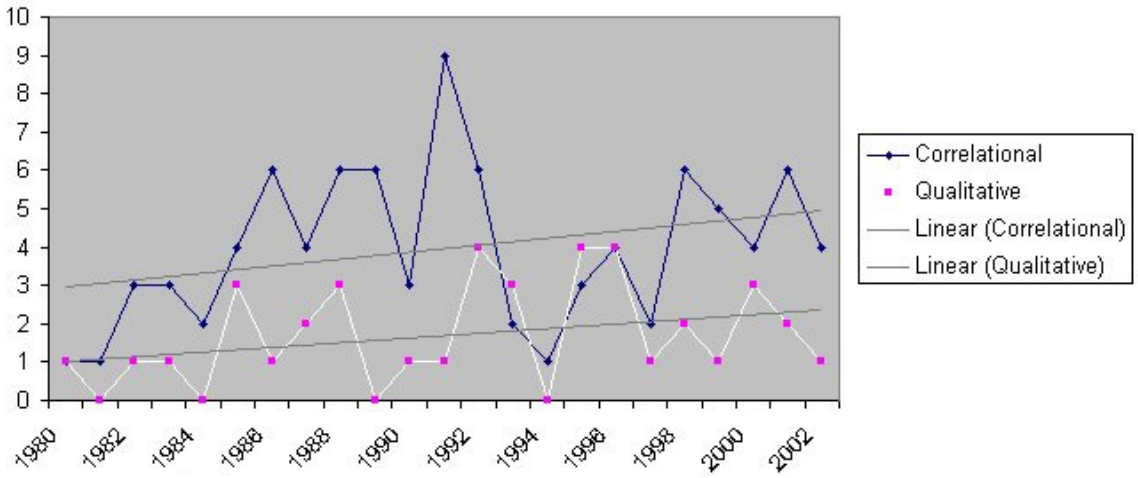

Figure 5. Frequency of Research Types Per Year

Frequency of Institutions Producing SDL Dissertations

Forty-four universities were identified as having only one SDL dissertation; 20 universities were identified as having two dissertations; four universities had three dissertations; five universities had five SDL dissertations; three universities were identified as having six dissertations; one university had seven dissertations; and one university had 10 SDL dissertations. Institutions with two or more SDL dissertations are listed in Table 1.

Table 1. Institutions with More Than One Reported SDL Dissertation

Higher Education Institution	*No. of Dissertations*
Columbia University Teachers College	10
University of Georgia	7
Kansas State University	6
Syracuse University	6
University of Toronto (Canada)	6
Michigan State University	5
Northern Illinois University	5
The Fielding Institute	5
The University of Southern Mississippi	5
The University of Tennessee	5
University of Oklahoma	5
Florida Atlantic University	4
University of Missouri – St. Louis	4
University of North Texas	4
Southwestern Baptist Theological Seminary	3
The Pennsylvania State University	3
University of Maryland – College Park	3
University of Missouri – Kansas City	3

Table 1 (continued).

Capella University	2
Case Western Reserve University	2
East Tennessee State University	2
Florida State University	2
Iowa State University	2
North Carolina State University	2
Oklahoma State University	2
Temple University	2
The Ohio State University	2
The Union Institute	2
The University of Alabama	2
The University of British Columbia (Canada)	2
The University of Nebraska – Lincoln	2
The University of Texas at Arlington	2
The University of Wisconsin – Madison	2
University of Calgary (Canada)	2
University of Denver	2
University of Missouri – Columbia	2
University of New Orleans	2
University of Texas at Austin	2

Due to the limitations of the data resulting from the search method, it is suspected that this analysis does not fully reflect the entire number of dissertations related to SDL written at particular universities. The researchers anticipate broadening the search parameters in future studies thus providing a more complete accounting of represented institutions.

Frequency of Advisors

Of the 171 dissertation abstracts reviewed, advisors were identified for 115 of them. Of that number, 16 advisors were listed more than once, and no advisor was listed more than four times (see Table 2). Again, because of data limitations resulting from the search method, this analysis likely does not identify every advisor who has directed a dissertation related to SDL.

Table 2. Advisors Reported on More Than One Dissertation

Advisor's Name	*No. of Dissertations*
Ralph G. Brockett	4
Huey B. Long	4
John Rachal	3
Richard P. Appelbaum	2
Richard E. Boyatzis	2
Art Burrichter	2
Bradley Courtenay	2

Table 2 (continued).

Lucy Guglielmino	2
John Henschke	2
Roger Hiemstra	2
Alan B. Knox	2
Victoria J. Marsick	2
Robert C. Mason	2
Sharan B. Merriam	2
Patricia Okimi	2
Mark Rossman	2

DISCUSSION

This study resulted from a comparison with some trends noted in the earlier content analysis of SDL articles by the University of Tennessee research group. That group reviewed 18 mainstream periodicals and observed the frequency of all articles on SDL and also, as a subset, articles reporting research on SDL. The highest number of articles on SDL appeared in 1986, with most of the writing occurring between the years 1983-1991. The frequency of research articles involving SDL also reached its peak in 1986 and the range of years with the most activity was also from 1983 to 1991.

The current analysis of collegiate dissertation abstracts revealed that during the years when the journals contained the greatest number of articles on SDL, the frequency of doctoral research on the topic was just beginning to rise. Research conducted at the doctoral level reached its highest frequency in 1996 and the range of years of greatest activity occurred between 1988 and 2001. Research on SDL from 1988 until the present has continued at a relatively constant rate, averaging nine dissertations per year. During the years when mainstream journal articles on SDL declined, collegiate research projects surged and remain at a high level.

CONCLUSION

The researchers emphasize that this is a preliminary study, and as such, it is a work in progress. By expanding the search parameters, for example using the search descriptors of related concepts (Brockett & Hiemstra, 1991), such as "self-direction in learning," "self-planned learning," "autonomous learning," and "distance education," it is felt that a more comprehensive study would emerge. Moreover, the authors are completing a follow-up manuscript whereby four streams of literature in SDL will be examined. These streams include adult education journals, articles found in the ERIC database, dissertation abstracts, and proceedings from the International Self-Directed Learning Symposium. Undoubtedly, this further study will help reveal a clearer picture of the data and trends of the literature in SDL. Nonetheless, the researchers are confident that the research, as it now stands, reveals a continuing strong interest in self-directed learning at the collegiate level.

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IS THE INTERNET CHANGING SELF-DIRECTED LEARNING? RURAL USERS PROVIDE SOME ANSWERS

Roger Hiemstra

Internet use is increasing each year and rapidly becoming the norm as a means for accessing information. There are corresponding indications that the medium is changing self-directed learning. The American Distance Education Consortium directed a multimillion dollar NSF grant to bring broadband Internet to various rural communities in the U.S. via satellite transmissions. In this article data from a related research project involving interviews of people in three rural communities are used to suggest ways self-directed learning is involved in their Internet use. Ideas regarding future research needs are included.

[Note: The article was accepted under previous editorship.]

INTRODUCTION

The Internet's growth in the past few years has been rapid. For example, the WWW grew from 130 sites in 1993 to more than 100 million as of November, 2006 (Zakon, 2006). Today, the U.S. has more than 211 million Internet users; there are nearly 322 million European Union users and China has more than 162 million (Miniwatts International, 2007). The ever-widening use of social networking sites like MySpace and Facebook demonstrate another way the Internet is changing societies throughout the world.

Perhaps more than any other factor, what has fueled such growth has been the steady increase in access via broadband connections, including cable, DSL, satellite feed, T1 lines, and various wireless forms. Pew researchers have substantiated such growth. Horrigan and Smith (2007), for example, noted in early 2007 that nearly half of all U.S. adults had broadband connections at their homes, a five percent increase over the previous year. Rainie and Horrigan (2005) suggest this: "The Web has become the 'new normal' in the American way of life; those who don't go on line constitute an ever-shrinking minority" (p. 59).

Growth in Internet usage and broadband access is likely to continue as competition drives down connections costs, wireless access becomes more common, and people see increasing value in being online. "More than a decade after the portals of the Worldwide Web opened to the public, we are now witnessing the true emergence of the Internet as the powerful personal and social phenomenon we knew it would become," said Jeffrey Cole (2007, p. 1), director of the USC Annenberg School's Center for the Digital Future. Such factors are making profound changes in the way people think about, seek, and use information, and these changes are impacting education and learning.

A study of rural people in the U.S. new to broadband Internet sought to better understand such changes. The study's purpose was guided by three broad objectives:

1. To better understand how people living in rural areas use the Internet when it is available via broadband connectivity.

2. To better understand what types of resources, databases, and collaborative opportunities rural users access when broadband Internet is available.

3. To examine the impact on individual learning for rural users who access the Internet over a broadband connection.

Based on the findings shown later, the author contends that these changes are actually changing the nature of self-directed learning (SDL). In essence, the Internet's ubiquitousness, a concept increasingly being used for the integration of the Internet into daily life, is irrevocably changing the way people learn, gather information, and assimilate knowledge.

ADVANTAGES OF THE INTERNET FOR SDL

There has been considerable thought already given regarding the Internet's impact on SDL. For example, Bulik and Hanor (2000) believe that the Web supports SDL by both increasing learner control and providing mechanisms for learners to determine what information is pertinent to them. Mathai (2002) suggests that the Internet is an ideal tool for enhancing SDL because of its ready access to massive amounts of information and its ease as a communication tool. Long (2001) describes the potential of the Internet for "searching and retrieving information" (p. 13). Rager (2006) writes that being skilled at using the Internet is critical now when thinking about the organizing circumstance concept introduced by Spear and Mocker (1984) more than two decades ago. Rager cautions us, however, to think about the challenges that the Internet can present to some learners.

Draves (2002) lists various reasons why the Internet enhances learning, including such advantages as being able to learn at a peak time of day, learning at your own speed, accessibility to much information, an ability to track personal progress, and the capability to test personal learning efforts. He also believes cognitive learning via the Internet is actually better than in-person learning. Long (2001) likes the virtual world's potential for learning to go "beyond problem solving to problem posing" (p. 14).

Kerka (1997) mentions the Internet's time and place flexibility in supporting SDL. Ruelland (2003) likes the flexibility the e-world provides in the learning rhythm. Candy (2004) stresses the Internet's liberating value in terms of continuous information access and no geographic boundaries or restrictions. He believes some SDL forms are well suited to the Internet:

> . . . Self-directed learning is one key way in which people keep up with change and, since we are currently experiencing an unprecedented level and pace of

> change on a global scale, it is plausible to expect the demands of a changing world to lead to greater amounts of self-directed learning. (¶ 20)

In many respects, even knowing that the Internet presents challenges to some users, in most ways it is the great equalizer. Although initial Internet access can be difficult for some people, the potential to learn what they have to learn once they do connect is great. In essence, if adults have motivation, drive, and patience they can learn much by themselves via the Internet.

THE RESEARCH PROJECT

The American Distance Education Consortium (ADEC) sponsored this research effort concerned with examining the impact on people and their communities after the introduction of broadband Internet. Such access was possible through a multiple-year five million dollar grant from the National Science Foundation that was matched by cooperating higher education institutions.

Called the Advanced Internet Satellite Extension Project (AISEP), this demonstration effort involved partnering with the Tachyon Corporation (Tachyon, 2007) to provide broadband Internet to those people living at the edges of the network (ADEC, 2006). Although AISEP was designed to serve hard-to-reach audiences in numerous locations, as noted earlier the researcher's role was to examine the impact of a broadband connection in rural areas.

Today, unfortunately, people living in rural areas still struggle comparatively with many of their urban and suburban counterparts in terms of Internet access. Horrigan and Smith (2007) note "Home broadband adoption in rural areas, now 31%, continues to lag high speed adoption in urban centers and suburbs" (p. 1).

Fewer choices in accessing the Internet, especially broadband connections, place those in rural areas at a learning disadvantage. This project provided new information about the Internet in rural locations, as well as several new ideas about SDL.

The Research Sites

One site was the Kettunen Center in Michigan. The Center, a complete conference facility, is in Tustin, south of Cadillac in the Lower Peninsula. It is a rural community of around 200 people. Internet connections at the Center, available during the workday and at other times by appointment, are via a roof-mounted satellite dish that feeds to 12 computer workstations. People at the Center can use the Internet to augment any learning activities. This site was visited twice. The first time was for interviewing teachers and administrative staff. The second visit involved interviewing research subjects as noted in the methodology section.

Another site was a recreation center in Kinross, Michigan, southwest of Sault Ste. Marie in the Upper Peninsula. Internet connections to 15 computers are via a satellite dish mounted on a raised platform adjacent to the building. Residents of this rural community of just over 1000 people can use the computers whenever the center is open, which generally includes throughout

the working day, early evenings, and limited weekend hours. This site was visited three times. The first two times involved interviewing teachers and administrators. The third time was for interviewing research subjects.

A third location was a community resource center in Marsing, Idaho, near Boise, a rural community of fewer than 900 people (20% are of Latino ethnicity). Internet feeds are via 15 computers connected to a roof-mounted satellite dish. The resource center is open for limited hours during the day, on Saturdays, and during the summer. This site was visited twice for the same purposes as described for the Kettunen Center.

The Research Subjects

Volunteer subjects, both youth and adults, were sought. With the assistance of local leaders and Cooperative Extension personnel, the researcher identified a sample of 51 interviewees (five from Kettunen Center participants, 13 from Kinross, and 33 from Marsing. They included 15 female and 15 male youth (8-18) and 14 female and 7 male adults (19 or older).

Methodology

A decision was made to utilize both quantitative and qualitative research methodologies for a more in-depth understanding of the Internet's impact. Initially quantitative analysis was used to derive basic comparative information, charting the types of online activities and comparing the degree and types of activities participated in by more experienced and less experienced Internet users, adults and youth, and males and females. This information is portrayed via figures (Microsoft Excel™ graphs). Three corresponding null hypotheses were tested:

Null Hypothesis 1: There is no relationship between the most popular types of Internet activities reported by experienced users and those reported by less experienced users.

Null Hypothesis 2: There is no relationship between the most popular types of Internet activities reported by adults and those reported by youth.

Null Hypothesis 3: There is no relationship between the most popular types of Internet activities reported by males and those reported by females.

To test the three hypotheses, the Spearman rank order correlation coefficient was used to indicate whether or not statistical relationships existed between the Internet activities of various respondent groupings. The Spearman coefficient depends on the ranking of responses rather than the actual values and it is useful when there are small numbers of subjects.

The qualitative data collection techniques involved participant observations, an examination of relevant documents, conversations with center and Extension personnel, and personal interviews using a semi-structured schedule. The interview schedule contained numerous open-ended items that facilitated queries of each subject about Internet usage and its subsequent impact on them (see Appendix A). All interviews were recorded and later transcribed. Throughout the data collection process, field notes and observational memos were written. In

this article only the words of interviewees are reported. Because of space limitations only four tables are presented to display findings. Additional tables and figures are at http://www-distance.syr.edu/reportdatadisplay.pdf.

Merriam and Simpson (1995) describe the appropriateness of qualitative techniques for field study activities, especially when a growing understanding of impact is desired. In essence, qualitative data collection, an ever-expanding understanding, and subsequent data analysis allows the researcher to uncover actual meanings of why people do, think, and even change through their own words. These strategies fit well with the desire to understand and interpret the Internet's impact on people living at the edges of society in terms of Web access. As depicted later, some new understanding about SDL was gained.

QSR International's NVivo qualitative data analysis software (2002) was used. NVivo is an excellent tool for handling, reducing, rearranging, linking, and displaying data during the analysis process. It facilitates the constant comparative analytical approach by involving a cyclical process of coding, recoding, and assessment or clarification of assumptions, hunches, and growing conclusions (Glaser & Strauss, 1967). This results in a framework for describing and understanding the data. The coding process involved analyzing the interview information, notes from participant observations, field notes, observational memos, and gathered documents.

THE INTERNET INFLUENCES LEARNING

Internet Uses

As might be anticipated, and in line with work by the Pew Research Center and the Center for the Digital Future cited earlier, rural people make a wide and varied use of the Internet when broadband connections are possible. Wang (2005-2006), too, found that adults use the Internet in various ways. The subjects interviewed for this study, for example, learned what they could about various subjects, garnered information to help them obtain child support, found recipes, listened to music, obtained information needed to help them write a grant proposal, and talked with friends or relatives about numerous topics. Figure 1 depicts the types of online activities undertaken by the subjects.

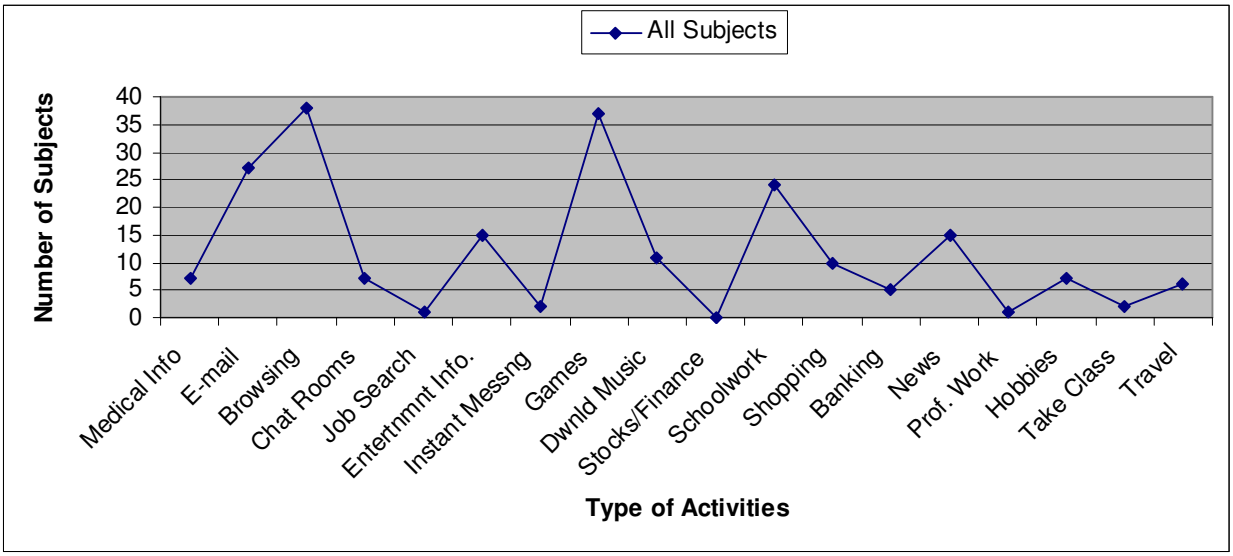

Figure 1. Use of the Internet by Rural Subjects: Online Activities.

To further understand the nature of such online activities, subjects were divided into 14 inexperienced users (involved with the Internet less than one year) versus 37 experienced users (one year or more of involvement). Figure 2 depicts the comparison, testing the first null hypothesis of no relationship between ways each group used the Internet. The null hypothesis was rejected at the .01 level. It appears that the two groups were similar in the types of activities reported. However, much care is required in interpreting these values because of small numbers. Although a test of the alternative hypothesis was not attempted, group similarities are implied.

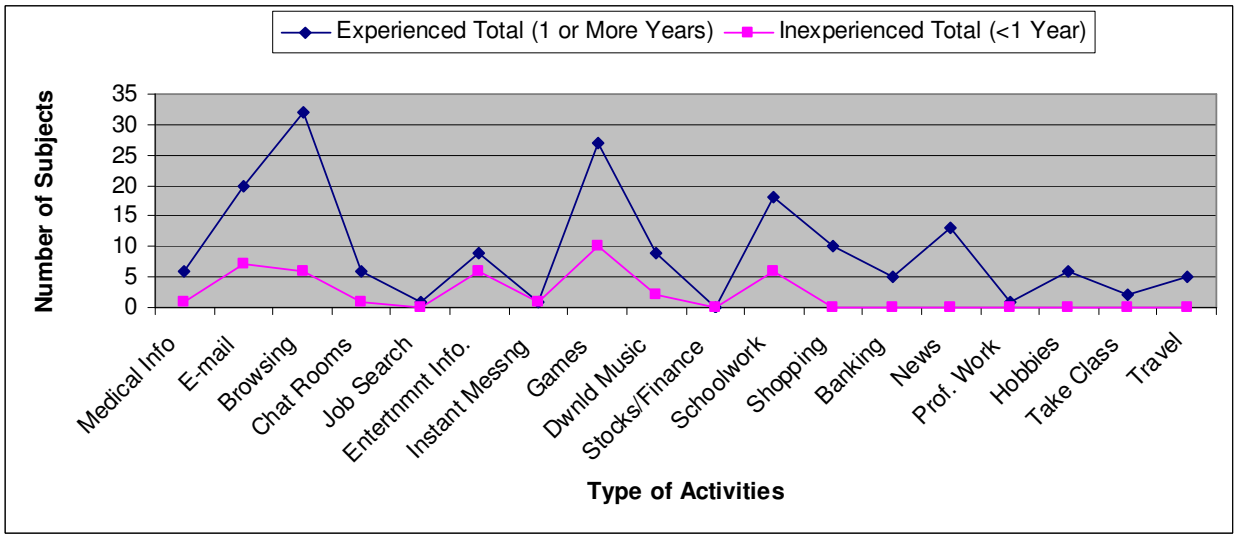

Figure 2. Internet Use by Rural Subjects: Experienced and Inexperienced User Comparisons. Spearman rank correlation coefficient = .692; $p < .01$.

A comparison of the 21 adults and 30 youth also was made in terms of Internet usage. Figure 3 tests the second null hypothesis and shows that adults and youth differ quite a bit in playing games and doing homework as might be expected. Adults tended to do more browsing, look to the Internet for news, and pursue hobbies as also might be expected. The Spearman coefficient suggested that the null hypothesis of no relationship between the ways adults and youth use the Internet cannot be rejected, but caution is again required because of the small numbers.

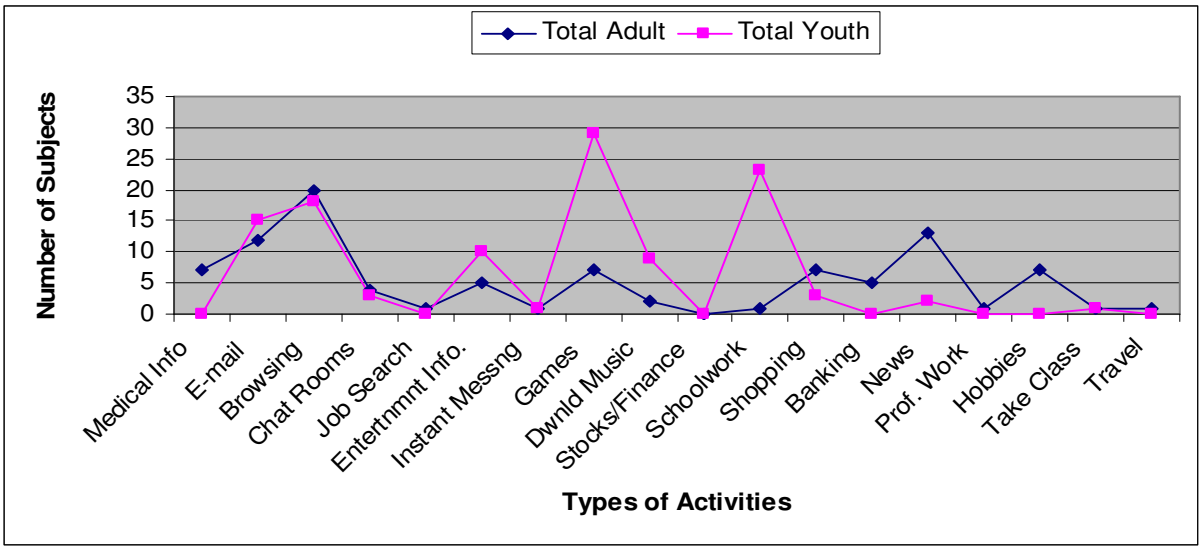

Figure 3. Use of the Internet by Rural Subjects: Adult and Youth Comparisons.
Spearman rank correlation coefficient = .408; $p > .05$.

A comparison by gender differences also was made. As Figure 4 shows in relationship to the third null hypothesis, there were significant similarities between the 29 females and 22 males in their online activities. This is confirmed by the Spearman correlation as the null hypothesis of no relationship between the two groups was rejected at the .01 level. Males perhaps used e-mail slightly less but tended to use the Internet slightly more for playing games.

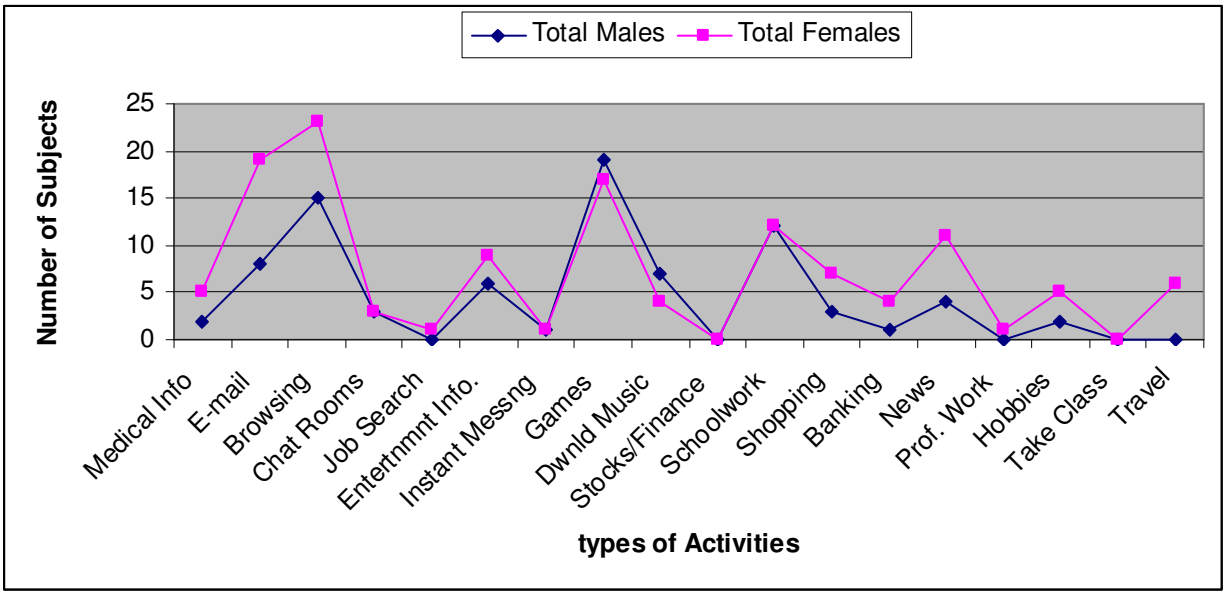

Figure 4. Use of the Internet by Rural Subjects: Male and Female Comparisons.
Spearman rank correlation coefficient = .846; $p < .01$.

Impact on Learning

The real value in doing qualitative research is being able to go beyond quantitative research's visual or even statistical comparisons. The following tables present a small sampling of Internet usage via the subjects' words. These sample quotes reveal how rural people keep up with the constantly changing world and intuitively understand that their user-derived needs often can be met through the Internet. They are answering interesting questions about life, personal interests, and essential needs through their Web searching. Having a means for fairly quickly and efficiently meeting such needs becomes an important tool in developing both lifelong and SDL skills.

One research objective was to determine the impact on learning needs for rural people who have broadband Internet access. In that regard, several related questions were asked during the interviews. As might be anticipated, respondents offered varied opinions and relayed numerous personal experiences as shown in Table 1.

Table 1. Internet Uses By Selected Rural Subjects

Descriptive Information	Researcher Observations	Subjects' Comments
29 year old experienced male in Michigan	Eclectic uses of the Internet by drawing on a childhood interest	*I collect toys and a lot of Japanese cartoons. I used it a lot for the animation and for surfing the web.*
15 year old experienced male in Idaho	Interesting uses pertaining to schoolwork	*I look up information for reports and stuff or on an art project. I get pictures I can draw.*

Table 1 (continued).

42 year old inexperienced female in Idaho	Innovative uses pertaining to physical fitness	*I like to train, I like to run, so I look for Olympic records and things like that, how close I want to get to it.*
14 year old experienced female in Idaho	Homework and personal uses common among youth	*During school I use it for homework. I also use it for music and games and to get some information about things.*
47 year old inexperienced male in Michigan	Only recently discovering the Internet, he dove into using it enthusiastically	*I've used it for references on different things, for medical problems, for my diabetes.*
70 year old inexperienced female in Idaho	This novice user knew what she could and could not do	*I learned on my own to get and send e-mail and that's all I basically do.*

Further qualitative analysis resulted in the emergence of three major themes.

1. Efficiency in accessing information.

2. Knowledge and skill increase.

3. Curiosity, enjoyment, and excitement.

They are represented in the following tables with illustrative quotes.

Efficiency and Access

*T*he notion of efficiency and easy access to information was expressed frequently. Table 2 provides a sampling of these comments.

Table 2. Efficiency In Accessing Information Via the Internet

Descriptive Information	Researcher Observations	Subjects' Comments
55 year old experienced female in Idaho	This user recognized her growing efficiency and skill	*Well, I've learned to be a little more overall efficient. As I use it more I've found my way around a little better.*
11 year old experienced female in Michigan	This enthusiastic girl was excited about her growing independence	*Now I can do my homework by myself. I can do lots of things more funner* [sic]. *It's amazing how you can do it!*

Table 2 (continued).

61 year old inexperienced female in Idaho	This woman was quite definitive on her ability to acquire information more easily	*Oh definitely! It has made it a lot easier to get the information and it gives me a lot more than what I'd get in any other way.*
13 year old experienced female in Michigan	This young lady had grown beyond her initial uses	*When I first started using it, I would do stupid stuff on the Internet, but now like I know how to go to something specific.*

Knowledge and Skill

A general increase in overall knowledge and skill from the experiences of using the Internet was another indicator of how the Internet has impacted learning. The subjects expressed such increases in various ways as shown in Table 3.

Table 3. Knowledge and Skill Increases Via the Internet

Descriptive Information	Researcher Observations	Subjects' Comments
47 year old experienced female in Idaho	This woman appreciated how using the Internet fit in with her busy lifestyle	*Well, I've learned quite a few things on the Internet I wouldn't have learned otherwise because our life styles are pretty busy.*
12 year old experienced male in Idaho	This young man was realistic in his growing understanding	*I don't run into so much problem as when I first started using it. I didn't know what to do with dot coms.*
19 year old experienced male in Michigan	This person talked about how important using computers had been	*A lot of my learning is really based on the computers because that is where I learned most of what I know.*
47 year old inexperienced male in Michigan	This enthusiastic beginner described how he was learning from others	*I'm learning by others' experiences, how they changed their lives, and how the changes helped them.*

Curiosity, Enjoyment, and Excitement

Finally, notions about curiosity, enjoyment, and general excitement in working with the Internet came up several times. Table 4 depicts some ways respondents expressed these sentiments.

Table 4. Curiosity, Enjoyment, and Excitement Gained Through Internet Involvement

Descriptive Information	Researcher Observations	Subjects' Comments
70 year old inexperienced female in Idaho	This excited user could not understand why her contemporaries weren't using the Internet	*I'm really excited about what I can do, the future of it, and I try to get my friends and they won't and I can't understand.*
13 year old experienced female in Idaho	This young woman was excited and appreciated how fun learning could be	*I learned so much on the computer. I have learned new things. It is fun to learn new things.*
14 year old experienced female in Michigan	This young lady was somewhat philosophical on how the Internet had impacted her	*Before I wasn't interested in going through the work of looking up something, but now if I am curious I always use the Internet.*
50 year old experienced female in Idaho	This woman put it very simply	*Oh my gosh, I learned a lot off the Internet.*

It is clear that the Internet has impacted the way rural people learn, access learning resources they need, and undertake various learning activities. Some of the people interviewed had become very excited about the Internet as a resource for new learning activities. Even though interviewees weren't using terms like SDL, personal control, and self-motivation, a sense was obtained that learning by themselves had become rewarding and even habit forming.

DISCUSSION AND CONCLUSIONS

Outcomes from Using the Internet

This research effort generally has supported previous research about Internet users. In essence, rural people in the U.S. make good use of computers that can access broadband Internet. With experience, such use often becomes more sophisticated, essential, and conducive to making a real difference in their lives.

After interviewing 51 youth and adults, observing what was going on in parts of Idaho and Michigan, reading and rereading interview transcripts, and finding ways to make a whole from the various parts, a conclusion can be reached. At least in the sites visited, the Internet has become an essential learning tool for enhancing the lives of those who use it. In many respects, the power of broadband Internet has helped rural people think of it as their encyclopedia, learning resource, and self-directed "go to" source of information needed for life. As a 14 year old female in Michigan said, "*Anything that you want is there. The whole world in a computer*."

This embracing of the whole world in a computer through Internet access seems to even be extended as these rural users gained experience and discovered new applications. Think of those earlier quotes from several people who exclaimed almost with glee how they had discovered all the additional things they could do on the Internet and how that was helping them in various ways. This, in turn, can lead to self-discovery and self-improvement, which ultimately benefits community and even society.

The interviewees also seemed to quickly become quite knowledgeable about the Internet, computers, and various associated applications. For example, often a fairly new user was employing the language, concepts, and approaches associated with Internet familiarity one might expect more with a very sophisticated and experienced user. Web site names and URLs, common Internet jargon, complaints about slow computers, discerning comments about which search engines did what, and even Web page design talk emanated from many of these rural users.

There appear to be new learning approaches and skills developing, too, as these rural people use the Internet. Several have readily accessed various resources or information sites to help them with their learning needs, including such actions as finding animation resources, increasing typing skills, e-mailing a professor about a college course requirement, and finding material for a special interest. As Raupers and Roberts (1998) suggest, technology seems to motivate some students to learn.

So, are there some indicators of success that show the Internet's impact on rural users? Here are several that come from the interview data:

1. A growth in computer and Internet knowledge, terminology, and use abilities.

2. The skill to evaluate Web pages and discern among them for their perceived value and usefulness.

3. Increased sophistication in using search engines and searching techniques.

4. Enhanced typing, communication, and information retrieval skills.

5. Growing confidence, curiosity, enjoyment, and even excitement about using the Internet.

6. Increasing use of the Internet for information, knowledge, and resources required in meeting life's needs and keeping up with change.

Recommendations for Future Research

An important lesson from this research effort is that having access to broadband Internet can make an important difference in the lives of many rural learners. A single study, however, can only be suggestive of how rural users find success as learners. The following recommendations will help verify, add to, and even quantify what was learned.

1. Additional studies in more rural areas throughout the U.S. are needed before a clear understanding of how such variables or differences as geographical location, community size, and various demographic characteristics impact on Internet usage.

2. Comparative research in rural, urban, suburban, and even international settings will help push forward the knowledge base.

3. A study needs to be directed at better understanding where a person accesses the Internet, such as a school, community library, or home, in terms of Internet usage, how frequently the Internet is accessed, and means for recording or saving appropriate information.

4. Research aimed at understanding the value of a teacher, tutor, trainer, or peer supporter in facilitating Internet usage would add useful information.

5. An effort to more clearly understand financial constraints in rural areas in terms of paying for Internet access is required so that institutional and governmental administrators have the information necessary for creating a broader infrastructure.

6. Additional demonstration projects aimed at creating varied Internet access options in rural areas are needed to help people close the gap with their urban and suburban counterparts.

Ultimately, the true value of such research can be broadened through widespread dissemination of any resulting information. Publications in varied formats, professional meeting presentations, public presentations in rural areas, electronic dialogue, and even revised curricula in various educational institutions will help enhance the Internet's value as a learning resource.

Contributing To the Future of Self-Directed Learning

Almost everyone who accesses the Internet soon experiences the enormity of what is there. The good news is that almost anything about which you are interested will be addressed in some way via multiple Web sites. The bad news is that almost anything about which you are interested will be addressed *ad nauseam* via multiple Web sites. The resulting information overload can be daunting, to say the least, especially for a new Internet user.

Several interviewees in the current study expressed concerns about the bombardment of information when working with the Internet. This comment from a woman in Michigan is typical: "*There is just so much to look into that it is almost like you don't know what to choose*." Thus, future attention must be given to providing initial orientation on using the Internet for new users, helping people understand the best search engine techniques, and providing guidelines for evaluating Web sites so that any SDL efforts are maximized.

What the future holds for rural and remote areas is still unclear. Foundation and other outside support will not be sufficient to meet all such needs across the U.S. Stone, Itoi, and Flynn (2004) provide some insight on what may be new ways of thinking about the situation. They describe how EZ Wireless in Hermiston, Oregon, decided to tackle the problem of providing

high-speed Internet access in rural areas. Through 35 towers and 75 antennas, they broadcast a signal that covers all of a rural community through their Wi-Fi blanket. Such efforts, added to what has been demonstrated through the AISEP and, hopefully, through future demonstration projects, suggest that means for ensuring that people living in rural and remote areas have access to broadband Internet can be found.

Having broadband access is very important to people living in rural areas and will likely become more important in the future as our information age continues to expand. The people that were interviewed, almost to a person, were excited about what they were able to do, were enthusiastically using the Internet to meet various personal learning needs, and were truly discovering new things they could learn that most likely could not have been done without the Internet. In many ways, because of their involvement with the Internet they had changed as learners and were undergoing such change mainly by themselves.

For the people in this study, the Web had a potential for resource access any time, any place, any path, any pace. However, it is still up to professional educators, designers, and human resource developers to make sure that those learning efforts are inclusive enough so people no matter where they live or no matter what their financial circumstances can be a part of it all. An 11 year old female in Michigan may have spoken for both the youth and the adults who were studied when she described how important this technology is to her: "*In my sleep I dream about computers*." Let's turn that dream into reality for everyone.

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APPENDIX A
Interview Schedule

[Initial questions were asked regarding age, grade in school (youth), major employment category (adults), and length of time in Internet usage. The following questions guided each interview with probing follow-up queries used for each as needed. The typical interview lasted one hour.]

1. What types of activities do you typically use the Internet for?
2. What type of resources or Web pages do you go to on the Internet?
3. How do you evaluate a Web page
4. Do you use the Internet differently now than when you first began using it? If yes, how?
5. Does any Internet usage involve taking classes, self-education, or other learning activities?
6. Does any of your use of the Internet involve working together with anyone else? If yes, how?
7. If you do use the Internet to work together with anyone else, how helpful has this involvement been for you?
8. In working with any learning activities over the Internet, do you enjoy working by yourself or with others?

9. In question 1 above, you described how you typically use the Internet. I am going to remind you of several of these, and for each, tell me about your learning experiences, how you carried them out, and how you feel about the information you found.
10. As you have worked with the Internet, describe the kinds of things that have both helped and limited you.
11. Did you receive the help you needed in learning about computers and the Internet?
12. What skills do you have now that you didn't have before the Internet was available?
13. How has being able to use the Internet changed your learning approaches?
14. How has being able to use the Internet changed you as a learner or as an individual?
15. What are the various ways you talk or message with others over the Internet?

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