ABSTRACT

Title of Dissertation: SOCIALLY CO-CONSTRUCTED TRANSFORMATIVE
                           SELF-REGULATION IN OCCUPATIONAL THERAPY:
                           AN IN-DEPTH ANALYSIS OF THE ROLE OF GOAL-
                           DRIVEN GUIDED REFLECTION IN A MAN WITH
                           BIPOLAR DISORDER

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        Lifespan development embraces an evolutionary perspective on individuals in

context, incorporating both growth and decline in function. Health and social welfare

programs influence an individual's capacity to accommodate for functional changes.

Specifically, occupational therapy's role in facilitating adaptation to and compensation

for trauma, illness, and the aging process has a major impact on lifespan development.

The impetus toward evidence-based practice challenges occupational therapy to show

direct relationships between intervention and outcomes. However, it has been difficult to

operationalize and measure process variables in routine intervention and to connect

process with the outcome of engagement in occupation to support social participation.

        The purpose of this non-experimental, qualitative study was to describe the long-

term evolution of insights about occupational therapy process and to identify how

therapeutic goals, socially co-constructed by an occupational therapist and a client,

contributed to transformative self-regulation in a mature man with bipolar disorder who

had expertise in computer technology. The therapeutic process was examined from two perspectives, the client's and the occupational therapist's, through analysis of archival data containing the client's guided debriefing interviews following each of 10 occupational therapy sessions.

Content and descriptive analyses revealed insights about occupational therapy process and endorsed client reflection in learning. Some process components set the foundation for learning (goals, transformative self-regulation, and reflection) and others were instrumental (activity demands, occupational performance, and participation). Competence was distinguished by activity goals and therapeutic goals; sessions addressed computer-related activities and communication skills.

This study demonstrated the reorganization of self-concept congruent with performance changes. Testing of possible selves eventually led to a revised ideal self, one competent to participate in valued social roles despite functional limitations. Reflecting on therapeutic activities, this client described his adjustment to fluctuating abilities imposed by bipolar disorder. The client's evolution was guided by the occupational therapist's social co-construction of the client's self-knowledge. Guiding reflection to develop transformative self-regulation led to the client's capacity for goal-directed adaptation, compensation, and self-development. Transformative self-regulation emerged as both process and outcome of occupational therapy.

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OCCUPATIONAL THERAPY: AN IN-DEPTH ANALYSIS OF THE ROLE OF
GOAL-DRIVEN GUIDED REFLECTION IN A MAN WITH BIPOLAR DISORDER

by

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DEDICATION

For my mother whose faith never wavered and

for my father who inspired reflection.

There is nothing inherent in the nature of habit that prevents intelligent method from becoming itself habitual.

Dewey, *Experience and Education*, 1938

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Susan C. Robertson

CHAPTER ONE

Introduction

Purpose

The purpose of this study was to describe the long-term evolution of insights about occupational therapy process and to identify how therapeutic goals, socially co-constructed by an occupational therapist and a client, contributed to transformative self-regulation in a mature adult man with bipolar disorder. The therapeutic process was examined from two perspectives, the client's and the occupational therapist's, through analysis of the client's guided debriefing interviews following each of 10 occupational therapy sessions.

The study of human development is focused not only on birth through young adulthood, but also continues to be important across the lifespan (Dixon & Lerner, 1988). Maturation is influenced by variables that take both increments and decrements in human function into account (Baltes, 1997). Biological and cultural evolution is best viewed as an incomplete process, one that changes with age, that can be described objectively and subjectively, and that is influenced by theoretical frameworks, "standards of comparison, cultural and historical context, as well as by criteria of functional fitness and adaptivity"

(Baltes, 1997, p. 367). Because an interaction exists between maturation and an individual's socio-cultural context, adult development is uneven, unique, and best viewed from a broad perspective.

As scientific knowledge about the etiology, course of disease, and corrective interventions improves, the average expected lifespan continues to lengthen. With increased longevity comes greater need for adequate health systems. Conversely, a major factor influencing the course of human development is the state of "medical technology and institutional support for the welfare of the person" (Dixon & Lerner, 1988, p. 34). Health and social welfare programs, comprised of several levels of intervention, from prevention, to acute care, to rehabilitation, to long-term care, have major impacts on the nature and degree of adaptation possible across the lifespan.

Occupational therapy offers rehabilitative intervention to promote an individual's reintegration into his or her social context following functional loss. Occupational therapy's role in health systems is to facilitate an individual's adaptation to and compensation for performance changes due to trauma, illness, and the aging process, a role that has a major impact on the quality of lifespan development. Like other health professions known to benefit health, occupational therapy has found it difficult to measure outcomes. Finding measurable evidence for changes in client performance directly resulting from occupational therapy intervention has been an elusive though highly valued vision.

Evidence for Health Outcomes

Much has been written about America's health from the perspective of end-outcomes of health care (Donabedian, 1995; Palmer, Donabedian, Povar, 1991; Tarlov,

Ware, Greenfield, Nelson, Perrin, Zubkoff, 1989), but *processes* of improving health have been addressed less frequently. Without understanding how people re-establish healthy patterns of self-regulation after trauma or illness, health interventions may be inefficient, misdirected, or short-lived.

This study was directed at one health profession, occupational therapy. The impetus for the study came from personally observing that there were differences in how each client perceived routine occupational therapy intervention. Without inquiring, it was not clear how clients with various kinds of functional loss understood the process of occupational therapy as it applied to their unique needs and goals. Further, it was not clear what impact occupational therapy had on integration of learned compensatory strategies that enabled clients to adapt to functional loss and, thereby, to engage in the variety of activities they chose to support meaningful participation in society.

The profession of occupational therapy has developed a body of knowledge, key constructs, and principles of intervention that center around its philosophical base. A Practice Framework has been developed to organize and communicate accepted aspects of routine intervention, including evaluation, intervention planning, intervention implementation, intervention review, and outcomes measurement (The American Occupational Therapy Association, 2002). This official document has been chosen to present the basic tenets of occupational therapy because it represents a synthesis of major theorists in the field and has been written to be applicable to all areas of occupational therapy practice.

The Practice Framework (The American Occupational Therapy Association, 2002) concisely presents the overall process of occupational therapy, but does not address

the inner workings of intervention at the level of an occupational therapy session. It discusses the need for an occupational therapist to develop a collaborative relationship with a client, but does not clarify how that may be achieved. Importantly, it describes the importance of self issues in occupation as part of its overall philosophy, but does not include self-development as part of the process of routine intervention. The Practice Framework identifies activities consistent with an individual's valued roles, assumes that these activities are related to a person's health, well-being, and satisfaction, and emphasizes that these activities provide meaning and purpose in an individual's life. But a distinct connection between self-concept and self-regulation as a vehicle for goal attainment has not been made in the profession's accepted definition of intervention.

Further, the Practice Framework presents theoretical perspectives on how clients may benefit from occupational therapy intervention. Missing in the literature are *client* views on the relationship of occupational therapy intervention and self-development. Because occupational therapy is organized to foster the exploration and testing of adaptive functional patterns, it is important to articulate client perspectives on occupational therapy process. The aim of this study, then, was to examine the process of occupational therapy as it has been described by a client in guided debriefing interviews conducted by an occupational therapist following routine intervention.

Rationale

This study has extended a line of inquiry that has broad implications for America's health and for occupational therapy specifically. Better understanding clients' perspectives on occupational therapy process has value to the over 103,000 occupational therapists and occupational therapy assistants employed (Bureau of Labor Statistics,

December 17, 2003) in a variety of intervention settings, ranging from skilled nursing facilities, schools, hospitals, rehabilitation hospitals, mental health centers, community-based programs, to home-based practice (National Board of Certification in Occupational Therapy, 2003). Four clients per day is a modest estimate of an occupational therapist's caseload that, when multiplied by the number of employed practitioners, results in 412,000 occupational therapy interventions per day nationwide. This study has the potential to influence the routine practice of occupational therapy and, thereby, to have a broad impact on the health of America's children, adolescents, adults, and older adults.

In addition, processes of client-centered intervention that emerge from this study have the potential to influence the country's overall design of health services if they are found to be applicable to other health professions, lay healers, and preventive practitioners. By targeting a client's development of self-regulation to adapt to limitations in body functions and performance, health services may extend their impact from remediation of impairment to the advancement of fully participating members of society (Matheson and Bohr, 1997). The ultimate gain is a healthier public requiring fewer health care resources, thereby, decreasing the overall cost of health care in America.

This remainder of the chapter provides an orientation to this study. It begins with key constructs and guiding principles in occupational therapy intervention. A critique of the inner workings of occupational therapy process and outcome presents issues with the accepted view on practice. A discussion of how occupational therapy addresses the needs of clients with mental illnesses follows. To explain how occupational therapy is integrated in the context of human development, the next section presents theorists relevant to understanding the impact of occupational therapy on lifespan development.

After this, research on occupational therapy process from a previous study is introduced. The next sections provide an overview of the current study, including a statement of purpose, research questions, a discussion of validity and reliability issues, and finally a review of limitations of the study.

Occupational Therapy

Occupational therapy fosters an individual's capacity to engage in valued occupations to create a meaningful, rewarding life (The American Occupational Therapy Association, 2002). Occupations include the areas of "activities of daily living, instrumental activities of daily living, education, work, play, leisure, and social participation" (The American Occupational Therapy Association, 2002, p. 612). For example, meaningful human occupation may include caregiver (caring for an infant), worker (assembling automobile engines), or sports player (playing in a tennis tournament).

Along the continuum of each person's life, it is likely that his or her function will be altered or constrained by congenital or genetic predispositions, learning disabilities, trauma, disease, lifestyle choices, or the aging process (Neistadt & Crepeau, 1998). Occupational therapists help these people find ways to fulfill their purpose in life by promoting health, remediating impairments, maintaining occupational performance, employing compensatory techniques, and preventing disability (The American Occupational Therapy Association, 2002). The overall aim of occupational therapy is to enable clients to "engage in occupation to support participation in context or contexts" (The American Occupational Therapy Association, 2002, p. 610).

One may find occupational therapists working with people of all ages in a variety of settings. In a neonatal intensive care unit, school system, or rehabilitation hospital, occupational therapists facilitate human development and adaptation. Occupational therapists also may work with elderly people in nursing homes, people coping with physical disability at home, and people with mental illnesses who live in shared community housing, for example. Occupational therapists may also be found in wellness programs and senior centers, or offering life coaching services in private practice. For each population, in each setting, occupational therapists strive to help people find ways to perform valued activities so that life is rewarding and meaningful.

To achieve this, occupational therapists participate in a client-centered, collaborative relationship (The American Occupational Therapy Association, 2002) that includes a client, his or her family, and his or her intervention team. Intervention sessions framed around a client's goals provide the forum where an occupational therapist and a client together create ways to meet a client's performance expectations. Cooperatively, an occupational therapist and a client explore how everyday life may be adapted to facilitate function that has been lost or impaired. The next section examines the process of occupational therapy intervention as it is currently understood.

Process. Occupational therapy's overall focus is a client's capacity for engaging in occupation and this is evident throughout its process. There are three fundamental elements of that process: evaluation, intervention and outcome. Each is considered in turn.

To begin, an occupational therapist conducts an evaluation to determine a client's needs, problems, and concerns about participating in meaningful activities conducive to a

sense of fulfillment in life. Information is gathered from a client using an occupational profile and analysis of occupational performance. In the occupational profile, a client's self report is used to determine his or her "history and experiences, patterns of daily living, interests, values, and needs" (The American Occupational Therapy Association, 2002, p. 614). Additionally, a client's concerns about how impairment or disability might affect his or her function are used to establish what is most important in performing daily activities.

Once a general overview of a client's concerns is known, an occupational therapist may observe actual performance of activities to identify any underlying skills and habits that might assist or hinder occupational performance. There may also be targeted assessment of specific performance skills, body functions, and body structures as well as activity demands and contexts to specify outcomes for occupational therapy (The American Occupational Therapy Association, 2002). An occupational therapist chooses individualized approaches to analyzing occupational performance, depending on a client's goals, skills, and needs.

Following evaluation, there are three parts to intervention: the intervention plan, intervention implementation, and intervention review. An intervention plan is designed to determine how a client's priorities will be addressed. An occupational therapist brings knowledge of human action, activity analysis, and theoretical bases for intervention to confirm a client's goals and anticipated outcomes collaboratively (The American Occupational Therapy Association, 2002).

Intervention implementation involves client participation in therapeutic activities directed to support and enhance his or her occupational performance. Intervention may

address performance skills and patterns, underlying body functions and body structure, as well as contexts for social participation. Intervention in occupational therapy involves a client performing therapeutic activities. Here, occupational therapy's therapeutic approach is based on principles of experiential learning (Reilly, 1969; Wood, 1998). Intervention sessions are structured to provide an arena for learning from the experience of doing purposeful activities (Meyer, 1922). In intervention sessions, clients perform activities where they can experience and adapt to real-life challenges. For a client, doing a familiar task, such as sweeping a floor, may mean being confronted with the explicit impact of functional changes or loss. Using this awareness, clients learn to choose adaptive strategies so that they can perform activities and engage in occupations.

Intervention review is an ongoing re-evaluation of a client's performance as it is related to his or her goals. An occupational therapist observes a client's occupational performance in the therapeutic activity as it was designed, the therapeutic context, and the therapeutic relationship with an occupational therapist. As a result of intervention review, any needed adjustments are made so that a client can increase his or her chances of success.

Settings for practice are broad and varied. An occupational therapist might provide services directly to a client, might lead a group to address collective and individual goals, or use education and consultation as interventions. As with all elements of intervention, implementation incorporates client collaboration on approaches to remediate or compensate for functional changes or loss.

Intervention review is the ongoing assessment of how a client's needs are being addressed and how pre-determined outcomes are being met. This continuous

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collaborative process may lead to new goals, revised goals, different activity demands, other contexts, or changes in the intervention plan. During the course of intervention, outcomes may need to be modified, additional referrals may be needed, or attitudes and expectations may need to be adjusted. Intervention review gauges the progress a client has made toward his or her goals and shapes intervention to approximate intended outcomes more closely.

The over-arching outcome of occupational therapy is the capacity for a client to be involved in life. "Outcomes are defined as important dimensions of health that are *attributed to interventions* [italics added], including ability to function, health perceptions, and satisfaction with care" (The American Occupational Therapy Association, 2002, p. 618). This definition of outcomes reiterates the profession's belief that the ability to perform an activity will be carried over instinctively into a client's daily life. It is assumed that when clients are "actively involved in carrying out occupations or daily life activities that they find purposeful and meaningful in home and community settings, participation is a natural outcome" (The American Occupational Therapy Association, 2002, p. 619).

The accepted model of occupational therapy intervention assumes that a client who has learned an adaptive strategy in occupational therapy intervention will use that skill when engaging in occupations and activities after discharge. If a client can perform in a clinic, day program, or school, occupational therapists interpret this to mean that a client will choose to use the strategy he or she has developed because that adaptation or compensation has been derived from client-centered, goal-directed performance of activities that are important to him or her.

Issues. There are several potential problems with occupational therapy's view of intervention. They center on issues related to outcome and those inherent in the profession's current views on process. These are addressed next, beginning with outcomes.

Given the state of outcomes research, it is very difficult to measure with certainty that a client's use of adaptations or compensations to enhance occupational performance is directly attributable to occupational therapy intervention. Changes in a client's performance skills, including motor skills, process skills, and communication/interaction skills are often determined by comparing a client's function at the start of occupational therapy to his or her function at the time occupational therapy is terminated. Functional changes a client may have made could be the result of any of a number of factors outside the realm of occupational therapy. For example, his or her family could have become more supportive, the prognosis may have improved due to medical management, or co-workers may have convinced a client that he or she can return to work despite functional limitations.

Another issue rests with the assumption that people participating in occupational therapy will be able to generalize what was learned in a therapeutic activity to life outside the intervention setting. This assumption may not be accurate. Clients may not be able to use an adaptation equally as well in the community as they have in the clinic. A client may not readily generalize learning because there are too many differences between the clinic and home, such as more limited space, flooring with rugs that limit mobility, or different social supports. For example, it cannot be assumed that if a client has learned to

use a shower bench in an adapted bathroom in a rehabilitation center, he or she will continue to use it at discharge.

Also, it may be difficult to transfer performance skills to engagement in occupations as a participant in society. Using what has been learned requires not only that a skill has been developed and but also that its use has been integrated. Only in this way can performance skills be chosen consciously by a client. Expecting a client to use learned adaptations in daily life assumes that he or she has become aware of the impact of functional limitations on occupational performance, has accepted those limitations as part of his or her self-concept, and has integrated them sufficiently to choose and apply self-regulatory strategies that foster goal attainment.

It is also important to view outcomes from several perspectives. An occupational therapist's views may be found in his or her documentation of a client's performance at the start of intervention and at its conclusion. Specific behavioral measurements are interpreted by an occupational therapist and an assessment is made about the conditions in which a client can function best. Typically, an occupational therapist compares the pre-assessment and the post-assessment to infer outcomes attributed to occupational therapy. However, a client's perspective on the outcomes of occupational therapy may differ from an occupational therapist's. Although a client may be asked to react to the usefulness of a piece of adaptive equipment or a particular problem-solving technique, an in-depth analysis and integration of occupational therapy outcomes from a client's perspective is missing or minimized in current occupational therapy outcomes research.

Despite these caveats, it remains very important for occupational therapy to provide evidence for outcomes. Outcomes research can be strengthened by being able to

show a more direct relationship between what a client learns in occupational therapy and how he or she carries that over to daily life. The far-reaching outcome of social participation that occupational therapy attributes to its intervention may be too ambitious without more definitive evidence to support that relationship. Yet studies that provide evidence for occupational therapy's process having a direct influence on a client's engagement in activity are scarce. The profession's assumptions about the intervention-outcome relationship point to a need for further outcomes research.

Being able to demonstrate a direct relationship between occupational therapy intervention and a client's engagement in occupation requires greater insight into the inner workings of occupational therapy process as defined in the profession's official documents. However, the accepted framework of occupational therapy, as described above, raises additional concerns. It is this researcher's view that helping a client move from performance of a therapeutic activity to appropriate choice and application of adaptations and compensations may require more than what is now considered accepted intervention. There may be more to occupational therapy process.

The profession's Practice Framework (The American Occupational Therapy Association, 2002) has articulated an occupational therapist's perspective on what occurs between an occupational therapist and a client. It describes what occupational therapists intend to achieve and how those outcomes are accomplished with evaluation and intervention. Assumptions about the framework itself might lead to additional insights about the inner workings of occupational therapy.

More specifically, the tenet that the use of therapeutic occupation or activity is the means to help clients perform (The American Occupational Therapy Association, 2002)

would benefit from greater clarification. The inner workings of occupational therapy process in routine intervention remain vague. The profession's Practice Framework (2002) defines the components of process as therapeutic use of self and therapeutic use of occupations or activities. The particular nature of meshing an activity, a client, and a therapist to design a therapeutic medium in occupational therapy is not clearly articulated. It remains a belief unless research can uncover what makes this combination of process components an effective environment for a client's learning.

An underlying assumption of this view on occupational therapy process is that an occupational therapist structures an activity for therapeutic purposes. An occupational therapist understands how the required actions, the sequence of steps, the space and lighting in the work area, and the nature of social interaction influence a client's performance. A client's ability to perform within an occupational therapist's therapeutic structure is expected to be integrated by him or her. The fundamental belief that a client's performance is readily transferable may not be what actually happens in an intervention session. There is a need to uncover what a client extracts from the doing of occupation or activity and how learning occurs for a client.

To better understand the relative impact of a therapeutic activity, a client, and an occupational therapist on a client's ability to perform, it is necessary to particularize occupational therapy process components. From a client's perspective, there may be components that are more or less pivotal in his or her learning. Perhaps the demands of an activity are most crucial, or the actual doing of a therapeutic activity, or the pride of accomplishing particular goals. It may be that not all of the process components carry equal weight in facilitating a client's occupational performance.

It is anticipated that research on the inner workings of occupational therapy process could reveal which factors have the greatest impact on outcomes from a client's perspective. Perhaps the power of the learning experience is not merely the design of actions required of a client to attain a goal. Perhaps seeing him or herself in action is the most important component of the process for a client. Or it may be that the therapeutic relationship a client forms with an occupational therapist is most important. Whatever the findings, it is important to hone in on occupational therapy process in order to be able to show direct relationships between intervention and outcome.

This line of inquiry into what occurs in an intervention session is at its inception. Before hypotheses can be generated and tested empirically, it is necessary to define the variables, the components of occupational therapy process. Beginning to understand what happens and how it happens during intervention is too massive to accomplish on a large scale. One population seen in occupational therapy has been selected to structure this study. That population is people with mental illnesses, in particular, with bipolar disorder.

Occupational Therapy in Mental Health

Occupational therapy has had a long-standing role working with people who have mental illnesses. At the inception of occupational therapy in 1917, its founders were active in extending moral treatment of people with mental illnesses through the use of occupation. William Rush Dunton, MD supervised occupation classes at Sheppard Pratt Hospital in Maryland and Eleanor Clarke Slagle was a welfare worker who realized the power of occupation through her affiliation with Jane Addams of Hull House. Later Slagle implemented habit training to structure occupation for people with serious mental illnesses at Phipps Clinic. At Johns Hopkins University, Adolph Meyer, MD, a mentor to

Dunton and Slagle, created the philosophy of occupational therapy as a humanitarian approach to helping people with mental illnesses adapt, incorporate healthy habits, and balance work and play (Schwartz, 2003).

The term "mental illness" describes a cluster of illnesses affecting emotional regulation, social integration, and capacity to engage in productive roles (American Psychiatric Association, 1994). The National Institute of Mental Health (2001) estimates that "22.1 % of Americans ages 18 and older—about one in five adults—suffer from a diagnosable mental disorder in a given year…this figure translates to 44.3 million people". Depressive disorders, including bipolar disorder, are the leading cause of disability in the United States and comprise 9.5% of the population or 18.8 million American adults, with a higher incidence among women (12.0%) than among men (6.6%) (National Institute of Mental Health, 2002). The 2.3 million Americans with bipolar disorder comprise 1.2% of the population in a given year (NIMH, 2001), a figure that does not include the people with bipolar II disorder whose illness starts with a depressive episode resulting in an initial diagnosis of major depressive disorder.

Mental illness is a deceptive term because it is now understood that these are physical illnesses of the brain (Charney, Nestler, & Bunney, 1999) rather than poor choices, weaknesses, or character flaws. As scientists have discovered the physical nature of mental illnesses, there is more information about the roles of the pre-frontal cortex in problem-solving and the hypothalamic-pituitary-adrenal axis in emotion regulation. Depression, anxiety, phobias, thought disorders, obsessions and compulsions are external manifestations of internal biological and neurochemical brain malfunctions; they are outward signs of the biological and chemical workings of the brain (Mann & Arango,

1999). These illnesses are serious and chronic, with often unpredictable fluctuations, at times refractory to medication, and variable in their manifestations during a person's lifetime. Increasing age can coincide with longer depressive episodes and with a shorter duration of euthymia between episodes.

Medication certainly is the first weapon against the functional limitations imposed by mental illnesses, but psychotherapeutic approaches, including occupational therapy, also are important. Though the current treatment model emphasizes community integration, social stigma still undermines people with mental illnesses and inhibits their motivation to integrate fully as equal partners in families, work groups, and social settings.

People with mental illnesses struggle to reap life's rewards despite often crippling biological brain disorders. Chronic mental illnesses require one to remain vigilant and persistent in orienting toward life goals. For many, this is an almost impossible challenge when symptoms become so severe that the day's only accomplishable goal is getting out of bed to drink a glass of juice. Clients have described the paralyzing loss of capacity to engage in even their most compelling occupational endeavors, and the resulting humiliation, hopelessness, helplessness, and repugnant dependency on others (Personal communication).

Adding to the self-disgust that often accompanies mental illness is the intermittent or even total lack of support from family and friends. "Buck up", "Get over it", "It's your choice, so stop being so lazy", "You can do it if you want to", and similar phrases intended to motivate a depressed individual often have the opposite effect. Because physical processes rather than volitional factors are at work, the person is utterly

incapable of turning the brain on or off, so such recommendations may be interpreted as insulting and lacking compassion by the person suffering through symptom exacerbation.

Society has hidden its mentally ill for generations on the back wards of locked institutions. People with serious mental illnesses might benefit from being sequestered for their own safety or the safety of communities around them. It is this researcher's position, however, that people with serious and persistent mental illnesses deserve an opportunity to achieve competence, to be in relation with others, and to fulfill their life goals. Occupational therapy intervention that incorporates a client's development of ways to regulate his or her thoughts, feelings, and behaviors may support more fully the social integration of people with mental illnesses.

As a licensed occupational therapist for over 30 years, this researcher's work has targeted goal-directed development of compensatory strategies in people with mental illnesses (Robertson, 1998; Denton, Skinner, Colborn, & Robertson, 2000), particularly people with mood and affective disorders, including bipolar disorder. Over this therapist's 30 years of practice, it has become evident that many people overwhelmed with emotional dysregulation *can* accomplish their goals, *can* become more self-empowered, and *can* integrate healthy self-regulatory strategies into their daily lives. The therapeutic challenge is to see what people with mental illnesses can do, rather than critiquing what they are not able to do. For people with mental illnesses, the interplay of a valued occupations, the performance of those occupations, positive relationships with others, and supportive environmental factors meld to bring about hope, change, and the perseverance needed to achieve what is most meaningful in life. This study seeks to

understand how the process of occupational therapy relates to a client's ability to achieve life satisfaction despite a chronic, serious mental illness.

Occupational Therapy and Human Development

Key constructs in occupational therapy process have a good fit with the works of seminal theorists in human development. Occupational therapy is well grounded in the premise that development occurs across the lifespan (Baltes, 1979; Baltes et al. 1980). Occupational therapists address the needs of people with limitations in performance at birth, in infancy, during childhood, and in early, middle, and late adulthood. Occupational therapists work with people whose performance is limited by a congenital condition, by acquired loss due to trauma or disease, or by the normal aging process.

For Dewey (1938), the process of experiential learning included both the doing of activity and reflection on those actions. Using performance of an activity is well integrated in occupational therapy's Practice Framework (The American Occupational Therapy Association, 2002). Working with a client to analyze remedial or compensatory strategies, the occupational therapist encourages him or her to generalize their use to occupations consistent with valued social roles.

Vygotsky's (1978) research illuminated the nature of social learning in greater depth. His premise was that social interaction between teacher and learner about a shared experience provides the forum for a collaboratively developed language and meaning for that experience. Vygotsky concluded that the learner proceeds through explanation, analysis, exploration, testing, accepting, reconstructing, and internalizing the meaning of experiences before they can be applied in novel life situations. His constructs have been summarized as the 'social co-construction of knowledge' for this study. Occupational

therapy is a good fit with Vygotsky's (1978) theory because occupational therapists are actively involved in a shared learning process with a client to establish goals, participate in therapeutic activities, and evaluate outcomes.

Occupational therapy's attention to adaptation and compensation is a construct supported by human development theorists. Markus (1980, 1987) developed a body of literature on the development of the self system and its use in monitoring and selecting behavior consistent with one's self-concept. She articulated the constructs of possible selves, real self, and ideal self as components of self-concept that shape and guide behavior. An individual's self scheme is an evolutionary product of his or her processing of information about the self. That scheme outlines moral and psychological factors of most significance to the individual's identity and guides the individual to react in consonance with his self view. Applying Markus' perspective on self-regulation, occupational therapy provides individualized interventions that permit a client to test possible selves, accept alterations in the real self, and re-build an ideal self. The end result is a revised self schema, one that a client incorporates in choosing how to engage in occupations and activities.

Vygotsky (1978) enriches the construct of self-regulation by emphasizing the social-historical-cultural aspects of learning how to solve problems independently. Applied to occupational therapy, a client collaborates with a more knowledgeable occupational therapist to develop strategies to compensate for limitations in performance skills. Their united pursuit of competence results in a client's capacity to use adaptations suitable for various social roles and contexts.

Given the rich relationship between human development and occupational therapy, it was anticipated that the results of this study would be more solidly understood by grounding them in human development theories. Because this was a qualitative study, however, the intention was not to seek out instances of one or more particular theories in the narrative data. Instead, the inductive orientation used in this study was geared to generate information from the data first, then to explain it using human development theories.

The Previous Study of Occupational Therapy Process

The intent of this study is to add to occupational therapy's understanding of its process of intervention at the level of implementation of intervention. This study is an outgrowth of a previous investigation of occupational therapy process using multiple case study design that was conducted at a large biomedical research institution. Guided debriefing interviews were collected from 20 clients and their respective occupational therapists following routine occupational therapy sessions. These guided debriefing interviews were transcribed verbatim and subjected to content analysis.

Three familiar elements of the occupational therapy process were identified through content analysis of debriefing interviews: activity demands, occupational performance, and goals. Activity demands comprised the therapeutic activity, objects used, required actions, and the intervention context. Occupational performance referred to a client's actions and reactions as he or she performed a therapeutic activity. Goals were the client-defined intermediate and end points of occupational performance leading to a client's ability to engage in occupations or activities in support of social participation.

Client goals were segregated into activity goals and therapeutic goals. Activity goals referred to individually selected activities or steps of an activity using a personal computer, such as word processing, making greeting cards, sending email, or using the Internet. Therapeutic goals centered on each client's distinct areas for development of performance skills, including motor skills, process skills, and communication/interaction skills, and of body functions. Among client factors affecting a client's occupational performance, mental functions include attention, memory, perception, thought, judgment, emotion regulation, and self-control (The American Occupational Therapy Association, 2002). Intervention goals were established cooperatively by occupational therapists and clients following evaluation and before intervention implementation.

The focus of the previous study was to uncover client views on components of occupational therapy process. In doing so, the use of content analysis provided an avenue for identifying, classifying, and measuring process components. Content analysis proved to be a method of analysis particularly suitable to understanding the guided debriefing interviews and revealing additional information about occupational therapy processes and outcomes. The previous study did not combine content analysis with descriptive analysis.

Following content analysis of a representative portion of the guided debriefing interviews, proportions of known occupational therapy process components were calculated. The three familiar components of activity demands, occupational performance, and goals were found in the clients' narrative. But the previous study uncovered a fourth process element which comprised approximately half of the codes assigned to textual messages. That unfamiliar element was *reflection*.

Reflection was discovered after a thorough analysis of occupational therapy's foundation, its philosophical base, and its practice framework. Modern occupational therapy emphasizes the performance of an activity or development of a skill in order to engage in an activity. Founders of the profession, however, understood *praxis* as not only performance of an activity, but also reflection on that performance (Englehardt, 1977). Further, early writing about the origin of occupational therapy incorporated and made reference to the principles of experiential learning promulgated by John Dewey (1910/1991, 1929/1958), an academician and philosopher at the University of Chicago (Schwartz, 2003).

Among his contemporaries was Eleanor Clarke Slagle, a social reformer and lecturer at the Chicago School of Civics and Philanthropy, who is considered instrumental in founding occupational therapy (Quiroga, 1995). Slagle was active in the educational movement of Jane Addams and Hull House where women could become familiar with the burgeoning industrialization of America and, thereby, hone their capacity to work in factories. Addams referred to the Hull House program as one that "conceived of education in terms that John Dewey would call 'a continuing reconstruction of experience' " (Quiroga, 1995, p. 41).

The congruence of reference to the work of John Dewey (1910/1991, 1929/1958) in the founding of occupational therapy served to strengthen the investigators' conclusion in the previous study, namely, that reflection was an integral aspect of occupational therapy process. Dewey's notion of experiential learning (1910/1991, 1929/1958, 1938) promotes a central role for reflection. He distinguishes experience into two parts: the

objective activity itself and the subjective reflective thoughts interpreting that experience, reflections that are capable of transforming (Dewey, 1958).

The work of Donald Schön (1983) has been influential in more recent examination of the construct of reflection. He proposed two types of reflection distinguished by when reflection occurs. Thoughtful analysis that occurs during the performance of an activity was called reflection-in-action; looking retrospectively at an experience was called reflection-on-action (Schön, 1983). In applying the types of reflection to the education of health professionals, Schön (1987) emphasized the development of reflection as a process in developing a professional role.

An extensive study of an occupational therapist's reflection in designing and implementing intervention has been well documented by the profession's clinical reasoning study (Mattingly & Fleming, 1990). However, a client's reflection-in-action and reflection-on-action (Schön, 1983) as he or she participates in occupational therapy intervention has received little attention in the occupational therapy literature. Based on analysis of guided debriefing interviews following occupational therapy sessions, the previous study revealed that clients with a range of impairments reflected on the demands of the therapeutic activity, the performance of that activity, and what it meant to live with an illness. Including reflection as a component of occupational therapy process resulted in four occupational therapy process components at the end of the previous study.

Given that the accepted view of occupational therapy does not articulate client roles in reflection and reasoning during and after intervention, the present study chose to examine guided debriefing interviews from the previous study in greater depth and from theoretical perspectives grounded in human development theories. It was thought that

theories of human development could inform occupational therapy process and outcome, particularly the development of adaptation and compensation through guided reflection.

Further Examination of Occupational Therapy Process

This study was a direct outgrowth of the previous study. The intent was to understand occupational therapy process more completely and to demonstrate a direct relationship between intervention and outcomes. This study took the four core process components revealed in the previous study—activity demands, occupational performance, goals, and reflection and considered them in greater depth. Reflection was a novel component not explicitly defined in the profession's philosophical base and practice standards, but was considered central to understanding client perceptions of occupational therapy process more completely. In addition, this researcher, principal investigator of the previous study, had an opportunity to pore over the guided debriefing interviews at length. Another aspect of occupational therapy's practice framework, the constructs of adaptation and compensation, were thought to be equally important, although they had not been singled out for examination in the previous study.

The fifth component of occupational therapy process, learning to adapt and compensate to functional changes or loss, has been coined 'transformative self-regulation' for this study. The term transformative self-regulation was chosen because it communicates the complex transformation a client undergoes while finding different ways to perform valued occupations. Transformative self-regulation is thought to describe the learned approach to self-regulation a client comes to accept as a way to engage more fully in social roles. Further, the process of reconstructing optimal compensatory strategies that enhance self-regulation connotes a client's central role in

integrating learned compensatory strategies into his or her repertoire of self-regulatory strategies. Transformative self-regulation, then, was included as a core construct in occupational therapy process.

Because little research has been done to examine client perceptions on the inner workings of routine intervention, the five core components were examined individually and as they related to each other. The present study was targeted to examine how a client forms and addresses both activity and therapeutic goals during the course of occupational therapy. In addition, information was sought to understand the evolution of a client's understanding and integration of transformative self-regulation using therapeutic activities with the personal computer. Specifically, this single case study sought to understand one client's evolution across 10 occupational therapy sessions as expressed in guided debriefing interviews. Interview data from a mature adult man with bipolar illness, gathered by his occupational therapist, comprised the data analyzed to untangle the interactive process of an occupational therapist and a client in routine intervention. The client designated for this study was the first and most interviewed participant in the previous study.

Though this study was an attempt to uncover the nuances of occupational therapy process with this one unique patient, it was considered an important first step in deciphering the microcosm of client-centered interactions with various people seeking the broad spectrum of health services and, in particular, occupational therapy. People with all kinds of illnesses or trauma and those experiencing the effects of aging strive to learn ways to live with their particular functional losses. Each faces the need to incorporate

individualized approaches to transformative self-regulation in their repertoire of daily life skills.

Purpose

The purpose of this study was to describe the long-term evolution of insights about occupational therapy process and to identify how therapeutic goals, socially co-constructed by an occupational therapist and a client, contributed to transformative self-regulation in a mature adult man with bipolar disorder. The therapeutic process was examined from two perspectives, the client's and the occupational therapist's, through analysis of the client's guided debriefing interviews following each of 10 occupational therapy sessions.

Research Questions

The following research questions were examined:

1. How did the client attend to activity and therapeutic goals?

2. How did process components relate to each other?

3. What was the distribution of process components across guided debriefing interviews?

4. How did the client act and react in guided debriefing interviews?

Limitations of the Study

This section of the chapter examines limitations of the study and discusses how they were handled. Limitations included threats to internal validity, external validity, and reliability.

Internal validity. The accuracy of research findings, and how well they reflect reality, poses threats to internal validity in qualitative research. In particular, this study was limited by the method of data collection used in the previous study, that is, the

focused interview. Though well documented as a viable instrument for qualitative research (Fontana & Frey, 1994), unstructured interviews increase the probability that a researcher may pose additional questions, comment on, and expand the respondent's views during open-ended interviews. The discussion may lead the respondent in one particular direction, at the exclusion of another. The researcher's views may fail to capture all relevant information or may reinforce a particular view.

Data from this study presented a longitudinal view of occupational therapy, spanning 37 days. Because intervention outcomes were affected by the nature of the therapeutic relationship, the occupational therapist and the client worked to develop an interactive, collaborative relationship that led to mutual understanding. The study sought to examine the nature of the therapeutic relationship as it occurred in routine practice. The therapeutic relationship relied on cooperative problem-solving, with both the occupational therapist and the client describing and analyzing the client's occupational performance. During this collaboration, the occupational therapist sought information on what helped and what hindered the client's performance. It was natural for both the occupational therapist and the client to engage in cooperative learning. The interplay of "intentions, meanings, inter-subjectivity, values, personal knowledge, and ethics" (Miller & Crabtree, 1994) was a routine part of occupational therapy intervention.

To reduce this threat to internal validity, a guided interview format was selected as the method of data collection in the previous study. This format provided flexibility and a less formal approach than a structured interview (Fontana & Frey, 1994). General topics of interest framed the interview but there was not a specific set of pre-established, unalterable questions. Rather, general lines of inquiry guided the inquiry. The guided

interview format was selected in order to balance the need to learn about the therapeutic process with the need to minimize researcher bias during data collection.

Another limitation concerned the client's condition and how it may have affected his potential to benefit from occupational therapy. Clients vary in their potential to benefit learn from therapeutic activities depending on the severity of illness symptoms, the presenting phase of illness (acute versus chronic), acceptance of their diagnosis, their capacity to collaborate on intervention. For example, clients with mental illnesses often benefit from psychopharmacology. Medication is added slowly to lessen side effects and test medication efficacy. Client performance is affected by medication; clients under-medicated are not able to benefit from occupational therapy in the same way as clients on optimal medication regimes. The state of medical treatment outside of occupational therapy can affect the effectiveness of occupational therapy by influencing a client's capacity to learn.

In this study, the client participated in occupational therapy using computers near the end of his hospitalization. He had a clear understanding of his illness, he had volunteered to participate in research on efficacy of psychopharmacology, and he had completed the research protocol where he was on experimental treatment or placebo only. He was in the treatment phase of his stay at the time of data collection. He had been seen in occupational therapy throughout his participation in research, but individual intervention using the personal computer activity was introduced at the time he received treatment medication.

Because he was beginning to benefit from medication management, he presented with different abilities during his participation in this study. His symptoms of poor

concentration, memory loss, irritability, and difficulty relating to others varied between sessions during the time he gradually received more effective medication management. He came to each intervention session with subtle, medication-induced differences in performance and capacity for emotion regulation. This client's condition was not unusual; he received routine occupational therapy intervention.

An additional limitation addressed the objectivity, consistency, and reliability of the intervention. The issue is whether this client's intervention plan was well matched to his goals. Occupational therapists routinely work with clients at different stages of illness or trauma so they are experienced at modulating intervention to address client needs. For example, occupational therapists may provide very structured activities for clients in the acute phase of mania because clients are less able to plan, organize, and follow-through on therapeutic activities. On the other hand, less structure and encouragement to work independently are characteristic of occupational therapy for clients managing a chronic illness. Entry-level education prepares occupational therapists to establish goals, design an intervention plan, implement intervention, and review intervention in a variety of settings for different client conditions. The overall philosophy of occupational therapy remains constant, although individualized treatment is adjusted to meet each client's unique needs and goals. The occupational therapist in this study was representative of occupational therapists with similar professional experience.

Clients differ in their acceptance of an illness and their capacity to perform therapeutic activities. This study examined a person who was not in denial of his condition, who was ready to learn new strategies to live with his chronic condition, and who was able to incorporate learned strategies into his day-to-day life. Because this

attribute was not consistent among people with an acquired illness, his views on occupational therapy may not be readily applicable to the general population of people with bipolar disorder.

External validity. A robust limitation in qualitative research is its inherent lack of generalizability. Carefully dissecting multiple guided debriefing interviews was not intended to provide explanations about occupational therapy intervention in general. Instead, this study was designed to describe the phenomenon of guided debriefing interviews with one unique client. Future studies may subject selected components uncovered by this study to experimental research to improve generalizability, but that was not the intention of the present study.

Several aspects under investigation in this study may not be generalizable to other cases. Specifically, this study sought to understand one male client with a specific illness, bipolar disorder. He presented with his own abilities in intelligence and capacity to reflect. The views he provided about occupational therapy may be unique to him, and not applicable to others with different disabilities, ages, intellect, and reflective capacities.

In the same way, characteristics of the therapist presented threats to generalizability. The therapist came to this study with her own professional experiences, expertise, education, intellect, and reflective capacities. Her perspectives on clients with mental illnesses, goals, occupational performance, and the therapeutic relationship were unique to her and may not be applicable to other occupational therapists.

Reliability. Qualitative research inherently has other significant limitations. Because data were collected and analyzed by the same occupational therapist, there are threats to reliability. The occupational therapist working with the client was the

researcher in this study. Qualitative inquiry allows for participant-observer perspectives on the case of interest (Patton, 1990). However, bias may be introduced when the same person gathers and analyzes data from narrative. In this study, the author collected interview data as the client's occupational therapist and also analyzed transcribed interview data.

To address this limitation, the researcher must exercise careful objectivity, maintain rigor in applying research techniques, and maintain professional credibility (Patton, 1990) to insure the integrity of the findings. Several strategies assisted in this process: testing rival hypotheses, examination of negative cases, and triangulation. In each, alternate explanations were pursued, other perspectives were analyzed logically, and different data-analysis techniques were applied to the same data. Deciphering the client's meaning was a recursive process of drawing tentative conclusions and testing them in other textual messages in order to affirm the client's intent.

Further, the methods of data analysis used in this study were structured to minimize researcher bias. Coding by two independent researchers and verification of proper assignment of codes was one strategy used. Another was assessment of how thoroughly the proposed coding scheme represented the full data set. Discussion of the findings explored rival hypotheses in deriving explanations for and conclusions about the results.

Creswell (1994) noted another approach to addressing the challenge of replicating qualitative research. He suggested that reliability may be enhanced by presenting the researcher's biases, values, and central assumptions of the study. These elements were introduced in this chapter's earlier discussion of the philosophy and practice of

occupational therapy and are further extended in Chapter Two. In addition, the detailed

data collection and data management protocols previously presented have improved the

chances that this study may be replicated in another setting or with different researchers.

The occupational therapist/researcher in this study had a background in

descriptive research. She earned a Bachelor's degree in anthropology and psychology and

had accumulated graduate coursework in qualitative methods, including ethnography and

discourse analysis. This educational background was combined with over 15 years of

extensive experience interviewing clients of all ages with a variety of mental illnesses.

She also was instrumental in data collection and analysis of the previous study. Her

background served to help with objective analysis of this study's interview data, and,

therefore, to minimize threats to reliability.

Though there were a number of limitations to this study, it was determined that

strategies could be implemented to minimize their effect on the results. Despite these

efforts, however, it was recognized that the issue of generalizability could not be

influenced because this is a single case study. Before examining the context for this study

by a review of the literature, definitions of terms and concepts were developed for this

study; they follow the list of references.

CHAPTER TWO

Literature Review

This chapter is divided into six sections. The first section describes evidence-based practice. The second section examines occupational therapy practice and education. The third section presents perspectives on experiential learning, including the constructs of reflection and the social co-construction of knowledge. In the fourth section, theoretical perspectives on self-development and self-regulation are reviewed. The fifth section presents bipolar disorder. The sixth section introduces types of mixed method approaches.

Evidence-based Practice

Health systems continually refine their services to deliver health care in ways that balance cost and quality (Sackett, 1997). While science has advanced the outcome of health services, costs of improved services have also increased. The pressure for cost-effective services has led health communities worldwide to examine the outcomes of health, to determine the cost-benefit of various treatments, and to monitor the quality of health services (Agency for Health Care Policy and Research, 1997; Bosco, 2001; Upshur, VanderKerkhof, & Goel, 2001).

Evidence-based practice is the current approach to the quality side of the issue (Sackett, 1997; Sackett, 1998). This approach seeks to apply research findings to clinical decision-making to facilitate optimal patient care (Gonzales, Ringeisen, & Chambers, 2002; Keenan & Redmond, 2002; Linton, 1998; Sackett, 1998). When results of studies measuring treatment outcomes are applied to patient care, clinicians are said to be using evidence in practice (Colyer & Kamath,

1999; Frattali & Worrall, 2001; Greengold & Weingarten, 1996; Grol, 2000; Hawley & Weisz, 2002; Holm, 2000; Kitson, Harvey, & McCormack, 1998; Ottenbacher & Hinderer, 2001).

The question of which variables measure an individual's health is a long-standing dilemma that may be framed using the International Classification of Functioning, Disability, and Health (ICF) (World Health Organization, 2001). This document defines health as not only the absence of disease but also as a condition that enables the individual to achieve a productive, fulfilling. Health, then is a broader construct than remediating or restoring a body structure or body function (Baum, 2003; Gray & Hendershot, 2000; Simeonsson, Lollar, Hollowell, & Adams, 2000). The organizing construct of the ICF is *participation in society*; health is best understood in terms of an individual's capacity for involvement in life situations. Engagement in occupation that supports participation in society is influenced by personal choice, body function or impairment, and contextual factors (Baum, 2003). The focus of rehabilitation, then, rests on restoring function, eliminating environmental barriers, and enabling "personal independence, social integration, and community integration" (Baum, 2003, p. 47).

Measurement issues. Researchers vary on which variables to include as evidence and how best to measure that evidence in practice. The essential debate centers on sources of information about an individual's health. Some authors contend that evidence reported from meta-analysis, randomized clinical trials, systematic review, and mega-trials is the best approach to measuring health (Colyer & Klamath, 1999; Curtin, Altman & Elbourne, 2002; Curtin, Elbourne & Altman, 2002; Fulmer, Mezey, Bottrell, Abraham, Sazant, Grossman, & Grisham, 2002; Holmberg, Baum, & Adami 1999; Keenan & Redmond, 2002). These authors promote quantitative analysis of health outcomes and application of significant findings from research to individual patient care.

Other authors fear that meta-analyses depersonalize the patient-clinician relationship (Miles, Charlton, Bentley, Polychronis, Grey, & Price, 2000). This contingent refutes reliance on meta-analytic findings at the exclusion of the patient's unique needs (Mitchell, 1999) and questions the quality of research culled into meta-analyses (Christiansen & Lou, 2001; Upshur, 2000). These authors express concern about evidence-driven practice without full appreciation of the role of sound clinical judgment in high quality health care. They urge a careful application of evidence to practice, emphasizing the role of clinical reasoning, experience, intuition, and patient perspectives in shared health care decisions (Buetow & Kenealy, 2000; Haynes, Devereaux, & Guyatt, 2002; Eriator, 1998; Keenan & Redmond, 2002; Linton, 1998; Malterud, 2002; Mitchell, 1999; Wensing & Grol, 2000). These authors promote qualitative examination of practice and outcomes.

Perhaps the full value of evidence-based outcomes research falls between the extremes of clinical expertise and evidence of quality practice from external sources. In this model, clinicians flexibly balance their own experience and judgment with external evidence in order to find and use betters clinical interventions (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). Here, evidence-based practitioners "continue learning but also continue evaluating their techniques and practice in light of this learning to see what can be improved" (Law, 2001, p. 5); they find and systematically use relevant information to make clinical decisions (Rosenberg & Donald, 1995). This view on evidence-based practice blends quantitative and qualitative approaches to understanding the outcomes of intervention as well as the optimal role for practitioners in facilitating those outcomes.

An important issue concerns the definition of health. If the outcome of health care is to be measured, then how health is defined becomes an important consideration. This study endorses

the World Health Organization's International Classification of Functioning, Impairment, and Disability (2003): the ultimate outcome of health intervention is an individual able to participate in society. If participation in society is the outcome to be measured, then the question of how to measure the quality of an individual's participation in social roles arises. There may be many different variables used to evaluate an individual's participation in life. At one end of the continuum is measurement of programmatic outcomes and, at the other end, is measurement of individual perspectives on participation. This delineation again suggests the need for both quantitative and qualitative measurements of participation in society.

It is also illuminating to distinguish between process and outcome variables. Examining the spectrum of service delivery was articulated by Donabedian (1980, 1982, 1985, 1988, 1991, 1992, 1995), who noted that health program evaluation encompasses three main areas: *structure*, *process*, and *outcome*. Distinguishing which variables to measure can specify examine relationships between "*what* health service is provided, *how* and *where* it is provided, and its *impact* on human performance" (Holm, 2000, p. 576). Relationships among processes and outcomes may provide a more complete picture of both evidence and practice (McIntyre, 1995). Examining only the result of a health program may fail to capture important information about program design and efficacy.

The aim of detailing outcomes on a case-by-case basis, is to focus on how individual treatment was provided and its effects on a client's performance during an intervention is an aspect of outcomes research that has been sparsely addressed. Additionally, understanding health processes from a client's perspective could better dissect and articulate session-specific outcomes (Greenhalgh & Meadows, 1999; Wijlhuizen & Ooijendijk, 1999), including quality of life (Andresen & Meyers, 2000; Nanda & Andresen, 1998), the effect of disability on

performance (Andresen, 2000; Andresen, Lollar, & Meyers, 2000; Cohen & Marino, 2000), and patient satisfaction (Edwards & Staniszewska, 2000). Synthesizing individual process-outcome relationships is likely to add important information to health outcomes evaluation.

    Evidence for occupational therapy outcomes. Occupational therapy's search to measure outcomes has paralleled that of the health care system, and has been limited by the same measurement considerations presented in the previous section. Determining outcomes in occupational therapy is even more complex because there are many factors influencing a client's ability to function. Clients may experience changes in body functions and body structures, for example, in contextual factors that facilitate function, in the activity demands that foster performance, and in their capacity for engagement in occupations that support participation in society (Law, Baum, & Dunn, 2001). Measuring occupational therapy outcomes is made more challenging by the need to measure changes in habits, role balance, and quality of life (Law, Baum, & Dunn, 2001).

    The type of outcomes research conducted has implications for how the findings may be generalized to occupational therapy as a whole. A model has been applied to occupational therapy by Holm (2000) who suggests that evidence on any of five levels may be useful for improving clinical care. These hierarchical levels of evidence are meta-analytic studies of randomized controlled clinical trials (level I); large randomized controlled trials using a control group and an alternative therapy group with large numbers of participants, at single or multiple clinical sites (level II); well-designed trials without randomization, single group pre-post, cohort, time series or matched case-controlled studies (level III); multi-site descriptive studies, evidence from well-designed non-experimental studies from more than one center or research group (level

IV); and expert opinion, descriptive and qualitative studies, and clinical evidence that can be obtained from one center or researcher (level V).

Clearly, the most solid evidence is derived meta-analyses, but they are scarce and more difficult to conduct. However, qualitative studies are most prevalent in occupational therapy and provide information about practice on which to build higher-level studies. The profession has concluded that qualitative research is best suited to create operational definitions of occupational therapy process and outcomes that could be used to better understand the "client's perspectives on program benefits, strengths, and weaknesses" (Law, Baum, & Dunn, 2001, p. 59). Further, naturalistic methods could reveal occupational therapy constructs in routine practice and these constructs could then be subjected to higher levels of evidence as described by Holm (2000) and Moore, et al (1995). Each level of evidence can inform practice and the long-term objective, in essence, is to gather evidence for occupational therapy outcomes by fostering research contributions from practitioners, educators, and administrators as a routine professional duty (Holm, 2000; Rogers & Holm, 1994).

Occupational Therapy Practice and Education

Man is an active being whose development is influenced by the use of purposeful activity. Using their capacity for intrinsic motivation, human beings are able to influence their physical and mental health and their social and physical environment through purposeful activity. Human life includes a process of continuous adaptation. Adaptation is a change in function that promotes survival and self-actualization. Biological, psychological, and environmental factors may interrupt the adaptation process at any time throughout the life cycle. Dysfunction may occur when adaptation is impaired. Purposeful activity facilitates the adaptive process.

Occupational therapy is based on the belief that purposeful activity (occupation) including it interpersonal and environmental components, may be used to prevent and mediate dysfunction, and to

elicit maximum adaptation. Activity as used by the occupational therapist includes both an intrinsic and

therapeutic purpose (American Occupational Therapy Association, 1970).

These words capture the philosophy of occupational therapy. The overall aim is to help people engage in the valued day-to-day occupations that give meaning to their lives despite impairment, disability, or handicap (Christiansen, 1997; Crepeau, Cohn, & Schell, 2003; Hasselkus, 2002). Throughout the lifespan, people must accommodate to changes in function that emerge through the developmental process, the effects of trauma and illness, and the aging process. These natural and imposed changes upset the equilibrium thus far established by the individual, disempowering (Townsend, 1996) him or her from valued life roles. People whose capacities require adaptation and compensation to engage in valued occupations may seek occupational therapy services.

Occupation is the central construct in occupational therapy and it refers to how people occupy their time and give meaning to their lives (Larson, Wood, & Clark, 2003). Occupational therapists help clients find ways to express purpose and fulfillment in life (Fidler & Fidler, 1978) by contributing to remediation of impairments, fostering self-regulation and well-being, and creating healthy environments (Neistadt and Crepeau, 1998) so that clients may participate in society in meaningful ways (Gray and Hendershot, 2000; The American occupational Therapy Association, 2002). Engaging in activities that are uniquely combined to create meaning and purpose enables full participation in life (Crepeau, Cohn, & Schell, 2003; Hasselkus, 2002).

One may find occupational therapists working with people of all ages, in a variety of settings (Freda, 1998; Griswold, 1998). Human occupations addressed in occupational therapy may include caring for an infant, assembling automobile engines, or participating in a tennis tournament. In a neonatal intensive care unit, school system, or rehabilitation hospital, occupational therapists facilitate client development through movement, sensory stimulation, and

developmentally appropriate cognitive challenges. Occupational therapists also may work with older people in nursing homes, adults coping with disability at home, and people with mental illnesses who live in shared housing in the community. Occupational therapy practice is as broad as the human condition. Occupational therapists evaluate and implement intervention for people in need of reshaping how they engage in activities that support participation in life

Evaluation. Occupational therapy evaluation searches for information on how a client's current function enhances or limits his or her expression of valued life roles. The foci of evaluation include a client's occupational profile, occupational performance, activity demands, and client factors as they influence engagement in various social contexts (Cohn, Schell, & Neistadt, 2003). Overall, occupational therapists use evaluation to understand clients' meanings of occupation, their activity demands, and their engagement in valued occupations in daily life (Larson, Wood, & Clark, 2003).

Evaluation is the entire process of gathering information about significant occupations and daily life activities as they are influenced by a client's abilities and limitations (Cohn, Schell, & Neistadt, 2003). Occupational performance deficits may affect a client's ability to engage successfully in "activities of daily living (ADL), … instrumental activities of daily living (IADL), and participation in work, play, leisure, and social activities" (Cohn, Schell, & Neistadt, 2003, p. 280). Occupational therapists look for factors in a client's environment and relationships that affect competent performance of meaningful occupations. This information comprises an occupational profile.

Listening through clients' narratives, therapists elicit clues as to what makes life passionate for people, and then strive to inspire client commitment to refine performance skills and incorporate adaptive strategies in daily life (Helfrich, Kielhofner, & Mattingly, 1994;

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Mattingly, 1998). Evaluation leads to a client's occupational narrative (Clark, 1993) and helps distinguish a client's needs and wants regarding his or her participation in society. Barriers to performance are identified, strengths are highlighted, and contexts that support performance are defined (Cohn, Schell, & Neistadt, 2003). For an occupational therapist, the evaluative process of finding cues and generating hypotheses about occupational performance involves diagnostic reasoning (Rogers & Holm, 1991) and results in an occupational therapy diagnosis (Rogers & Holm, 1997). Jointly, a client and an occupational therapist portray how a client may perform meaningful occupations by minimizing deficits and emphasizing assets. Evaluation precedes the collaborative establishment of specific therapeutic goals.

Intervention planning. Occupational therapy goals "describe the behavior that is targeted for treatment, the conditions under which the behavior should be displayed, and the expected level of performance" (Kohlmeyer, 2003). Long-term goals are general directions for intervention and short-term goals are specific performance-based steps to achieve long-term goals. Goal-directed interventions (Levine & Brayley, 1991) are framed around what a client identifies as supports and barriers to meaningful participation in life. Because goals derive from a client's occupational narrative and an occupational therapist's diagnostic reasoning, they are geared to enhance a person's ability to engage in meaningful occupation. They may target general areas of occupation, performance skills, client factors, as well as performance contexts with the overall intent being to foster a client's participation in society (World Health Organization, 2001).

Occupational therapy aims to help clients *restore* deficits or *compensate* for those deficits that cannot be corrected so that they may live as meaningfully as possible (Holm, Rogers, & James, 1998). When a disease, disorder, or impairment is the focus of occupational therapy,

intervention focuses on remediation and restoration. When the goal is disability prevention and health promotion, treatment focuses on compensation, adaptation, supportive services, and advocacy. Compensatory approaches might include changing activity demands, modifying the context, maintaining safety in occupational performance, or engaging people in meaningful occupations in healthy environments (Holm, Rogers, & James, 1998). Whether restorative or compensatory approaches might orient occupational therapy, the overall framework for change is "involvement in life situations, …personal independence, social integration, and community integration" (Baum, 2003, p. 47).

Selection of feasible goals is optimized through collaboration between an occupational therapist and a client, so that goals are both understood and valued by each person (Cohn, Schell, & Neistadt, 2003). In this study, a distinction has been made between activity goals and therapeutic goals. Because a client's definition of goals tends to target occupational performance, his or her goals are designed to be able to go to work, to prepare a meal, or to play with the children. On the other hand, an occupational therapist's perspective concurs with a client's goals but also orients therapeutic goals to the underlying body functions and body structures that support a client's performance. For example, an occupational therapist would be more likely to articulate the development of social skills or organization and decision-making; a client would seek the ability to return to work.

Intervention. Intervention is integrally linked to evaluation. Intervention consists of using evaluation results to identify planned outcomes, choose methods of intervention, and evaluate progress toward client-centered goals. In essence, occupational therapists organize intervention using an information processing model (Rogers, 1983). Decisions are made about client capacities, activity and environmental demands from evaluation results, and approaches to

influence performance discrepancies are planned (Holm, Rogers, & Stone, 2003). The guiding

processes of occupational therapy are to analyze and define performance problems, to develop

adaptive and compensatory approaches to achieve performance goals, and to evaluate how well

adaptations and compensations to activity demands, occupational performance, or context may

facilitate a client's goal attainment (Christiansen & Baum, 1991; Christiansen, Baum, Haughen,

2005). These processes translate into the functions of intervention planning, intervention

implementation, and evaluation of outcomes that an occupational therapist uses to organize client

intervention.

A basic tenet of occupational therapy intervention is its structured use of experiential

learning (Reilly, 1969; Wood, 1998) where valued occupations are the means of intervention

intended to enhance a client's ability to perform (Baum & Law, 1997; Fidler & Fidler, 1978;

Meyer, 1922; Yerxa, 1998). Therapeutic occupations are goal-directed and offer a lens on *how* a

client performs and learns to adapt (Allen, 1987; Levine & Brayley, 1991; Cara & MacRae,

1998; Clark, 1993; Gray, 1998; Nelson, 1996; Rogers, 1982a, 1982b; Steinbeck, 1986; Trombly,

1995).

Occupational therapists help clients participate in goal-directed occupations and

activities to help them achieve mastery and competence, increase autonomy, and enjoy

greater self-determination in life. Intervention consists of helping clients learn or relearn

behaviors that support performance patterns in work, self care, and leisure occupations

(Mosey, 1986; Neistadt & Crepeau, 1998; The American Occupational Therapy

Association, 2002).

Intervention structures a client's occupational performance both to develop underlying

skills and also to place a client in therapeutic activities consistent with his or her life goals.

Intervention sessions are organized around client-driven goals that incrementally develop adaptive skills (Schkade & McClung, 2001). Changes in activity demands and the environment are used to promote a client's development of adaptive strategies (Dunn, Brown, & McGuigan, 1994). In this way, occupational therapy fosters a client's development of skills needed to participate in society in meaningful ways (Schell, Crepeau, & Cohn, 2003).

The therapeutic challenge is to design and adjust a client's preferred activities so that he or she can perform them successfully. For an occupational therapist, this may mean changing the complexity of the activity, for example, or teasing out and organizing distinct tasks within the activity, or working in a less chaotic environment, or building a client's performance skills. Occupational therapists may structure activities with more distinct steps or perhaps change seating position, light, or noise in a room. Even the relationship between a client and an occupational therapist may be evaluated to discover what social supports a client needs in order to perform successfully (Fidler & Fidler, 1963).

Therapeutic occupations are goal-directed and offer a lens on performance that a client can use to incorporate compensatory strategies into daily living (Levine and Brayley, 1991; Rogers, 1982b). By participating in purposeful occupation, the real effects of performance can be described and analyzed. Participation engages both therapist and client in finding ways to overcome functional challenges so that a client *can* perform. In this sense, occupation is the means of therapeutic intervention but it is also the end goal (Trombly, 1995). Engaging in and analyzing the performance of activity during occupational therapy sessions reveals how a client can compensate. The over-arching aspiration of occupational therapy is to facilitate adaptation so that a client can find different ways to participate in the roles that make life rewarding.

Intervention review. Assessing the process and progress of intervention is an ongoing process in occupational therapy. In collaboration with a client, an occupational therapist determines the efficacy and effectiveness of planned intervention and its implementation. Client outcomes are considered throughout intervention. Appropriate changes in activity demands, performance, and intentions are introduced to facilitate realistic outcomes (American Occupational Therapy Association, 2002).

Relationship of theory to evaluation and intervention. The purpose of this study is not to debate the various models of practice or to weigh the relative merits of language to describe occupational therapy's philosophical base. Suffice it to say that occupational therapy is grounded in theory. For each client, theories or frames of reference are selected to organize an intervention approach; occupational therapists base their selections on the needs of clients and how best to help them.

There are many frames of reference in occupational therapy, including those derived from occupational performance perspectives, rehabilitation perspectives, developmental and neurological perspectives, and learning perspectives (Crepeau & Schell, 2003). However, each organizing framework articulates ways occupational therapist may help clients to develop and to adapt their capacity to achieve personal mastery over self and environment (Reilly 1962). Intrinsic motivation (Florey, 1969) and the drive to experience oneself as an agent of change (Burke, 1977) are central to engaging in healthy occupation. Health is regarded as a balance of time and effective use of habits that give order to daily life (Kielhofner, 1977; Shannon, 1972).

Regardless of the chosen theoretical orientation, one consistent idea organizes occupational therapy intervention; that idea is activity analysis. Occupational therapists analyze activity from multidimensional perspectives. First, analysis may target the demands of an

activity, contexts in which it is performed, and the meaning and purpose it expresses. Second, analysis may examine the theoretical underpinnings of an activity to describe its potential therapeutic value. Third, and more specific to an individual client, analysis may hone in how performance of that occupation or activity is embedded in physical, social, and cultural contexts (Crepeau, 2003). By combining these three approaches, activity analysis explores the demands of the activity that an individual seeks to perform, how and why it may be therapeutic, as well as the individual's "actual occupational engagement within a specific context" (Crepeau, 2003, p. 189). Activity analysis guides a therapist's examination of how occupation may be most therapeutic (Dunn, Brown, & McGuigan, 1994; Lamport, Coffey, & Hersch, 1989).

The role of an occupational therapist is to facilitate a client's performance of therapeutic activity, collaborating on the just-right challenge for each client. Activity analysis guides a therapist's exploration of how activity demands may be most therapeutic (Creighton, 1992; Dunn, Brown, & McGuigan, 1994; Lamport, Coffey, & Hersch, 1989). An occupational therapist examines the motor, process, and communication/interaction skills inherent in occupations and activities of interest to a client. The activity is partitioned into small accomplishable steps. As a client develops underlying performance skills, he or she can develop the ability to complete therapeutic activities with the long-term aim of generalizing those skills to future engagement in occupation and participation in social roles.

Therapeutic relationship. Occupational therapists translate their professional body of knowledge into the day-to-day practices of working with clients. The central arena of occupational therapy intervention is the intervention session where a dynamic, collaborative, evolutionary, learning relationship between an occupational therapist and a client fosters function (Peloquin, 1998). Occupational therapists work individually with

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clients or create client groups to work as teams on individualized, intrinsically-motivated goals (Rogers, 1982; White, 1971).

Within the therapeutic relationship, an occupational therapist and a client develop a collaborative, interactive dynamic (Devereaux, 1984; Fidler & Fidler, 1963; Peloquin, 1993; Peloquin, 1988) focused on learning how to adapt to limitations, incorporate new ways to perform valued occupations, and improve quality of life (Christiansen & Baum, 1991; Fidler & Fidler, 1983; Neistadt & Crepeau, 1998). An occupational therapist and a client together develop a client's competence through a relationship based on empathy, respect, personal dignity, and empowerment (Peloquin, 2003). In this sense, the therapeutic relationship embodies client-centered care (Law, 1998). A client is the catalyst for the process and outcome of occupational therapy.

Outcomes. The over-riding outcome of occupational therapy is a client able to choose and excel at meaningful endeavors in life (Fine, 1999; Hawking, 1996), to be productive, and to be in supportive environments. Participation in one's social context of family, community, and cultural group (Mosey, 1986; The American Occupational Therapy Association, 2002) is an integral part of human survival and health (Bateson, 1996; Wilcox, 1998), one that occupational therapy facilitates by fostering a client's occupational performance. Interventions are related to the intended outcome of treatment: those occupations of interest and relevance to the individual become both means and end to the occupational therapy process (Cynkin & Robinson, 1990; Gray, 1998; Trombly, 1995). For example, a client seeking to resume work spinning wool in a yarn factory must try out the type of work and the kind of environment like that of the anticipated work setting. In a therapeutic environment, the actual performance of activities inherent

to the role of spinner can be examined and analyzed. Intervention, then, appropriately addresses limitations in body structure and body function to foster occupational performance by building motor, process, and communication skills (The American Occupational Therapy Association, 2002).

The belief that performance of therapeutic occupations in a structured experiential learning environment will prepare a client for the future is based on the assumption that clients will generalize what they have learned spontaneously. Having developed underlying skills is assumed not only to provide the means for a client to participate in social roles but also to inspire his or her intrinsic motivation to apply those skills in daily life. This assumption is at the crux of occupational therapy outcomes research. It has been difficult to measure a client's actual use of learned adaptations and compensations in life after occupational therapy, so it has been impossible to demonstrate that occupational therapy's approach to fostering a client's function creates valid and reliable outcomes.

Even more elemental to the quest for evidence of occupational therapy outcomes is finding ways to tap a *client's* understanding of occupational therapy process. Occupational therapists are clear about their philosophy, practice models, and intentions. But, in this researcher's experience, it is difficult for clients to articulate the essence of occupational therapy. When asked what they did in occupational therapy, clients are likely to address activity goals at the exclusion of therapeutic goals; clients say they made a cake, used the Internet, or used adaptive equipment. In this researcher's experience, transferring the development of underlying performance skills, particularly mental functions, to engagement in life activities is not typically a conscious process for clients.

Standards of education. Occupational therapy accredits its educational programs to ensure that occupational therapists enter the profession with similar orientations to occupational therapy evaluation, intervention planning, intervention implementation, and outcomes. In the profession's official document, Standards for an Accredited Educational Program for the Occupational Therapist (The American Occupational Therapy Association, 1999), essential curriculum content is outlined. In addition to coursework, occupational therapists must complete at least 6 months of fieldwork, pass the national certifying examination, and work under the direct supervision of an occupational therapist during the first year of practice. Because a profession cannot dictate educational requirements to a university, requirements for an academic program are general in nature. It is clear, however, that accreditation standards require academic curricula to impart the ability to perform theory-driven, client-centered, goal-directed, and occupation-based evaluation and intervention

To achieve this standard, educational programs rely on entry-level textbooks to frame the profession's theoretical perspectives, models of practice, and frames of reference. The ideal would be to designate the relative use of various textbooks commonly used to orient students to occupational therapy. Unfortunately, for propriety reasons, publishers were unwilling to provide information about the number of copies of occupational therapy textbooks sold. In general, some schools prefer one textbook over others, other schools choose between several major textbooks, and still other schools require multiple textbooks. Three recent editions of long-standing and well-regarded textbooks have been selected for comparison. *Willard and Spackman's occupational therapy* (2003) provides a broad overview of occupational therapy practice; *Occupational Therapy: Performance, participation and well-being* (2005) provides a more theoretical orientation to occupational performance; *A Model of human occupation: Theory and*

application (2002) offers an exploration of theoretical underpinnings of occupational therapy.

How these textbooks distinguish standard occupational therapy practice is presented in Table 1.

Table 1

Common Textbooks Used in Entry-level Occupational Therapy Education

Process Component	*A model of human occupation, 2002*	*Willard and Spackman's occupational therapy, 2003*	*Occupational Therapy: Performance, participation, and well-being, 2005*
Goals	Understand how performance capacities affect occupational performance and change them to improve performance	Occupations to develop; Occupations to return to; Occupations to discontinue	Reduce deterioration and dysfunction in occupational performance
Process	Occupational engagement	Create/promote Establish/restore Maintain Modify Prevent	Relate the factors of person, environment, occupation, and performance to performance in therapeutic activities
Adaptation	Dynamic change process	Improve occupational performance	Foster changes performance
Principles of Intervention	Client uses strategies to change: choose, commit, explore, identify, negotiate, plan, practice, re-examine, sustain	Relate client goals and desired occupational performance. Client perform meaningful activities	Improve client's performance and participation in environment
Role of an occupational therapist	Foster change in objects, occupational forms, skills, habits, and roles	Therapeutic use of self; therapeutic use of occupations and activities; consultation; education	Foster balance of occupations, healthy interaction of person and environment
Outcome	A person able to live a fulfilling and joyful life with a disability	Occupational performance; client satisfaction; role competence; adaptation, health and wellness; prevention; quality of life	A person able to engage in activities of his or her own choosing, regardless of disease or impairment

These textbooks reach thousands of occupational therapy students every year. Though it is not possible to distinguish the relative impact of each textbook, it is possible to determine the number of occupational therapy students attending the nation's 150 educational programs for occupational therapists. According to the American Occupational Therapy Association (2005), a

total of 10,224 students were enrolled in entry level educational programs. The majority of

students were enrolled in professional entry-level master's degree programs (4,506 students),

followed by combined baccalaureate/master's degree programs (3,809 students) and

baccalaureate programs (1,691 students). The trend toward master's level entry into the

profession is reflected in these figures. A master's degree in occupational therapy will be

required by 2007, and academic programs have clearly initiated university approval of

curriculum modifications to that end.

Occupational science. Increased focus on occupation as a therapeutic medium and

outcome of occupational therapy led to the emergence of occupational science (Yerxa, 1989,

2000) and its expansion and application by Ruth Zemke and Florence Clark (1996). This

interdisciplinary basic science seeks to understand human occupation in its many forms. It is

distinguished from the applied science of occupational therapy that seeks information about

occupation as the means and end of intervention. Whether occupational science is a basic or

applied science may not be the issue; the application of knowledge about occupation is likely to

enrich intervention and knowledge gleaned from practice is like to influence research on the

complexity of occupation. For Zemke & Clark (1996), occupational science has the potential to

decipher "the form, function, and meaning of human occupation" (Zemke & Clark, 1996, p. vii),

in all its contexts, including the therapeutic context.

Experiential Learning

There are many views on experiential learning, each contributing to variations on

its implementation. The works of John Dewey (1910/1991, 1929/1958) were chosen to

frame the examination of experiential learning in this study. John Dewey's (1938)

notions about experiential learning are described as one of the essential foundations of

occupational therapy (Larson, Wood, Clark, 2003). His premise was that experiential learning involved two processes: the act of doing and reflection on the doing (Dewey, 1910/1991, 1929/1958, 1938). Learning occurred when the individual incorporated new knowledge about the self, performance, and meaning as it was derived from experience. For Dewey, learning experiences had to be goal-driven, constructive, educative, ones that stimulate growth, increase sensitivity, require conscious awareness, and foster a moral understanding of the world. (Dewey, 1938, p. 47; Rodgers, 2002, p. 847).

On the micro level, Dewey's (1910/1991, 1929/1958, 1938) principles have merit for the construction of individualized occupational therapy intervention sessions. Dewey (1910/1991, 1929/1958) believed that the meaning of experience emerged through community with others, in active, shared reconstruction and reorganization of experience (1916/1944). For Dewey, learning required interaction, continuity, and meaning-making through interaction in an environment of "objects and other persons" (Dewey, 1938, p. 43). Because routine habits can result in decreased awareness, Dewey (1910/1991, 1929/1958) recommended that learning experiences involve genuine interaction with the environment. He believed that interaction within the learning experience can lead to change in the self, change in others, and change in the environment.

Interaction was necessary, as was continuity of learning. With a ripple effect, each learning experience presented an opportunity to extract meaning, and the meanings of experiences built on each other; "every experience lives on in further experiences" (Dewey, 1938, p. 27). Dewey (1910/1991, 1929/1958) was convinced that what was learned in the past framed the way new information was understood and influenced the actions available to the learner in the new situation (Rodgers, 2002, p. 847). "Only by

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extracting at each present time the full meaning of each present experience are we prepared for doing the same thing in the future" (Dewey, 1938, p. 49). With interaction and continuity, according to Dewey, learning is vibrant, active, and builds both the learner and the world.

Dewey (1910/1991, 1929/1958) contended that key factors in learning experiences were perception and meaning-making. Organization of meaning was "attained on the basis of experience" (Dewey, 1938, p. 21) and, importantly, meaning emerged in the act of reflecting on that experience. He felt that making meaning was a collaborative venture, one that based the formation of values on social learning. For experience to be meaningful, it had to involve a teacher's and a learner's "mutual adaptation" (Dewey, 1938, p. 45) and, in particular, a teacher's "adaptation to the needs and capacities of individuals" (Dewey, 1938, p. 46).

Reflection. For Dewey, reflection was at the core of learning. The reflexive thinker was self-aware and able to control his or her thoughts, feelings, and attitudes in order to openly engage in inquiry. Summarizing Dewey's (1910/1991, 1929/1958, 1938) position on teaching, Rodgers (2002) stated that "reflection that is guided by whole-heartedness, directness, open-mindedness, and responsibility, though more difficult, stands a better chance of broadening one's field of knowledge and awareness" (p. 858). Whole-heartedness, also called single-mindedness, channeled curiosity and enthusiasm for the subject content into a passion for teaching. Directness described the teacher's inner confidence, self-awareness, and ability to observe objectively and reflect on experience. Open-mindedness was a willingness to consider different points of view while intellectually critiquing one's own perspective and the perspectives of others.

The final attitude Dewey (1910/1991, 1929/1958) felt essential to generalizing the habit of reflection was accepting responsibility for the conclusions and actions that resulted from a particular line of reflective inquiry. The teacher who developed a clearer understanding of an experience through reflection must take responsibility for using that information in future teaching experiences. The same principle applied to learners who were expected to generalize what they learned and how they learned it to future life experiences.

Dewey's seminal work on reflection has set the standard for intellectual inquiry and critical thinking. His views have been disseminated through the work of educators, philosophers, and clinicians. Several more modern authors whose work is pertinent to occupational therapy are presented next.

Schön (1983) presented a framework for reasoning in practice which emphasized two types of reflection: reflection-in-action and reflection-on-action. These approaches to reflection were presented as ways to guide the practitioner's reflection, not the client's. Fostering the habit of reflection in practitioners had two purposes. One was to foster a practitioner's reflection as a way to understand practitioner-client interactions more deeply (Schön, 1983). The aim was to develop a practitioner's skill in experiential listening to a client's underlying meaning and in reflecting on the most helpful therapeutic response. This development had two phases: reflection-on-action and reflection-in-action. Another purpose was to foster self-directed experiential learning to bring practitioners from novice to expert (Schön, 1987).

Schön's work was well-embraced in the health professions. Paget (2001) saw reflective practice as a learning process that could help develop clinical knowledge and

skills among nurses. On the premise was that more reflective practitioners would provide better clinical care, this author examined whether reflective practice changes clinical practices. Nurses who saw a long-term change in their practice learned the skill of reflecting and used it for "constant reviewing of professional practice" (209). Attitudes and patterns of interpersonal skills changed with reflection so that reflective practitioners perceived improvements in patient care differently; they saw patients more holistically.

Mezirow (1994, 1991, 1990, 1981) sought to better understand types of reflection in adult learners. He coined content reflection, process reflection, and premise reflection. This categorization was used to interpret reflection in the previous study. Content reflection referred to the clients' analyses of activity demands, including the environment and therapeutic relationship. Process reflection referred to clients' performance of therapeutic activities. Premise reflection referred to clients' self views, self-concept, and identity as a person with performance limitations.

Mezirow's (1994, 1991, 1990, 1981) work on transformation was instrumental to more widely distributed theoretical and applied research on reflection. Mezirow (1994) promoted a better understanding of how critical reflection involved in-depth examination of the rules and principles used to guide interpretations and analysis. Learning is making sense of our experiences. "Approved ways of seeing and understanding, shaped by our language, culture, and personal experience, collaborate to set limits to our future learning" (Mezirow, 1991, p. 1). "The formative learning of childhood becomes transformative learning in adulthood" (Mezirow, 1991, p. 3).

As adults, we attribute meaning to experiences based on habits of expectation or meaning perspectives that are developed through symbols and cues as well as through

language Interpretations of past experiences create conceptual frameworks within which new information is understood. Fitting each new experience into our existing framework validates our expectations and reinforces our comprehension of meaning. Learning takes place, however, when habitual expectations and selected perceptions are challenged.

The key factor in facilitating adult learning is reflection on assumptions and meaning systems (Mezirow, 1991, p. 4-5). "Reflective learning involves assessment or reassessment of assumptions…that results in new or transformed meaning schemes, or, when reflection focuses on premises, transformed meaning perspectives" (Mezirow, 1991, p. 6). "Adult development is seen as an adult's progressively enhanced capacity to validate prior learning through reflective discourse and to act upon the resulting insights. Anything that moves the individual toward a more inclusive, differentiated, permeable (open to other points of view), and integrated meaning perspective, the validity of which has been established through rational discourse, aids an adult's development" (Mezirow, 1991, p. 7).

Building on the work of Wertsch (1979), Mezirow defined learning as an activity resulting from social interaction that involves goals, actions, and conditions under which goal-directed actions are carried out…" (Mezirow, 1991, p. 13). Reflection, the intentional reassessment of prior learning, involves critique or analysis, "gives coherence and order to activities" (p. 15), and can take several forms depending on its purpose. This study sought additional information about reflection.

Social co-construction of knowledge. Occupational therapy process is based on a collaborative therapeutic relationship in the learning experience. Information about the nature of human interaction in the process of learning from experience was informed by

the works of Vygotsky (1934/1986, 1978). Vygotsky (1934/1986, 1978), a Russian lawyer who studied psychology, philosophy, literature, political science, history, and medicine was employed at the Institute of Experimental psychology in Moscow (Gredler, 2001). After a period of being banned in Russia, Vygotsky's work was published in English in the 1950's. Writing in the early 20th century, he offered two theoretical frameworks applicable to this study. The first was the social co-construction of knowledge and the second was concept formation (Vygotsky, 1978, 1934/1986). These frameworks combined to provide a lens on the inner workings of therapeutic relationships in occupational therapy.

As defined here, occupational therapy is closely aligned with Vygotsky's (1978, 1934/1986) development of higher psychological processes through the social co-construction of knowledge. Vygotsky (1978, 1934/1986) explained the social co-construction of knowledge as a process of creating meaning from experience in ways that enabled the learner to internalize values, beliefs, and attitudes. Socially co-constructing knowledge involved deriving an individualized sense of word meanings, building consciousness, and internalizing higher psychological reasoning. Vygotsky (1978, 1934/1986) provided a framework to examine facilitator-learner actions and reactions and provided a language for describing components of the process of internalization.

In an effort to distinguish human cognitive development, Vygotsky (1978, 1934/1986) promoted the importance of social interaction in learning as the main factor separating animal or natural activity from that of human mental processes. Believing that human beings develop through interaction with their environment, he observed that

people develop psychological tools, that is, signs and symbols in a language that influences conceptualization and thinking.

Language and speech "bring about the transformation of human consciousness and are the instruments essential to the development of higher cognitive functions" (Gredler, 2001, p. 279). Through learning experiences in cultural contexts, higher cognitive functions develop and transform the individual's capacity for new learning. Intellectual development "occurs when speech and practical activity…converge" (Vygotsky, 1978). "Cognitive development involves the qualitative transformation of some forms into others and a complex process of overcoming difficulties and of adaptation" (Gredler, 2001, p. 284). Language helps structure how the world in perceived and allows the individual to choose how to structure his or her attention (Vygotsky, 1978). In the end, human beings can attend selectively, can control their behavior, can regulate function, and can internalize selected approaches to self-regulation.

In addition to the social co-construction of knowledge, Vygotsky (1978, 1934/1986) examined the development of thought and its relationship to language. Vygotsky's (1978, 1934/1986) framework for the evolution of concept formation is applicable to this study. His research on the development of concepts in children, adolescents, and adults led to his "assumption that concepts evolve in ways differing from deliberate conscious elaboration of experience in logical terms. Analysis of reality with the help of concepts precedes analysis of concepts themselves" (Vygotsky, 1934/1986, p. 141). Several of Vygotsky's (1978, 1934/1986) principles of higher cognitive development relate to experiential learning in occupational therapy. Specifically, concepts about how to function despite limitations imposed by illness

develop through analysis of reality, that is, reflection. In this sense, learning is a co-construction of knowledge in a social and cultural environment, where signs, symbols, and language can help individuals learn to self-regulate.

Gredler (2001) extended Vygotsky's (1978, 1934/1986) theoretical notions into a treatise on instructional strategies with emphasis on the social context of learning. "The implication of Vygotsky's theory is that the culture that teaches its children symbols as communication only is omitting the most important function of artificial signs, that of mastering and developing one's thought processes" (Gredler, 2001, p. 305). Wertsch (1985), a scholar of Russian psychology, emphasized the developmental underpinnings of Vygotsky's (1978, 1934/1986) theory of how the mind is formed. Given that the social co-construction of knowledge is accepted in current approaches to education, this study sought to better understand how Vygotskian (1978, 1934/1986) principles applied to the process of occupational therapy, that is, to the integration and application of transformative self-regulation.

Self-regulation and Self-development

Self issues are critical to understanding occupational therapy process and outcome. Markus (1986) posited that self-concept has several functions. It "regulates behavior, organizes and makes meaning of actions and experiences, and frames incentives, standards, plans, rules, and scripts for behavior" (p. 299). With her colleagues, she has developed the notion of possible selves, and its counterparts, the real self and the ideal self. This framework provides a way of exploring self-development.

Self-concept is another important concept. Concepts about the self may be positive or negative, central or peripheral to the essential self. How one perceives him or herself has an impact on thoughts, feelings, and behaviors. People may use different ways

of representing their selves, or may be unaware of aspects of their self-concept. Central issues in self-development and self-regulation are expanded on in Chapters Four and Five.

This study is both based on human development theories and also is intended to contribute to the broad context of research in human development. It sought to understand relationships among functional change or loss and human development more thoroughly, in particular self-regulation following a major interruption in the routine course of adult development. Because the case analyzed in this study was an adult male with bipolar disorder, the next section presents an overview of the etiology, symptoms, course of disease, and treatment of bipolar disorder.

Bipolar Disorder

Bipolar disorder has been defined by the American Psychiatric Association as a mental illness characterized by depressive and manic episodes. The Diagnostic and Statistical Manual IV (1994) provides information about major symptoms, course of disease, and treatment of bipolar disorder.

Prevalence and severity of mental illnesses was calculated from a house-to-house survey conducted between 2001 and 2003 (Kessler, Chiu, Demler, & Walters, 2005) revealed that mental illnesses are prevalent in the United States. Moderate and serious cases represent 14% of the 9,282 adults who participated in the survey. Mood disorders (9.5%) followed anxiety disorders (18.1%) as the most prevalent forms of adult mental illness. Bipolar disorder is thought to comprise a small portion of mood disorders, but its severity is intensified by comorbidity and genetic loading. Many people with bipolar disorder have other mental illnesses and the combination of illnesses compromises recovery from either illness. Bipolar disorder has a very

strong prevalence in families and is seen from one generation to the next, often with increasing severity as it is passed down.

Bipolar disorder has a profound effect on adult development, self-regulation, and self-concept among those affected. The unpredictable course of illness interferes with competence in productive roles and relationships. Though tempting to stereotype bipolar disorder, it is an illness experienced in unique ways by each individual. Bipolar disorder as it was experienced by the client in this study is presented in each chapter's case overview.

Mixed Method Research

Qualitative research is best suited to create operational definitions of occupational therapy process and occupational performance. Importantly, qualitative research enables the profession to understand the "client's perspectives on program benefits, strengths, and weaknesses" (Law, Baum, & Dunn, 2001, p. 59). Naturalistic methods can lead to an uncovering of occupational therapy constructs in routine practice.

The question facing occupational therapy researchers is how to measure process and outcome variables. Methods that articulate relationships among person, occupation, and environment are needed in occupational therapy outcomes research. This is a challenging endeavor, because constructs like habits, role balance, and quality of life (Law, Baum, & Dunn, 2001) are difficult to measure. One strategy is to combine qualitative and quantitative approaches to understanding a topic of interest. This study combined case study research design with analysis using a quantitative approach of content analysis and a qualitative approach, descriptive analysis.

Case study. Multiple case study research design (Yin, 2003) seeks to explore the "context of a phenomenon" (Yin, 2003, p. 13) in order to "describe an intervention and

the real-life context in which it occurred" (Yin, 2003, p. 15). Multiple case study culls information from more than one case using replication logic. The aim is to replicate significant findings from the first case in other cases (Yin, 2003, p. 47).

Case study allows one or more than one unit of analysis to be examined within a single case (Yin, 2003). Treatment session reviews, defined as the case in this study, may include multiple units of analysis. A unit of analysis is an "identifiable message or message component" (Neuendorf, 2002, p. 71).

According to Yin (2003), case study analysis benefits from a general analytic strategy that pre-defines the targets of analysis, that captures all available evidence, that separates description of the results from their analysis, and that thoughtfully examines how the data may be interpreted from different perspectives. There are three analysis strategies useful in case study research: "relying on theoretical propositions, setting up a framework based on rival explanations, and developing case descriptions" (p. 109). The specific techniques of pattern matching, explanation building, time series analysis, logic models, and cross-case synthesis (Yin, 2003) may be used in case study analysis.

The first, and most preferred, of the three general strategies to be described is reliance on theoretical propositions. Here, the analysis is framed around the propositions that guided the design of the case study. This study is based on the propositions that occupational therapy plays a role in the client's development of adaptive strategies for self-management, that health outcomes are related to the process of treatment, that client-centered care fosters motivation and addresses client goals, and that client and therapist reflections on learning experiences are an important element of occupational therapy process. In this strategy, these propositions would be examined in both sets of interviews.

The second general strategy is testing of rival explanations. The researcher seeks to determine whether the study's theoretical propositions fully explain the findings. Alternative explanations are sought and explored in order to build confidence in the analysis. Whether alternative hypotheses can be discarded in favor of the previous propositions or alternative hypotheses can be chosen to explain the data, the strategy of thoughtfully considering different ways to explain the study's results deepen the case analysis.

The third general strategy is developing a case description (Yin, 2003). This strategy is well suited to describing a case, or elements of a case. A descriptive approach can help organize complex cases and may precede other general strategies.

There are five techniques that may be used in conjunction with the general analysis strategies. First, pattern matching may be used to strengthen internal validity. The procedure is to develop propositions about relationships among independent and dependent variables before examining the data. Finding the predicted patterns and, at the same time *not* finding alternative patterns, increases the study's validity (Yin, 2003). If some of the predicted patterns are not substantiated fully by pattern matching, the next step is to conduct other case studies to examine all threats to internal validity by repeated comparisons.

Second, the case may be analyzed in order to build an explanation about the case. Explanations provide critical insight and may relate to existing theoretical propositions or lead to theory development. Yin (2003) suggests that explanations derive from comparing findings to initial propositions, then revising the proposition before comparing it to a second or third case. The explanation is built by refining ideas, examining rival

hypotheses that might explain the data, then looking for evidence in the data to support the revised explanation. The explanation-building process is a series of repetitions that serve to approximate more closely a valid explanation for the data. This strategy is useful when the researcher remains attentive to the initial purpose of the study and responsibly seeks information to refute any alternative hypotheses.

Third, time series analysis examines selected variables as they occur over time in qualitative data. It is possible to choose one independent and one dependent variable to conduct a time series analysis. The basic process is to examine a trend of data points and compare it to a pre-established theoretical trend or a rival trend (Yin, 2003). Time series design can be simple or complex; one or several patterns of change over time can be uncovered or more than one variable can be the focus of analysis. Examining the chronology of an event is another form of analyzing relationships among events over time.

Pattern matching, explanation building, and time series analysis are useful in this study. The fourth and fifth strategies, logic models and cross-case synthesis are less applicable to this study. In logic models, the researcher "stipulates a chain of events over time" (Yin, 2003, p. 127) that link cause and effect. An event from an earlier stage becomes the causal event for the next stage in a logic model. Predicted outcomes of a chain of events are then tested against sequential stages found in the data. The use of a logic model is premature because the events in occupational therapy process are not yet clear. Cross case synthesis is used when multiple cases conducted as independent research are available (Yin, 2003); this approach was not suitable for this study because cases were not independent.

In addition to the general analysis strategy of relying on theoretical propositions and the use of specific techniques, other tools may be helpful in coding narrative text, including content analysis (Yin, 2003). Like a computer software package designed to categorize and organize large volumes of narrative text, content analysis provides a useful technique in the overall case analysis.

Content analysis. Content analysis is a technique used to quantify narrative data that is aimed at increasing the objectivity, systematic description, reliability, validity, replicability, and hypothesis testing consistent with the scientific method (Neuendorf, 2002; Holsti, 1969; Weber, 1990, Krippendorff, 1980).

There are specific procedures in content analysis intended to conform to the scientific method and to minimize investigator bias. The coding scheme and protocol should be developed before coding the data so that an *a priori* design is achieved; "all decisions on variables, their measurement, and coding rules must be made before the observation begins" (Neuendorf, 2002). Codes are assigned by raters independently, then compared to reach consensus. Final codes are recorded and tallied to yield quantitative results. The specific strategies used to analyze this study's data using content analysis appear in Chapters Three and Four.

Descriptive research. This study was designed to investigate the phenomenon of occupational therapy process. Phenomenological studies "describe the meaning of the lived experiences for several individuals concerning a concept or a phenomenon" (Creswell, 1998, p. 51). The previous study sought to explore this concept based on reports from people who had experienced occupational therapy process. This study

examined the phenomenon of occupational therapy process from the perspective of one individual.

In descriptive research, data are analyzed by clustering meanings, by describing what was experienced, and by structuring a description of how it was experienced (Creswell, 1998). The researcher's intent is to convey the nature of an experience, to define its essential structure, and to report it so that the experience of phenomenon is more fully understood.

Descriptive analysis of the guided debriefing interviews was an analysis strategy used exhaustively in this study. The client's textual messages were viewed from many angles in an attempt to extract the explicit and implicit meanings he conveyed. Each round of analysis helped to describe the client's understanding of occupational therapy process more thoroughly. The specific application of descriptive research approaches is explained in Chapter Three.

Metaphor. Lakoff & Johnson (1980) propose that human beings construct a metaphor to frame their lives and that language can be examined to uncover that metaphor. They propose several types of metaphors, but suggest that spatialization metaphors are most basic. "Happy is up; sad is down and having control or force is up; being subject to control or force is down" (Lakoff & Johnson, 1980, p. 15) are two examples. Metaphor derives from experience and culture and it reflects fundamental values and beliefs that organize experience (Lakoff & Johnson, 1980). The search for metaphor in the client's occupational therapy experience was an important part of this study's analysis. Analysis of the guided debriefing interviews examined the client and the therapist textual messages for underlying constructs they used to encapsulate the

client's framework for occupational therapy process. A discussion of this client's metaphor appears in Chapter Five.

The review of literature revealed that the research questions chosen for this study were valid and applicable to current professional endeavors in evidenced-based practice. Occupational therapy's use of occupational performance as means and end to intervention blended with human development theories of self-development. The next chapter presents the method used to address the research questions.

CHAPTER THREE

Method

The purpose of this study was to describe the long-term evolution of insights
about occupational therapy process and to identify how therapeutic goals, socially co-
constructed by an occupational therapist and a client, contributed to transformative self-
regulation in a mature adult man with bipolar disorder. The therapeutic process following
each of 10 occupational therapy sessions was examined from two perspectives, the
client's and the occupational therapist's, through analysis of the client's guided
debriefing interviews.

This chapter describes the method that was used to gather and to understand data
from the guided debriefing interviews of a client who used a personal computer in routine
occupational therapy sessions. This chapter is divided into six sections. The design of the
study is described in the first section. The second section describes the participants. The
third section presents describes the data. The fourth section presents quantitative and
qualitative approaches used to analyze the data from the client's guided debriefing
interviews. The fifth and sixth sections discuss reliability and validity issues.

Design

The present study's use of archival data from a previous study conducted by this
investigator was approved by the University of Maryland Institutional Review Board
(Appendix A). The methods that were used to manage the data in the previous study are

presented in Appendix B. Archival data were subjected to more in-depth analysis in this study. Methods of analysis used in this study are presented next.

This single case study. This study was a single case study in which a client's guided debriefing interviews from the previous study were subjected to further scrutiny. The difference between quantitative and qualitative research designs is that it is desirable to be familiar with the case in qualitative research. Being able to draw on insights from actual experience provided an advantage for understanding the course of occupational therapy intervention.

The client was chosen for this study for several reasons. First, he was a client of the occupational therapist conducting this study so he was well-known to her. Second, he was the first participant in the previous study, so guided debriefing interviews had the least chance of being biased by the occupational therapist's impressions. Third, he provided more interviews than other participants in the previous study and he was able to articulate his views clearly. Fourth, this client was highly motivated to use the personal computer and to contribute to data collection.

Because this study used archival data, data collection and management procedures in this study were the procedures used in the previous study. The occupational therapist, who was this researcher, completed the Client Screening Form (Appendix C) and it was reviewed by the study's associate investigator who found the client met inclusion criteria. The associate investigator described the study to the client and the client, associate investigator, and the occupational therapist as a witness signed the informed consent forms. The client's occupational therapist administered the Focused Interview (Appendix

D) and audio-taped the client's guided debriefing interview following each of 10 occupational therapy sessions.

Few problems were experienced with the mechanics of using the tape recorder because the recorder was primed before each intervention session. Infrequently, portions of the textual messages in the 10 guided debriefing interviews were inaudible to the transcriptionist. She noted the few words that were difficult to hear with the phrase "inaudible" or a question mark. The occupational therapist reviewed the audiotapes and inserted missing words and phrases before coding the data. In the 124 minutes of transcribed guided debriefing interviews, there were only 22 instances when a word or phrase was inaudible to the transcriptionist, four of which occurred in the latter six guided debriefing interviews. Because the first four interviews had 18 phrases that were inaudible, it may have been that as the transcriptionist became more familiar with the speakers, she had greater success in understanding the language. The fourth guided debriefing interview did not identify the start time, so it was not possible to accurately measure the duration of that interview. It contained 39 textual messages, a number similar to other interviews that were from 8-15 minutes in length. It was determined that the data were complete and that they would yield valid and reliable results.

Participants

There were two participants in the single client chosen for this study—the client participating in occupational therapy and the occupational therapist working with him. Their distinguishing characteristics are important because they may have had an impact on how occupational therapy process was defined in this study's data set.

The client. The client was a 54 year-old, Caucasian man, married, a father of three adult children, and master's-level educated. He had severe refractory Type I bipolar disorder, and he voluntarily participated in a randomized, controlled, clinical trial as an inpatient at a large research and teaching hospital. Prior to his participation in this clinical trial, he had been tried on several approaches to medication management, but he had been refractory to these previous interventions. Refractoriness refers to the condition when medications selected to minimize symptoms may be beneficial at first but then become ineffective. This client had reported a resigned acceptance to having a chronic mental illness with symptoms that caused irritability and weakened his ability to form positive interpersonal relationships. Although he did continue to seek a helpful medication regime, his refractoriness led to an understandable distrust that any treatment might be helpful. Because his illness symptoms, including irritability, were not fully treated, he was cautious and guarded, at times paranoid, in relating to staff and hesitant in forming close relationships with peers on the inpatient unit.

This client was selected from the group of 20 participants in the previous study of occupational therapy process because he was goal-focused, articulate, and willing to discuss his performance in occupational therapy. Further, his goals of developing his future worker role included use of a personal computer. Occupational therapy groups had been provided throughout this client's year-long inpatient hospitalization, as was medication management (psychiatrist, pharmacologist, and nurses), psychotherapy (nurse and social worker), recreation therapy (recreation therapist), vocational counseling (vocational counselor), and milieu management (interdisciplinary team). At the time of this study, he had completed the research trial and had moved to post-trial, therapeutic

medication management. When he volunteered to participate in occupational therapy research, it was during the latter part of the medication management phase of his hospitalization.

The client was an experienced computer salesman who had marketed software and hardware and who had consulted on computer solutions. He had been employed for the past 10 years as an information technology specialist, answering technical support queries from customers, at a small business until the severity of his illness symptoms interfered with his ability to maintain employment. At the start of his participation in the previous study, he was interested in maintaining his computer skills while participating in occupational therapy research, with the hope of building an entrepreneurial role in the information technology field after discharge. Additionally, his offer to assist in creating a small computer room in the occupational therapy clinic was an aspect of consulting he hoped to pilot-test during occupational therapy.

The occupational therapist. The occupational therapist was a 48 year-old, Caucasian, single woman. She was a master's-level educated occupational therapist with 23 years of professional experience in direct occupational therapy clinical intervention, education, administration, and research. She worked on the inpatient behavioral health unit of a large biomedical research institution where the client participated in clinical research.

Given her clinical specialization in mental health, she was assigned a caseload of people with various forms of mental illness, including bipolar disorder, major depression, anxiety disorder, post-traumatic stress disorder, social phobia, and schizophrenia. This population was comparable to those seen in her previous clinical roles. At the time of

data collection, her clinical experience was in a wide range of occupational therapy services typically provided in a variety of mental health settings. These included inpatient hospitals, a partial day hospital, long-term industrial hospitals, community-based day treatment programs, and now a clinical research facility.

As occupational therapist for some of the clients in the previous study and a member of their interdisciplinary staff teams, she was involved in their overall occupational therapy intervention during all phases of hospitalization. During the clients' participation in clinical research, she provided therapeutic groups three to four times weekly on the locked inpatient unit, including community meals, education seminars, and community meetings as part of occupational therapy's unit-based programming. Additionally, weekly individual sessions were available in the occupational therapy clinic's computer room, a small office environment with three computers accessible to the Internet, word processing, and games.

For occupational therapy provided to clients throughout their clinical trials and during the post-research medication management phase of hospitalization, the occupational therapist chose an overarching theoretical framework. It was designed to foster clients' goal achievement through adaptation of activity demands, a framework applicable at any stage in their hospitalization. When a client was on placebo or ineffective medication and unable to perform well, the aim of occupational therapy was to help him or her to clarify symptoms and to recognize early warning signs as part of adapting to the severity of his or her symptoms. During medication management and improved function, the aim of occupational therapy was to foster clients' abilities to develop performance skills needed to engage in activities in support of their participation

in society. This included expanding and refining clients' coping strategies through uniquely adjusted therapeutic activities while attending to emotion regulation, activity analysis, daily structure, and discharge planning. In general, clients' performance of therapeutic activities was moderated and individualized to strengthen those performance skills each client was anticipated to require in daily life after discharge.

Like other participants in the previous study, this client's occupational therapy plan involved use of the personal computer, an activity closely aligned with his long-term goal of developing and evaluating the potential for building a small business consulting on Internet access. Occupational therapy intervention was structured to include opportunities to trouble-shoot hardware and programming problems, to apply software applications in novel ways, and to design a suitable work environment in the occupational therapy clinic. This combination of therapeutic activities represented the kind of demands this client was likely to encounter in the future as a consultant in a business setting.

The client in this single case study had participated in routine group programming on his inpatient unit, but he had not been involved in individual intervention before participating in this study. Individual intervention commenced at the same time as data collection for the previous study in the form of guided debriefing interviews conducted by the occupational therapist. The occupational therapist for this client was the researcher as well as the principal investigator for the previous study.

Data

The archival data included this client's 10 guided debriefing interviews and demographic information from the Client Screening Form. These 10 guided debriefing interviews were semi-structured using the Focused Interview, and were collected near the

end of this client's one-year hospitalization. Nine of these guided debriefing interviews immediately followed an occupational therapy session, and the final guided debriefing interview was conducted at the client's discharge from occupational therapy.

The data set for this study included transcripts of the 10 guided debriefing interviews between the occupational therapist and the client. The time span between the first and last guided debriefing interviews was 11 weeks. The average length of time between each of the first seven guided debriefing interviews was about four days. Fourteen days elapsed between sessions eight and nine, and 37 days between sessions nine and ten. Nine of the guided debriefing interviews totaled 124 minutes (mean = 13.78 minutes; range = 8-21 minutes) with 500 textual messages (mean = 50; range = 39 to 69 messages per interview). It was not possible to include the duration of the fourth guided debriefing interview because the ending time was not recorded.

Immediately following each occupational therapy session in the previous study, the occupational therapist had interviewed the client to ascertain his perceptions about occupational therapy process. In guided debriefing interviews, the client explained the role therapeutic activities played in his intervention plan and how he applied what he learned to his anticipated future engagement in activity while coping with a serious, chronic, mental illness. In this study, the real-life phenomenon of occupational therapy was examined in greater depth through analysis of the client's 10 guided debriefing interviews.

Data Analysis

Principles of case study research were described in Chapter Two. According to Yin (2003), case study analysis benefits from a general analytic strategy that pre-defines

the targets of analysis, that captures all available evidence, that separates description of the results from their analysis, and that thoughtfully examines how the data may be interpreted from different perspectives. This was the general analytic approach applied to the client's guided debriefing interviews.

Content Analysis. At the time of content analysis, there were six components selected for analysis of the client's views on occupational therapy process: goals, transformative self-regulation, reflection, activity demands, occupational performance, and participation. They were organized using a tool known to be helpful in coding narrative text—content analysis (Neuendorf, 2002). Content analysis is a technique used to quantify narrative data, one that is aimed at increasing the objectivity, systematic description, reliability, validity, replicability, and hypothesis testing consistent with the scientific method (Holsti, 1969; Krippendorff, 1980; Neuendorf, 2002; Weber, 1990). Functioning like a computer software package to categorize large volumes of narrative text, content analysis was a useful technique in the analysis of guided debriefing interviews in the previous study.

Specific procedures in content analysis are intended to conform to the scientific method and to minimize investigator bias. A coding scheme and protocol should be developed before coding the data so that an *a priori* design is achieved; "all decisions on variables, their measurement, and coding rules must be made before the observation begins" (Neuendorf, 2002). This procedure was followed in designing a way to search systematically for the six known and unfamiliar components of occupational therapy process.

In order to set the rules for applying a coding scheme to the guided debriefing narratives, the operational definitions were first constructed into a coding scheme that depicted the relationships among process components described above. The coding scheme for this study is described in the next section.

Coding scheme. The purpose of the coding scheme was to locate occupational therapy process components in the client's textual messages. This required that theoretically derived definitions be conveyed in practical terms and organized *prior to analysis*. In designing the ultimate coding scheme, the first step was to organize the foundational process components and represent relationships among them. This was achieved by depicting how goals, transformative self-regulation, and reflection were to be coded with respect to activity goals and therapeutic goals (Table 2).

Table 2

Foundational Process Components

Activity Goals	Therapeutic Goals
Explanation of activity goals	Explanation of therapeutic goals
Reflection on activity goals	Reflection on therapeutic goals
Explanation of transformative self-regulation addressing activity goals	Explanation of transformative self-regulation addressing therapeutic goals
Reflection on transformative self-regulation addressing activity goals	Reflection on transformative self-regulation addressing therapeutic goals

The next step was to merge foundational and instrumental process components in a way that honored the theoretically-derived relationships among process components. To achieve this, a matrix was arranged in a way that depicted relationships and interactions among all process components. As this matrix materialized, it resulted in the study's coding scheme (Table 3).

Table 3

Coding Scheme for Occupational Therapy Process Components

Foundational Process Components	Instrumental Process Components		
	Activity demands	**Occupational Performance**	**Participation in Society**
Activity goals	Explanation of intentions regarding activity demands	Explanation of performing a therapeutic activity	Explanation of future social, productive, community roles
Reflection on activity goals	Reflection on intentions regarding activity demands	Reflection on performing a therapeutic activity	Reflection on future social, productive, community roles
Therapeutic goals	Explanation of intentions regarding therapeutic use of activity	Explanation of intentions to develop performance skills	Explanation of intentions regarding transfer of performance skills to future occupations or activities
Reflection on therapeutic goals	Reflection on intentions regarding therapeutic use of activity	Reflection on intentions to develop performance skills	Reflection on intentions regarding transfer of performance skills to future occupations or activities
Transformative self-regulation for activity goals	Explanation of adaptation and compensation to demands of the therapeutic activity	Explanation of adaptation and compensation to performing the therapeutic activity	Explanation of adaptation and compensation to future social, productive, community roles
Reflection on transformative self-regulation for activity goals	Reflection on adaptation and compensation to demands of the therapeutic activity	Reflection on adaptation and compensation to performing the therapeutic activity	Reflection on adaptation and compensation to future social, productive, community roles
Transformative self-regulation for therapeutic goals	Explanation of adaptation and compensation to intentions regarding therapeutic use of activity	Explanation of adaptation and compensation to intentions to develop performance skills	Explanation of adaptation and compensation to intentions regarding transfer of performance skills to future occupations or activities
Reflection on transformative self-regulation for therapeutic goals	Reflection on adaptation and compensation to intentions regarding therapeutic use of activity	Reflection on adaptation and compensation to intentions to develop performance skills	Reflection on adaptation and compensation to intentions regarding transfer of performance skills to future occupations or activities

Using these definitions of occupational therapy process components, symbols to apply the coding scheme were developed (Appendix E) and the codes were operationalized (Appendix F) so that the coding scheme could be applied to the guided debriefing interview data in compliance with accepted practices of content analysis

(Neuendorf, 2002). The researcher wrote the codebook to be used to label textual

messages. This was used to train a second coder and involved thorough discussion of the

operational definition and it application to the data. The two coders were the Committee

Chair and this researcher.

Coding the data. Using the pre-defined coding scheme, the two coders practiced

applying codes to one guided debriefing interview together, with discussion to build

consensus. Divergent ratings were discussed to uncover the rationale each rater used for

assigning a particular code. Their rationales were compared with the coding definitions

leading to agreement on the correct code assignment. Based on the collective experience

of the two coders, the codebook was revised and training on revisions was conducted.

Raters then began the second phase of coding. Both coders applied the coding

scheme to a sample of the data (10%) in order to pilot-test the efficacy of the coding

scheme. Here, one guided debriefing interview was coded independently by each coder

and the results compared. Following discussion to reach mutual understanding, another

guided debriefing interview was coded and discussed. Reliability was checked by

comparing how each coder assigned codes to the first guided debriefing interview.

Reliability was calculated by percent agreement (Holsti, 1969). Once 80% reliability was

confirmed, the final coding was done independently using a revised codebook.

When comparing the results of independent coding, guided debriefing interviews

were examined for any chunks of text not coded or coded differently. When discrepancies

were found, the coders negotiated for consensus on code assignments until all data were

coded reliably. Coding of the data was followed by a debriefing on the reliability of

applying the coding scheme. These steps were designed to increase inter-rater reliability

by use of a well-worded coding scheme, adequate coder training, and a procedure that did not tax the coders to fatigue.

Two distinct applications of the coding scheme emerged. Portions of textual messages were assigned either single codes or combination codes. Single codes were assigned when words had only one meaning and when the text represented only one component of occupational therapy process. Combination codes were assigned when portions of the textual message displayed more than one meaning or more than one code simultaneously. Combination codes suggested a multi-faceted perspective on the client's views of the complex nature of occupational therapy process. Combination codes also indicated 'rich text' (Agar, 1992) in which the client indicated levels of understanding or relationships among elements of the occupational therapy process.

The researcher counted the frequency of the single codes in each textual message. Textual messages that included combination codes were listed on the raw data tabulation sheet, but were not tallied. Raw data were entered onto Excel spreadsheets from which summary tables were developed. The Supplement to this dissertation presents the results of the content analysis for the client's 10 guided debriefing interviews, indicating the frequency of each code by session. From this, the proportion of each code was calculated and relationships among variables examined (Neuendorf, 2002). Procedures for analyzing the data using content analysis were now clear. The procedures used in descriptive analysis are presented next.

Descriptive Analysis. True to principles of mixed method analysis (Tashakkori & Teddlie, 1998), the quantitative results from content analysis were examined further using descriptive analysis. Here, the guided debriefing interviews were examined for

information about how the occupational therapist and the client acted and reacted in the session-by-session evolution of transformative self-regulation. This step in the analysis was congruent with Yin's (2003) strategy of using description to organize complex cases. Descriptive analysis also provided a way to search for alternative explanations of the data, to test rival hypotheses.

Each guided debriefing interview was reviewed many times and from many different angles in the search for congruent explanations for the client's actions and reactions. The client's views on occupational therapy process were evaluated for their degree of fit with known theoretical bases of occupational therapy process. When a relationship among components was discovered, it became a focus of the analysis. The entire set of guided debriefing interviews was reviewed again using the newly discovered component to explain parts of the data that had not been explained by known process components. This fundamental analytical approach was repeated and resulted in revealing of additional process components not previously understood in the ways they were presented by the client. Descriptive analysis was an exhaustive, reiterative process, continuing until the data were fully explained by a logical set of internally consistent constructs explanatory of the inner workings of occupational therapy.

Descriptive analysis began by seeking information about components familiar in theoretical descriptions of occupational therapy process. As presented in Chapters One and Two, the organizing factors in intervention are goals. Occupational therapy goals, derived by an occupational therapist in collaboration with a client following evaluation, dictate how intervention will be structured. Goals may influence how the demands of the therapeutic activity are to be shaped to foster a client's development of performance

skills and underlying, client-specific body functions and body structures. From a client's perspective, goals related to the therapeutic activity itself may be the conscious objectives in occupational therapy. For analysis of this study, the required actions, objects used and their properties, and social demands, for example, comprised activity goals. Information about the client's concrete descriptions of the actions he hoped to achieve was sought in analysis of the guided debriefing interviews.

For an occupational therapist, activity goals are complemented by therapeutic goals aimed at remediation of underlying motor skills, process skills, and communication/interaction skills (The American Occupational Therapy Association, 2002). For the client in this study, occupational therapy evaluation indicated that he would benefit from compensating for those process and communication/interaction skills that had been limited by his symptoms of bipolar disorder. In particular, developing greater flexibility in attending to the therapeutic activity, accommodating his actions and adjusting the environment to solve problems were important to his goal of developing a consulting business. Additionally, evaluation of communication/interaction skills indicated a need to accommodate his orientation to others, his giving and receiving of information, and his capacity to collaborate and relate to others to achieve interim and end goals.

Descriptive analysis, then, generated information about the client's perceptions of his actions and intentions in occupational therapy sessions. Distinguishing activity goals from therapeutic goals was thought to offer insights into the evolution of the client's attention to the full scope of his plan to offer computer services as part of a small business.

Another central component of occupational therapy process is occupational performance, that is, the ability to accomplish "selected activities or occupations in daily living, education, work, play, leisure, and social participation" (The American Occupational Therapy Association, 2002, p. 632). The client was challenged to design a valued product he could market to consumers interested in accessing the Internet. Also, he described how his performance was impacted negatively by confrontational relationships that increased his frustration and irritability. This client was thought to be able to benefit from refinement of his psychological function, specifically temperament and personality functions inherently difficult to regulate in people with bipolar disorder.

In addition to goals and occupational performance, analysis sought information about this client's experience of conflict in occupational therapy. His ability to choose how to react to frustration in attaining his goals was thought to provide a lens on this client's ability to regulate emotions. As such, describing the conflict experience was an important part of analyzing what, if any, impact occupational therapy process may have had for this client.

Next, analysis turned to understand novel components in occupational therapy process more fully: reflection and transformative self-regulation. Because the conflict experience provided a powerful example of how this client was limited in attaining his activity goals, it was examined from another perspective. Occupational therapy process is one of fostering a client's adaptation (The American Occupational Therapy Association, 2002), so this component was expanded for this study and thought of as transformative self-regulation. Adaptation to symptom-induced attitudes, perceptions, and behaviors was thought to be an ongoing process of transformation where small changes in self-

regulation led a client to become aware of his or her choices of and positive and negative impacts of self-regulatory strategies on goal attainment. Descriptive analysis sought information about the client's self-regulatory strategies and their impact on goal attainment. The client's guided debriefing interviews were examined for instances where he tested and evaluated a particular self-regulatory strategy, when he explored and accepted different ways of regulating his emotions, and when he reconstructed approaches to communicating with others in support of his goals.

As discussed in Chapter One, reflection was found to be the most frequent component of occupational therapy process discussed by the 20 clients in the previous study. In guided debriefing interviews, clients reflected on what they were doing, how they were doing it, and what it meant to their future capacity to participate in important social roles. Reflection referred to clients' analyses, evaluations, insights, and meanings of activity demands, occupational performance, and participation as well as goals and transformative self-regulation. In this study, further analysis revealed the nature of guiding reflection used by the occupational therapist as well as the client's responses. It was considered important to expand on the component of reflection by seeking to understand the complexities of the client's guided reflection.

In examining reflection, the importance of a seventh hidden component became visible. This additional component was the nature of guided reflection, that is, the questions and observations that the occupational therapist used to guide the client to reflect on the occupational therapy session's therapeutic activity. At times the occupational therapist merely posed a question, at times she asked about the meaning of the client's behavior, and at times she probed for a deeper analysis of performance.

Because it appeared that the actions and reactions of the occupational therapist had an impact on how the client learned from the therapeutic activity, the nature of guided reflection joined reflection and transformative self-regulation as the third unfamiliar process component to be examined in this study.

A final application of descriptive analysis captured additional information from the guided debriefing interviews. Building on the profession's exploration of client narrative discussed in Chapter Two, the language of guided debriefing interviews was examined for ways the occupational therapist and the client created a shared understanding of the client's condition as well as of occupational therapy process. Information was sought on the shared use of metaphor by the occupational therapist and the client.

Lakoff and Johnson (1980) proposed that human beings construct a metaphor to frame their lives and that language can be examined to uncover that metaphor. They proposed several types of metaphors, but suggested that spatialization metaphors are most basic. "Happy is up; sad is down and having control or force is up; being subject to control or force is down" (Lakoff & Johnson, 1980, p. 15) are two examples. Metaphor derives from experience and culture and it reflects fundamental values and beliefs that organize experience (Lakoff & Johnson, 1980).

Data collected for this study were rich with metaphor about occupational therapy. Textual messages were examined to determine whether the occupational therapist and the client presented any organizing metaphors for the process of intervention, more specifically of transformative self-regulation. The aim of this part of the analysis was to seek information about the use of metaphor in the language of occupational therapy and

to determine how metaphor might have contributed to occupational therapy process. Metaphor was sought in the underlying meaning in the textual messages of both the occupational therapist and the client.

As stated, two fundamental approaches to analyzing the guided debriefing interviews were used in this study: content analysis and descriptive analysis. Any analytical approach has advantages and disadvantages, which can be observed in the study's reliability and validity of this study. Procedures used to increase reliability and minimize threats to validity are presented next.

Reliability

Intersubjectivity and intercoder reliability were measured by comparing the content classification results of two coders. The consistency of shared meanings from the message data constituted the measure of reliability (Weber, 1990). There was found to be 80% reliability between the two coders. Another measure of reliability was stability, measured by examining how consistent the same coder was over time (Weber, 1990; Krippendorff, 1980). Consistency in coding was enhanced by the co-development of a coding scheme that was used by both coders. Additionally, the process of reaching consensus for all assigned codes contributed to consistent application of the codes to the client's guided debriefing interviews.

Descriptive analysis naturally was more difficult to test for reliability. Making meaning of the guided debriefing interviews from an occupational therapy perspective was spearheaded by the researcher, and then checked with the second coder. Operational definitions for process components were formulated and evaluated for their internal consistency with analysis results. Operational definitions were reshaped to accommodate

the meaning reached by consensus, were defined objectively, and then were sought in the guided debriefing interviews. Once components could be identified repeatedly, and could be found in the textual messages consistently, descriptive analysis was thought to be reliable. The formulation, reconstruction, and search for process components in guided debriefing interviews was a cyclical process where those parts of the operational definitions found to be unreliable were discarded or incorporated into existing components of occupational therapy process. The results presented in Chapter Four have been organized to show relationships among reliable process components found in the data.

Validity

Validity may be examined through internal validity, face validity, criterion validity, content validity, and/or construct validity. In content analysis, internal validity is observed when the conceptual definition matches the operational definition used to measure the concept (Neuendorf, 2002). In multiple case studies, external validity can be assessed by determining how representative the sample is of the population and whether the content analysis is true to life (Neuendorf, 2002). This study examined how well the coding scheme captured the components of goals, occupational performance, transformative self-regulation, and reflection in guided debriefing interviews. Because it was a single case study, there is a need to test external validity in future studies.

Face validity examines how well the coding scheme developed for content analysis measures what it is intended to measure. One way to measure face validity is to have others not familiar with the study examine the measures to determine what they think is being measured (Neuendorf, 2002). Tests for face validity were conducted by

asking occupational therapists to assign codes to representative textual messages in the previous study. The components of goals, activity demands, occupational performance, and reflection were tested with four groups of occupational therapists in the previous study. The additional component of transformative self-regulation has not been subjected to tests for face validity.

Criterion validity is the extent to which the content analysis links to an established standard that is external to the measure (Neuendorf, 2002). Ongoing monitoring of how well the coding scheme represented familiar occupational therapy components was conducted to provide information about criterion validity. As the content analysis was performed, inconsistencies with theoretical underpinnings of occupational therapy informed the researchers of the need to revise the coding scheme and application of that scheme to the data.

Content validity is the extent to which the coding scheme measures the full domain of the concept being measured (Neuendorf, 2002). The goal was to cover the presence of important aspects of occupational therapy by fully coding the guided debriefing interviews. Uncoded data would have revealed a threat to content validity. After coding the first three guided debriefing interviews, adjustments were made to the coding scheme and operational definitions before researchers coded the entire set of data. At the conclusion of coding, assignment of codes was complete for the full data set.

Construct validity is the extent to which the coding scheme is compatible with other theories. This was a challenging endeavor because construct validity in content analysis has not been achieved (Neuendorf, 2002). Efforts were made to incorporate key constructs from related theories in the operational definitions of occupational therapy

process to address threats to construct validity. For example, information about transformative self-regulation was supported by human development theories. Reflection in experiential learning was supported by the education literature.

The next chapter presents the application of content analysis and descriptive analysis to the guided debriefing interviews. Information is presented as it was revealed. Content analysis was the first approach used to understand the client's guided debriefing interviews so the results of content analysis appear first.

CHAPTER FOUR

Results

This chapter presents the results of the study in four parts. The first part provides an overview of the client's experience in occupational therapy as it is understood so far. The second part presents the results of content analysis for occupational therapy process and outcome. Using descriptive approaches, the third part describes the evolution of the client's views on the inner workings of occupational therapy, particularly of transformative self-regulation as it was co-constructed with the occupational therapist in guided debriefing interviews. The fourth section articulates the nature of guided reflection used by the occupational therapist.

Where coded textual messages are used verbatim in the presentation of results, they have been identified by speaker and by positioning in the guided debriefing interviews. For example, '1-C4' refers to Session 1, client's textual message 4 and '8-T33' refers to Session 8, therapist's textual message 33.

Case Overview

An accomplished businessman had increasing severity and frequency of both manic and depressive symptoms of bipolar disorder. His symptoms included increased irritability, paranoia, poor judgment, poor concentration and memory, and difficulty relating to others. Aware that he had a chronic illness, he hoped to be able to return to work as a self-employed entrepreneur so that he could adjust productivity demands to the unpredictable symptom fluctuations.

The client's over-arching goal was to use a set of distinct vocational skills he had mastered earlier in life to create a small business. From the start, he viewed intervention sessions as the laboratory for applying his technical computer skills to the steps involved in testing his small business concept. Specifically, he chose activities that incorporated the steps required to develop a product, to pilot-test it with a customer, to design a marketing strategy, and to estimate cost-revenue figures in order to determine whether it was a viable business.

Though this client felt competent with many computer-related activities, he revealed that he had been challenged by interpersonal relationships in a number of family, social, and vocational settings. He described difficulty controlling his irritable behavior in work relationships where he felt criticized, misunderstood, or minimized. His communication and interaction patterns had resulted in untenable interpersonal conflicts in past employment situations and dismissal by employers.

Though the client could articulate both activity and therapeutic goals, he was not aware of how they intertwined. He articulated the need to work better with people, but he perceived that interacting with others was part of marketing and promoting his business venture, that is, his activity goals. He identified the need to develop rapport and to work within a customer's time constraints, but his strategies were presented as action steps he could use to implement his consultation role. Devising ways to deal with "difficult people", that is, people who presented conflicts for him, was an aspect of customer relations, not a basic communication skill.

The complexity of communication and interaction was not apparent to him. He was unaware of the relationship between underlying body functions, particularly emotion

regulation, and his activity goals. Not realizing that working well with others was an internal process of self-regulation, his tendency was to look outward for sources of his limitations. He shifted responsibility for negative working relationships to his co-workers rather than viewing communication as a dynamic interaction with shared responsibility.

The occupational therapist, however, saw two distinct types of goals for this client. The first was consistent with the client's view and addressed the concrete steps of developing a small business. These types of goal were, indeed, activity goals appropriately addressed by occupational therapy. The occupational therapist could understand the client's perception that developing communication and interaction skills was one aspect of small business development. However, she perceived that working with people was much more than an activity goal. The second type of goal involved therapeutic development of a core social skill, that is, the capacity to interact cooperatively with others. Given that the client had two distinct but related needs, two types of goals were used to organize occupational therapy sessions: activity goals and therapeutic goals.

In guided debriefing interviews following the client's performance of therapeutic activities, the occupational therapist invited him to explain what had occurred in the intervention session. The client's explanation revealed how he understood his activity goals and his choices of occupational performance; it justified his illness symptoms, and examined his perceptions of the therapeutic relationship with the occupational therapist. The client's narrative in earlier debriefing interviews revealed that he initially did not discern that the development of communication and interaction skills was a central aspect of developing of a small business. As guided debriefing interviews progressed, however,

the client became more collaborative in the therapeutic relationship with the occupational therapist and began to extend this to working with customers. He became more introspective, seeking to understand his goals and performance from a more complex perspective that included the notion of dynamic interpersonal communication.

During each guided debriefing interview, the client explained his current pattern of self-regulation and its potential effect on his future productive endeavors. This design and testing of self-regulatory strategies coupled with explanation in guided debriefing interviews became a transformative aspect of this client's self-development. In this sense, transformative self-regulation was the vehicle for the client's ability to integrate and apply new self-knowledge while choosing self-regulatory strategies consistent with his goals and self-concept.

As guided debriefing interviews came to a close, the client's use of transformative self-regulatory strategies was integrated into how he viewed his future work endeavors. What had been an unconscious therapeutic process had become an explicit component of the client's skill set. On a deeper level, by integrating a compensatory set of transformative self-regulatory strategies, he had been able to re-frame his definition of possible and ideal selves. Transformative self-regulation, therefore, enabled him to expand his self-schema, to test and choose different ways to communicate and interact with others during conflict, and, as a result, to transform his self-concept to one able to engage in occupations and activities he found meaningful.

In summary, occupational therapy helped shape this client's capacity for goal achievement in ways that were not apparent to him at first. In the evolution of guided debriefing interviews, this client's evaluation and acceptance of unfamiliar self-

regulatory strategies for communication and interaction, particularly in conflict, was transformative. He became more self-aware by reflecting on the impact of his actions and reactions, constructing transformative self-regulatory strategies for future relationships. Self-development, then, was a cycle of self-awareness, competence, and reconstruction of self-concept that was navigated through transformative self-regulation. The central outcome of occupational therapy was constructed through transformative self-regulation and, further, this capacity for transformative self-regulation *was* the outcome.

As discussed in Chapter Three, mixed method analysis was chosen to increase the reliability and validity of conclusions drawn from the client's narrative data gathered in guided debriefing interviews. Content analysis measured known components of occupational therapy process, as discussed in Chapters One and Two. Descriptive analysis yielded additional interpretations of occupational therapy process and suggested relationships among process components that had not been evident in content analysis.

The interplay between content and descriptive analyses was a recursive rather than a linear evolution, requiring repeated and exhaustive review of guided debriefing interviews from multiple perspectives. By allowing diverse facets of meaning to come from the data, a profound and multi-layered therapeutic process of intervention was illuminated. This chapter presents the results as they were realized, beginning with quantitative findings from content analysis.

Content Analysis

Of the analysis strategies useful in case study research (Yin, 2003), this study relied on theoretical propositions about occupational therapy process in developing

operational definitions. The first step in analysis was designating operational definitions for the pre-designated components of occupational therapy process. These included goals, transformative self-regulation, reflection, activity demands, occupational performance, and participation in society. These six process components were operationally defined in order to systematically apply them to the 10 guided debriefing interviews.

Operational definitions. The six occupational therapy process components were defined.

Goals—Client goals, the driving force in the design of occupational therapy intervention, were separated into activity goals and therapeutic goals. Activity goals organized what the client wanted to achieve. These goals were related to the objects used in the therapeutic activity, actions required of the activity, space and social demands, as well as the nature of the therapeutic relationship.

Therapeutic goals were related to performance skills required of the client, specifically motor skills, process skills, communication and interaction skills, and the underlying body functions inherent in performance. Therapeutic goals were aimed at intrapsychic and behavioral changes the client wanted or needed to make.

Transformative self-regulation—The evolution of analysis, reconstruction, integration, and application of adaptive strategies was called transformative self-regulation in this study. Adaptation is well understood in occupational therapy as an intervention directed at "finding ways to revise the current context or activity demands to support performance in the natural setting…[and it includes] compensatory techniques" (Dunn et al., 1998, p. 533). Intervention involves an occupational therapist in "…focusing on changing the demands of an activity so that they are within the person's

ability level. These adaptations may involve the modification of the occupation itself by reducing its demands, the use of assistive devices, or changes in the physical and social environment" (Crepeau, Cohn, & Schell, 2003, p. 197).

In this study, transformative self-regulation was chosen to encompass the accepted definition of adaptation in occupational therapy, with the addition of two important factors. First, transformative self-regulation referred to the *client's* conscious choice of small, incremental accommodations in order to perform an activity. Transformative self-regulation was defined as an internal process that influenced a client's design of activity demands and performance skills and patterns in context. Second, this learned process of self-regulation was seen as transformative for a client. The ability to self-direct and to analyze the effectiveness of self-regulatory strategies was a skill that changed a client's capacity for engagement in occupations and activities.

Reflection—Reflection, uncovered in the previous study, referred to a client's analysis and interpretation of an event, idea, skill, or self-concept, for example. The nature and scope of analysis differed with relation to what was being analyzed, to how familiar or novel it was to a client, and importantly, to the client's capacity for critical thinking. Reflection was contrasted with description of occupational therapy process because it involved higher-level cognitive skills.

Activity demands—In occupational therapy theory, an activity has properties inherent in the tools, materials, and objects used in performing it. In this case, activity demands denoted the client's computer-related activities underlying his goal of small business development. The physical environment places demands on the activity also; space, lighting, arrangement of furniture, noise, and work surfaces can be used to

structure a therapeutic activity. Social structure, in particular, the hierarchical or collaborative interaction patterns required to perform the activity, places additional demands on an activity. Any activity requires that certain actions, such as physical movement, information processing, and interaction among participants, be carried out in sequence and at the proper time.

Another factor that places demands on an activity is a client's body functions. A client's ability to employ the required motor, process, and communication/interaction skills to perform an activity is influenced by underlying physical and psychological body functions, and these body functions are, in turn, influenced by the underlying anatomy and physiology, or body structures, available to a client (The American Occupational Therapy Association, 2002). Because illness, trauma, or the aging process can contribute to limitations in body functions and changes to body structure, a client may have difficulty with motor, process, and communication/interaction skills making occupational performance difficult, if not impossible.

Throughout evaluation and intervention, an occupational therapist and a client engage in a collaborative therapeutic relationship developed to help that client remediate and compensate for functional changes or loss. In addition to a therapeutically structured activity, an occupational therapist creates an empathetic, caring, relationship that respects a client's dignity while fostering his or her competence. To help clients attain their goals, occupational therapists may use their personal abilities and keen self-awareness; this is called therapeutic use of self (Frank, 1958).

Occupational performance—Occupational performance encompasses the skills needed to carry out valued activities of daily life. These may be in the areas of work,

education, play, and leisure in addition to the fundamental areas of personal self care, and instrumental activities of daily living such as meal preparation and clean up, home management, care of others, or financial management, for example. Occupational therapists work with a client to improve or enhance performance skills and patterns that lead to a client's capacity for engagement in occupations or activities so that he or she can be involved in desired life situations (The American Occupational Therapy Association, 2002).

More specifically, occupational performance refers to the motor, process, and communication/interaction skills needed to achieve goals. Motor skills refer to physical aspects of an activity, such as motions and positioning of the hands and head, for example. Process skills refer to information processing, organizing, sequencing, and other executive functions necessary to perform an activity. Communication/interaction skills refer to a client's ability to express needs and coordinate with others.

Participation in society—Engagement in activity in support of participation in society is defined as the outcome of occupational therapy (The American Occupational Therapy Association, 2002). Occupational therapy is committed to help clients carry out occupations and activities they find meaningful and motivating. The development of underlying performance skills and patterns is intended to facilitate a client's ability to be involved in purposeful occupations and activities in the future. Participation in society, as the outcome of occupational therapy, refers to a client's translation of occupational performance into fulfillment of future social roles, productive roles, and community roles. Becoming involved in life incorporates the capacity to engage in occupations.

These six central components formed the framework for content analysis and, later, for descriptive analysis of the single case used in this study. The meaning of each component was clear and consistent with occupational therapy's current theoretical base and model of practice. For ease in referring to process components, they were separated into two types. The first type was coined 'foundational process components' and it included goals, transformative self-regulation, and reflection. Foundational process components were thought to create the building blocks for a client's learning from experience. Integrating the capacity to adapt a purposeful activity involved a client in reflection. The second type was called 'instrumental process components' and it was comprised of activity demands, occupational performance, and participation in society. Instrumental process components, on the other hand, were seen as the means for achieving goals, the instruments for developing transformative self-regulatory strategies, and the focus of a client's reflection.

Now that foundational and instrumental process components had been operationally defined, the next step in data analysis was to use these definitions to understand the client's 10 guided debriefing interviews. Consistent with mixed method analysis (Tashakkori & Teddlie, 1998) described in Chapter Three, quantitative and qualitative analysis approaches were used to understand the six components of occupational therapy process of interest in this study. Content analysis (Krippendorf, 1980; Neuendorf, 2002) was chosen as the quantitative approach because it provided a way of identifying and tabulating components in narrative. Descriptive analysis (Creswell, 1998, Denzin, & Lincoln, 1994) was chosen as the qualitative approach

because it could lead to a practical understanding of the client's meanings, actions, and reactions as expressed in guided debriefing interviews.

Content analysis was selected as the first analysis approach because it could provide information about the distribution of process components. Before coding the guided debriefing interviews, the coding scheme proposed for this study was examined as it applied to the client's textual messages. In doing so, the previously defined operational definitions were illustrated with examples from the client's explanation of occupational therapy process as shown in Table 4.

Table 4

Application of Operational Definitions to Guided Debriefing Interviews

Foundational Process Components	Instrumental Process Components		
	Occupational Form	Occupational Performance	Participation in Society
Activity goals	"having the paper and pencil available, in addition to the computer" (2-C44)	"being able to look at two documents, two pages, side by side" [on the monitor] (2-C8)	"what I'm pursuing on that customer's behalf" (1-C28)
Reflection on activity goals	"a monitor that is appropriate for this kind of activity… [one with] good resolution" (1-C18)	"I got some insight into what needs to be done" (1-C2)	"depending on the users, the customer's needs and the customer's budget" (8-C4)
Therapeutic goals	no evidence found	"tuned in on an in-person situation…tuned into the body language" (2-C24)	"identify what some of the possible considerations are in terms of the [customer] relationship that might develop" (2-C4)
Reflection on therapeutic goals	"[to be] profit-oriented, [a relationship with the customer], that's a good thing" (8-C36)	"[a relationship forming] makes it easier to discuss [with the customer]" (8-C36)	"[guidelines for an interview with the customer] so that there are no misunderstandings a little bit later" (1-C36)

Table 4 (continued)

Foundational Process Components	Instrumental Process Components		
	Occupational Form	Occupational Performance	Participation in Society
Transformative self-regulation for activity goals	"it's important that the desk or table height…the monitor…the chair are at the right point" (1-P16)	"I can type faster than I can write things" (1-C28)	"there might be a situation where they would have to call their boss… or they might have some other thing going on with themselves" (3-C15)
Reflection on transformative self-regulation for activity goals	"if it's too many [people in the environment], it would be very distracting and disruptive" (2-C19)	"[problems with the computer hardware] were not my problem" (5-C50)	"there are going to be circumstances where the customer is not going to want to stop his or her thought process" (1-C28)
Transformative self-regulation for therapeutic goals	no evidence found	"[another person working in the computer room] was okay…she was working on her own thing, there wasn't any cross-conversation, or anything that would be interruptive" (7-C54)	"I was thinking about that technique, and bringing that technique [not blaming others] into the business arena" (9-C16)
Reflection on transformative self-regulation for therapeutic goals	"there needs to be …just something to kind of mask [too much noise in the environment]" (1-C10)	"[just wait quietly]...it's very hard for me to do that" (7-C20)	"[I doesn't have to be a close working relationship with everyone"" (10-C18)

This version of the coding scheme clarified how the client's actual words were to be coded. Both coders developed this template before coding the data to be certain that the data was coded reliably. The next section describes how the coding scheme was applied to the guided debriefing interviews in content analysis.

Application of coding scheme. The coding scheme was pilot-tested with two coders. Coders used the coding scheme and operational definitions to assign codes to one guided debriefing interview independently. Consensus was reached after discussion, and

a set of clarified operational definitions was pilot-tested on two additional guided debriefing interviews. Once the coding scheme was applied reliably by the two coders in a total of three guided debriefing interviews, they independently assigned codes to the remainder of the client's guided debriefing interviews before meeting to establish consensus. All final codes were assigned with full agreement of both raters.

Codes recorded on spreadsheets were tallied and quantitative data was culled to answer the study's research questions. Because the intent of this study was to understand client views, data from only the client's textual messages were included in content analysis, though both the occupational therapist's and the client's textual messages were fully coded. In addition, code frequency and proportion were calculated for instances where only *one* code was assigned to the client's textual messages. Data from textual messages assigned more than one code (combination codes) were addressed in descriptive analysis.

Because the initial point of analysis was the distribution of occupational therapy process components, codes from each guided debriefing interview were tallied for both foundational and instrumental process components (Supplement). From this master spreadsheet, data were segmented and organized in tabular form to answer the study's research questions.

Distribution of Process Components. This section describes findings from content analysis, organizing the data to answer this study's research questions.

1. <u>How did the client attend to activity and therapeutic goals?</u>

The first research question established the relative proportion of this client's explanation of his performance of therapeutic activities. Goals, transformative self-

regulation, and reflection were tallied as they applied to activity goals and to therapeutic

goals. This yielded the relative proportion of the client's attention to each type of goal as

expressed in his explanation of how he adapted and compensated to address his goals and

in his insights about occupational therapy. Distribution of the foundational components of

occupational therapy process is presented in Table 5.

Table 5

Distribution of Foundational Process Components

Process Component	Activity Goals	Therapeutic Goals	Total (n=613)
Goals	101 (16.48%)	19 (3.10%)	120 (19.57%)
Transformative self-regulation	166 (27.08%)	27 (4.41%)	193 (31.49%)
Reflection	218 (35.56%)	82 (13.37%)	300 (48.94%)
Total	485 (79.12%)	128 (20.88%)	613 (100.00)

There was a marked distinction between the client's overall explanation of

activity goals (79.12%) and of therapeutic goals (20.88%), indicating he paid least

attention overall to the therapeutic goal of refining communication and interaction skills.

The client's focus naturally fell to his expressed goal of developing a small business. The

distribution between activity goals and therapeutic goals was repeated for transformative

self-regulation with the client's reference to activity goals (27.08%) far exceeding

therapeutic goals (4.41%), and for reflection with activity goals (35.56%) exceeding

therapeutic goals (13.37%). These findings illustrated that the client's conscious intention

was to achieve his activity goals, and this validated occupational therapy's intervention

approach using therapeutic activities. The marked distinction between activity and

therapeutic goals was used to organize the remainder of the analysis.

Analysis turned next to transformative self-regulation. The client explained how

he adapted and compensated in performing therapeutic activities in approximately one-

third of his textual messages, as measured by the relative proportion of transformative self-regulation (31.49%). This was not surprising because adaptation and compensation epitomize the over-arching aim of occupational therapy. It was unusual, however, to find that this client could explain explicitly how he adjusted activity demands and how he used specific self-regulatory strategies to perform therapeutic activities. His awareness, exploration, and testing of goal-directed adaptation and compensation was guided by the occupational therapist following intervention sessions.

There were two predominant reactions to guides provided by the occupational therapist: explanation and reflection. Explanation yielded information about *what* happened and *how* it happened in context, thereby, uncovering the client's perspectives on causal relationships. Explanation was oriented to his present performance of therapeutic activities.

Reflection, in contrast, revealed how the client understood his actions and reactions, that is, the meaning he attributed to them. Comprising 48.94% of process components, reflection was clearly different from explanation. In guided debriefing interviews, this client could interpret and synthesize relationships between his actual performance of therapeutic activities and his future engagement in purposeful occupations. He could articulate what he had learned and how he generalized that to other situations in the immediate and more distant future. The client reflected on his goals, on activity demands, on his occupational performance, on intended engagement in occupations and activities to support social participation, and on transformative self-regulation. Reflection revealed the client's framework for interrelationships among process components.

It is important to note that the six pre-identified process components completely explained the data. The content of textual messages was fully coded and no additional components were revealed. Content analysis had answered the first research question; analysis turned to examine relationships among process components.

2. <u>How were process components related to each other?</u>

Analysis of relationships among foundational and instrumental process components was conducted in stages. To begin, relationships among goals and instrumental process components (activity demands, occupational performance, and participation in society) were examined. Goals were thought to have a distinct and separate function in occupational therapy process. Goals gave direction to intervention.

Transformative self-regulation, on the other hand, targeted the client's adaptation and compensation in order to perform therapeutic activities. Transformative self-regulation occurred within intervention implementation and was the skill carried over into engagement in activity to support participation in society. Relationships among transformative self-regulation and instrumental process components were of interest in this part of the analysis. Frequencies and proportions of goals and transformative self-regulation were calculated as they related to instrumental process components (Table 6).

Table 6

Distribution of Goals and Transformative Self-regulation Among Instrumental Process Components

Process Component	Activity Goals		Therapeutic Goals		Total (n=613)	
	f	*%*	*f*	*%*	*F*	*%*
Goals						
Activity demands	23	3.75	0	0.00	23	3.75
Occupational performance	53	8.65	11	1.79	64	10.44
Participation in society	25	4.08	8	1.31	33	5.38
Total	101	16.48	19	3.10	120	19.57
Transformative Self-regulation						
Activity demands	42	6.85	0	0.00	42	6.85
Occupational performance	98	15.99	22	3.59	120	19.58
Participation in society	26	4.24	5	0.82	31	5.06
Total	166	27.08	27	4.41	193	31.49

Expected, though nonetheless important, the instrumental process component of occupational performance was the primary focus of the client's intention and adaptation. It was surprising, however, that the client attended to ways of performance in relation to goals (10.44%) only about half as often as he did to transformative self-regulation (19.58%). This was an early indication that transformative self-regulation may be a central factor in occupational therapy process.

In contrast to the explanation of goals and transformative self-regulation, reflection involved higher-level processing skills, such as analysis and synthesis, leading to integration and application. Reflection was applicable to any other process component. For example, the client reflected on goals, on transformative-self regulation, on activity demands, on occupational performance, and on participation in society. Content analysis next sought frequencies and proportions of relationships among reflection, instrumental

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process components, and other foundational process components, again distinguishing

between activity and therapeutic goals. Table 7 presents this distribution.

Table 7

Distribution of Reflection Among Process Components

Process Component	Activity Goals		Therapeutic Goals		Total (n=613)	
	f	%	*f*	%	*f*	%
Reflection on Goals						
Activity demands	24	3.92	1	0.16	25	4.08
Occupational performance	37	6.03	10	1.63	47	7.67
Participation in society	20	3.26	6	0.98	26	4.24
Total	81	13.21	17	2.77	98	15.99
Reflection on Transformative Self-regulation						
Activity demands	46	7.50	3	0.49	49	7.99
Occupational performance	82	13.38	45	7.34	127	20.72
Participation in society	9	1.47	17	2.77	26	4.24
Total	137	22.35	65	10.60	202	32.95

There were three key findings from this part of the analysis. First, occupational

performance was the focus of greatest reflection on goals (7.67%) and on transformative

self-regulation (20.72%), a finding consistent with the earlier result. Second, reflection on

transformative self-regulation (32.95%) was more frequent than reflection on goals

(15.99%). Third, the client's reflection on adaptation of communication and interaction

(10.60%) was more than three times as frequent as reflection on his intent to

communicate and interact (2.77%). For this client, then, occupational therapy was the

forum for conscious adaptation and compensation of occupational performance.

At this point, findings provided a distribution among all guided debriefing

interviews combined, but it was not clear how process components were distributed

across sessions. The third research question sought information about the evolution of the

client's views on occupational therapy process.

3. <u>How were process components distributed across guided debriefing interviews?</u>

Content analysis provided the means to examine the distribution of process components across the 10 guided debriefing interviews. As in previous parts of the analysis, activity and therapeutic goals were distinguished. Information about reflection was sought for both goals and for transformative self-regulation. Instrumental components were not highlighted at this stage because previous analysis had shown that occupational performance was the predominant focus of the client's explanation. Additionally, the client's focus on occupational performance was consistent across guided debriefing interviews. Frequencies of codes for foundational process components were found for each of the 10 guided debriefing interviews (Table 8).

Table 8

Distribution of Foundational Process Components Across Guided Debriefing Interviews

	Debriefing Interview	Activity Goals	Therapeutic Goals	Transformative Self-regulation: Activity Goals	Transformative Self-regulation: Therapeutic Goals	Reflection: Activity Goals	Reflection: Therapeutic goals	Reflection on Transformative self-regulation: Activity Goals	Reflection on Transformative self-regulation: Therapeutic Goals
		f	*f*	*f*	*f*	*f*	*f*	*f*	*f*
Earlier	1	21	7	22	2	16	3	31	4
	2	8	4	22	0	9	3	22	10
	3	18	1	7	0	11	3	7	1
	4	11	2	15	0	9		7	2
	5	10	0	21	0	11	0	20	3
	6	7	0	7	0	4	0	7	0
	Sum= 368	75	14	94	**2**	60	9	**94**	**20**
Latter	7	10	0	25	9	7	0	6	12
	8	2	0	18	5	6	5	14	4
	9	8	1	21	7	4	2	16	13
	10	6	4	8	4	4	1	7	16
	Sum= 245	26	5	72	**25**	21	8	**43**	**45**

Comparing the earlier and the latter guided debriefing interviews, a pattern indeed emerged. That pattern had several distinguishing characteristics. First, activity goals were consistently given greater attention at all points along the continuum of intervention. However, there was an increase in the client's focus on therapeutic goals in the latter guided debriefing interviews. To illustrate this, data for transformative self-regulation

were compared. There was an increase in transformative self-regulation for therapeutic goals, from 2 of 96 (2.08%) codes in the earlier guided debriefing interviews to 5 of 72 (34.72%) codes in the latter guided debriefing interviews. Reflection on goals indicated a similar shift. The client referred to therapeutic goals 9 of 69 (13.04%) times in the earlier guided debriefing interviews and 8 of 29 (27.59%) times in the latter guided debriefing interviews. The pattern remained consistent with reflection on transformative self-regulation. The client emphasized therapeutic goals in the latter guided debriefing interviews (45 of 88 codes or 51.14%) more than the earlier guided debriefing interviews (20 of 114 codes or 17.54%). For each of the foundational components, the client explained issues related to his communication and interaction more often in the latter guided debriefing interviews; how he addressed his therapeutic goals evolved.

Importantly, so did his attention to transformative self-regulation. A comparison of goals and transformative self-regulation showed that the client explained and reflected on goals (n=158, 42.93%) a little less often than transformative self-regulation in the earlier guided debriefing interviews. In contrast, there was a substantial increase in the client's explanation and reflection on transformative self-regulation in the latter guided debriefing interviews (n= 185, 75.51%). The client's adaptation and compensation were the major topics he discussed as guided debriefing interviews evolved. Discovering a marked increase in the client's attention to therapeutic issues and transformative self-regulation in the latter debriefing interviews was noteworthy.

Four conclusions could be drawn from content analysis: the client clearly and consistently distinguished activity and therapeutic goals; occupational performance of therapeutic activities was his primary vehicle for explaining occupational therapy

process; therapeutic issues were more predominant in the latter guided debriefing interviews; and transformative self-regulation became more conscious to the client in the latter guided debriefing interviews. Understanding these findings more fully required additional analysis.

Findings from content analysis were based on assignment of single codes to the client's textual messages. There were, however, multiple instances where textual messages were assigned more than one code, or "combination codes". The relatively high proportion of combination codes (30.26% of 879 total codes assignments) conveyed that words and phrases conveyed multiple levels of meaning for this client. Though unexplored so far, combination codes suggested that there might be other components of occupational therapy process not visible through content analysis. For this reason, analysis was steered to examine the complex, multifaceted process of occupational therapy more closely.

It was determined that this line of inquiry was not informed by additional content analysis. Instead, another approach was needed to understand the evolution of transformative self-regulation and of this client's therapeutic goal of developing communication and interaction skills. This need was addressed through descriptive analysis of the guided debriefing interviews.

Evolution of Client Views on Occupational Therapy Process

From this point on, analysis of this case proceeded in true qualitative fashion and inductively generated a language and delineated constructs to describe occupational therapy process. Analysis was not organized around the application of a model to the data because no model was available at the time. Instead, it was a recursive process of

discovery that sought to understand how the client developed insights through guided

debriefing interviews. Results of this descriptive approach were organized to address the

final research question.

4. <u>How did the client act and react in guided debriefing interviews?</u>

The initial direction of descriptive analysis originated from the findings of content

analysis. Viewing the proportions of process components over the course of guided

debriefing interviews had revealed an evolution in this client's views, an evolution that

altered his explanations of communication and interactions. Yet unclear were the

distinguishing mechanisms of this transformation.

To better understand the client's evolution, descriptive analysis was organized to

augment insights into occupational therapy process components that had been measured

in content analysis. Three focal themes emerged: goal-directed performance of

therapeutic activities, his experience of conflict in interpersonal relationships, and

developing and testing transformative self-regulatory strategies. With each of these

client-centered themes, he both explained and analyzed occupational therapy process,

reinforcing the use of reflection as an important component of his learning experience.

The three core themes of goal-centered occupational performance, the conflict

experience, and transformative self-regulation framed the cross-session descriptive

analysis that is presented next.

Goal-driven occupational performance. Descriptive analysis of goals confirmed

the findings from content analysis. This client distinguished activity from therapeutic

goals. He chose therapeutic activities aligned with his goal of examining the feasibility of

his small business concept and evaluated whether he could funnel his skills into a

profitable venture. At the start of the guided debriefing interviews, everything else was

secondary and peripheral to this aim; his activity goals were clearly defined and they

guided his occupational performance. The client was most explicit about what he did; his

choices of therapeutic activities are listed in Table 9.

Table 9

Activities the Client Performed Across Sessions

Debriefing Interview	Activity Focus
1	Narrowing an Internet search
1	Recommending improvements to the computer room environment
1, 3, 8	Identifying ways to establish rapport with future customers
1, 2, 9	Copying information from the Internet to a word processing program
1, 2, 3, 5, 8	Addressing improvements in the computer memory, monitor, or printer
2	Testing language to assess customer needs
3	Working with 2 software programs simultaneously
3, 7, 9	Assessing future customer needs and work style
3, 4	Requesting and working with a pilot customer (physical therapist)
4	Seeking information to determine the cost-benefit ratio of consultation services
4, 5	Transferring files form the Macintosh (MAC) to the personal computer (IBM)
4	Developing a budget
5, 8	Setting up bookmarks
5, 8	Using bookmarks in the Internet for different customer topics
5, 6, 8	Intuitively using unfamiliar software applications
5	Saving and transferring files
5, 8	Evaluating and improving layout of the computer room
5	Assembling an adjustable computer table
5, 6, 7	Drafting and editing a marketing brochure
5	Working with the facility's computer technology specialist
7	Assessing possible formats for the brochure
	Choosing art work for a logo
7, 8, 9	Working with other people in the computer room
8	Printing to a color printer
8	Identifying the need for promotional materials for different audiences
8	Accommodating changes in the environment and availability of computers
9	Taking responsibility for the negative outcome of a prior attempt to troubleshoot
9	Pulling a list of political representatives for future advocacy efforts
9	Exploring generalization of learning to the "real world" (9-C32)
10	Reviewing accomplishments and learning in occupational therapy at discharge
10	Emphasizing the importance of relationships with others as a core outcome of occupational therapy intervention

From the beginning, however, the client found that attempts to achieve his activity goals were interrupted by the poor condition of the computer equipment. He found himself channeled involuntarily into addressing additional activity goals that included troubleshooting numerous computer hardware and software problems and rearranging the work environment. The environmental challenges were numerous and persisted

throughout the course of occupational therapy because this was a new program offering in its very early pilot phase.

Negotiating for needed tools and resources affirmed his expertise in computer technology, but it did little to further his initial goal of product design and testing. Understandably, the futility of his efforts forged a debilitating frustration that escalated across the earlier guided debriefing interviews. Rather than expressing his exasperation directly, he described how the out-dated and chaotic working conditions thwarted goal attainment. His reaction to conflict paralleled his reports of previous difficulties at work: he blamed others, withdrew, and circumvented the perceived flaws of co-workers who 'forced' him to manage their negativity. Regulating negative emotions seemed impossible because he felt powerless to alter his neural circuitry, so he took little responsibility for his expression of negative emotions. His ineffectual approach to converting his needs into corrective action collaboratively had resulted in irritability, angry outbursts, and deteriorating interpersonal relationships.

Because he was confronted with similar frustrations in occupational therapy, his therapeutic goal of interacting effectively with others became enmeshed with his activity goals. However, he was not aware that collaborating with the occupational therapist to perform therapeutic activities provided a testing ground for developing communication and interaction skills. The therapeutic challenge was to introduce shared responsibility for constructive communication and interpersonal interactions into the client's activity of developing a business. The occupational therapist drew his attention to "challenging people you [might work] with, people that might be more difficult to work with" (1-T25). This structure, repeated across the guided debriefing interviews, helped him supplement

his repertoire of communication and interaction skills, despite it being an unconscious process at first.

The client examined customer relations from different perspectives as he explained his occupational performance. He sought ways to determine "the customer's general objectives and how that customer wants to work on it…" (1-C36). He considered how to reach customers: "getting some promotional materials together" (5-C56). These kinds of situations provided opportunities for him to analyze challenges to negotiating interactively with others and to articulate more effective alternatives. In each guided debriefing interview, he explored and tested novel communication and interaction strategies and evaluated how they influenced goal attainment.

As guided debriefing interviews evolved, he could generalize from his interactions with the occupational therapist, highlight the importance of communication and interaction, and convey his understanding of relationship building with future customers. "[Knowing that the occupational therapist over time] made it easier to discuss…to get to know each other and to talk about many different things…and that's no different than a customer situation" (8-C36). He analyzed that "many times I've looked at things as if they should happen right now, they should be one-two-three, and that includes relationships. And I guess, looking back at it, relationships that have worked here have taken place over a period of time" (10-C14). His own words demonstrated that he had integrated transformative self-regulation and started to reconstruct his capacity for effective communication and interaction.

At this point in the analysis, it was affirmed that occupational therapy was indeed a client-driven evolutionary process of goal definition and revision aimed at increasing

competence. Merely identifying the client's goals, however, did not reveal much about the underlying process of learning from therapeutic activities. To better understand the process of occupational therapy, analysis turned to examine the client's experience of frustration and to uncover how it affected his occupational performance.

The conflict experience. The essence of the conflict for this client was the disparity between activity demands and goal attainment. In keeping with occupational therapy's use of meaningful activity, it was thought that occupational therapy intervention would provide an arena for showcasing this client's competence in computer-related activities. But his proficiency was hindered by the ongoing challenges he faced with the software, memory, and printing capabilities of outdated computer equipment.

A well-functioning computer room was the essential tool this client needed to achieve his goals, yet it failed him. He explained, "[I] never got a chance to actually go through [transferring data from the Internet to a word processing [document] because the computer bombed out" (2-C46). The computer froze using the Internet and a word processing program simultaneously due to insufficient memory. In rebooting the computer, he lost information he had retrieved and formatted, and had to begin again. Dealing with computer problems took so much time that he only "had a 15-minute hour" (2-C16).

As guided debriefing interviews progressed, he attempted to express his frustration. At first, he rationally conveyed the impact of a disruptive environment on his goals. The disarray and cramped condition of the computer room were problematic. It was evident to both the occupational therapist and the client that this severely disheveled

workspace was "not as productive as it should be" (2-C6). Further, the computer room was annexed to a larger clinic where other intervention occurred and where staff held administrative meetings or engaged in spirited lunchtime discussions. He acknowledged that so much noise was "very distracting and disruptive" (2-C20).

Though continuing to advocate for his needs, he minimized his frustration at being unable to meet his activity goals. For example, he emphasized that inadequate equipment was "a waste of time…jarring" (2-C48). Seeing no adjustments, he noted, "The environment has not changed much since we've talked about it…The system [administrative support to supply working equipment and improve office environment] did continue to fail, and so that's a little bit frustrating…" (3-C12). In part, this deflection may have helped him avoid expressing his disappointment and anger directly to the occupational therapist and the organization.

To remedy the problems independently, the client applied his knowledge of computer technology and programming plus his work experience to tweak the computer's operating system. Outside of intervention sessions, he independently tried to circumvent insufficient memory by reprogramming the computer, a strategy that caused him to introduce new problems unknowingly. Unfortunately, none of his expertise could solve the problem of allocating funds to purchase additional memory for the computer, the root cause of the problem.

The futility of his efforts to acquire adequate computer resources became the catalyst for a deeper conflict. This client's difficulty interacting with others, particularly when overcome with negative emotion, made the conflict untenable for him. He saw himself as ineffectual in negotiating for his needs. His perceived incompetence and

powerlessness in the hierarchical occupational therapist-client relationship created a dynamic tension that may have contributed to his indirect style of communication.

The client's reluctance or inability to discern communication and interaction issues made the conflict even more complex. When the occupational therapist encouraged him to examine how he interacted with people, he interpreted this as a lack of endorsement of his 'real' goals, that is, his conscious activity goals. Because he was unaware of how performing a therapeutic activity blended his activity and therapeutic goals, the conflict escalated. In addition, the symptoms of bipolar disorder compromised his ability to regulate emotions, so the frustration was felt even more acutely. The significance of this underlying interpersonal conflict was that it provided an opportunity for the client to explore and test ways of interacting with others in negative situations through his relationship with the occupational therapist.

The client had come to expect that performing a therapeutic activity meant he was likely to become frustrated. Each successive computer glitch fueled his disappointment until he erupted in anger, to his embarrassment, in the fifth guided debriefing interview. "Maybe throwing the problem at someone else, and sometimes that's where it belongs… It really was not my problem, even though I tend to think of it as my problem…It was someone else's problem. And that person [the occupational therapist] having stepped up to it, and made some calls as to how it might be resolved. But that's a key for me, is to be able to say to someone else, 'I've done what I can do; here it is, it's your problem". (5-C50). The client had evolved from explaining the impact of poor working conditions, to describing their limitations on his performance, to expressing anger overtly at the perceived shortcomings of the occupational therapist.

The conflict had developed over four guided debriefing interviews, but it de-escalated quickly. When the client acknowledged his emotional shift from frustration to desperation, the occupational therapist empathized, "…it's very hard to be …stifled time after time by the technology…I can certainly understand the frustration" (4-T35). The client's response was to reiterate his recommendations but also acknowledge restraints in the organization: "Well, getting into the real world, I would probably handle the technical problems a little bit…[differently]…I might [solve them myself], or I might call in outsiders…And I know some of those things cannot quite so easily be done here" (4-C36, C38). After expressing his anger and being supported for doing so, his explanations became less intense and at times humorous: "Well, the environmental issues…" (6-C4), followed by laughter. He talked about losing 20-25 minutes "playing around with [computer problems and printer problems]" (6-C6).

This client experienced an evolution in how he managed conflict. He shifted from requiring specific equipment to a more collaborative interaction with the occupational therapist. Yet, it was not clear how that evolution took place. One explanation was that transformative self-regulation was developed by the client in his performance of therapeutic activities. Transformative self-regulation, therefore, was the next focus of descriptive analysis.

Developing and testing of transformative self-regulation. Examination of the client's textual messages across guided debriefing interviews revealed that the client chose a variety of transformative self-regulatory strategies at different points in time. How he chose goals, performed therapeutic activities, and communicated with the occupational therapist illustrated multifaceted transformative self-regulatory strategies,

even though self-regulation was an unconscious process for this client through the earlier guided debriefing interviews.

To hone in on the component of transformative self-regulation, the first step was to identify types of self-regulation and when the client used them. The conflict experience permeated the first six guided debriefing interviews; it was a decidedly negative experience for the client, one that he had trouble articulating explicitly. Once the client was able to communicate his anger and found that he was not criticized for it, the tone of guided debriefing interviews became collaborative and positive. This part of the analysis, then, sought to understand the client's transformative self-regulatory strategies in situations he perceived as negative and in situations he found to be positive.

Transformative self-regulatory strategies were grouped into positive and negative types. When the occupational therapist was perceived as antagonistic, three clusters of self-regulatory strategies were more evident. Similarly, another three clusters of strategies emerged when the occupational therapist was perceived as an ally. Transformative self-regulation in the negative experience of conflict is explored next.

When the client viewed the occupational therapist as an antagonist, he used strategies intended to help him withdraw and to prevent overt conflict with the occupational therapist. The three clusters of strategies he used have been called Avoid/Ignore/Deny, Protect/Justify/Rationalize, and Challenge/Confront/Blame. Examples of each cluster follow.

Avoid/Ignore/Deny—Use of these transformative self-regulatory strategies prevented the client from interacting with the occupational therapist around sensitive issues. There were many illustrations of this kind of transformative self-regulation,

particularly in the earlier guided debriefing interviews. The occupational therapist noted that the client was "whipping from one concept to another, trying to put in this bookmark, or trying that technique…" (5-T25). She asked if the client was distracted and the client responded "No, I don't perceive it…that's normal for me" (5-T27, C30). The client attributed his disorganized style to manic illness symptoms. This avoidance of discussing his performance restricted him from examining how he might adapt to his illness symptoms.

Protect/Justify/Rationalize—Here, the client justified his behavior based on illness symptoms. Seeking information about the client's frustration, the occupational therapist acknowledged the lack of assistance from the organization's computer technologist: "Searching for help, not being able to quite get the help we needed at the moment. So, we finally figured out how to adapt through it, but [it was frustrating]…" (6-T7). The client rationalized his frustration, saying, "What I find that that does to me is that that interferes with my thought process for some time, even after the immediate problem is resolved. Because I tend to dwell on that a little bit" (6-C8). He explained that nonmalleable illness symptoms inhibited adaptation or transformative self-regulation. Protect/Justify/Rationalize, then, sustained the client's initial conceptual framework of his illness and limited his exploration of alternate behavior choices.

Challenge/Confront/Blame—With this cluster of strategies, the client shifted responsibility to the occupational therapist or the organization. These strategies were repeated often during the conflict experience. For example, the occupational therapist posited that "…we were both creating some language to help guide how you end up relating to customers" (2-T17) and the client replied, "I think we were discussing

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terminology, and I don't think I arrived at a decision as to what the correct terminology should be…so that others can easily understand" (2-C18). What at first appeared to be a clarification instead distracted the client from the real therapeutic goal of finding ways to work comfortably with people when he experienced frustration.

The three clusters of strategies used during conflict had a negative effect on the client's ability to achieve his goals. They impeded the goal of managing communication and interaction issues, specifically his flexibility to use novel transformative self-regulatory strategies. He could see first-hand that he had trouble resolving conflict with the occupational therapist. Additionally, they set up a barrier between him and the occupational therapist, impeding collaboration on his activity and therapeutic goals. Any reference to the notion of improving himself or to learning new strategies for successful interaction with others was taken as a criticism by the client. To protect himself, he ignored the occupational therapist's viewpoint, challenged her perspective, and blamed the organization for faulty equipment. Because these negative strategies were ineffective in minimizing the conflict, they heightened the client's anxiety about communication and interaction with future customers.

In contrast, the client used three clusters of transformative self-regulatory strategies in positive portions of the guided debriefing interviews. When the client came to view the occupational therapist as ally, he used strategies that enhanced achievement of both activity and therapeutic goals. These have been called Notice/Compliment/Affirm, Clarify/Expand/Illustrate, and Synthesize/Profess/Use. Examples of each cluster highlight the contributions these positive transformative self-

regulatory strategies made to the client's success in communication and interaction, and by extension, to his long-term entrepreneurial goal.

Notice/Compliment/Affirm—After an effective collaboration with the occupational therapist, the client evaluated the interaction. "I think you're different than the way most people would address situations like that, and that's your background, your training…You don't say, 'I don't like that'. You say, 'Is there another way that could be done?'...You always point out what you like about it, and then, 'Why did you add this? How would it look if…?' and you do it in a way that's very diplomatic" (7-C36, 38). "All I'm pointing out is that you're non-confrontational, and I believe that many other people, innocently, are confrontational, as I perceive them" (7-C44). By highlighting the occupational therapist's style, he saw that collaborating with others was possible.

Clarify/Expand/Illustrate—This cluster of strategies was observed when the client could detail potentially provocative features of conflict. For example, when asked about working with four people in the same small room, the client noted that "…all are known to me, and it's a cordial relationship. So it's okay. I guess that says something: if the right people are there, it's okay to have some of this distraction" (9-C10). "None of these people are there to critique me, to make demands upon me, and that's very important. So while we had some chit-chat, ...it wasn't intrusive in terms of what I was trying to accomplish...I was focused, one part of my brain, I guess, was focused on what I was trying to do. Another part of my brain was focused on the idle chatter that was going on. But the two didn't interfere. That's very important" (9-C12). His analysis of the interaction provided information about how he might use transformative self-regulation

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in the future by becoming aware of his surroundings and how they affected his performance.

Synthesize/Profess/Use—Here, the client synthesized his reaction and generalized it to future situations. When asked the effect of hypomania, the client explained, "I'm not sure about that. I think I'm in a little bit of a revved up mode, and when I am, I kind of want to forge ahead, and that's totally opposite of how I am when I'm in a somewhat less positive mode, when I'm in a depressed mode. At those points, I probably have no interest in doing anything" (6-C16). To manage hypomania he suggested, "I get a little bit antsy, nervous, compulsive, and I find it difficult sometimes just to sit still" (7-C8). "I need to train myself to stay on activity" (7-C12), …"stay tuned in and quiet" (7-C14), …"concentrate" (7-C16), …"just wait quietly. It's very hard for me to do that, but it's an important thing" (7-C20). This sequence aptly illustrated the client's anticipated use of transformative self-regulation to check how he would express his emotions in order to accomplish his goals.

At this point, there appeared to be a relationship between what the client perceived as a positive or negative interpersonal situation and the type of transformative self-regulation he chose. In reality though, any one of the clusters of strategies presented an opportunity for the client to evaluate its effect on his goals. His revelations about novel approaches to monitor and regulate his emotions, and by extension his behavior, were professed to be self-evident but, in fact, were seen by the occupational therapist to be the culmination of his reflection in guided debriefing interviews.

The client's conception of relationships and his improved skill in interacting with people evolved over the course of the guided debriefing interviews. Based on his

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experiences with the occupational therapist, he began to analyze how different styles of interacting affected his performance and goal achievement. Near the end of the guided debriefing interviews, he synthesized what he had learned about close working relationships. "It's a matter of just developing your relationship, working on it. It's like a project…a relationship is a project of sorts… [for it] to work, you have to be attentive to it…another part of, I think, developing relationships is to value not just the similarities, but to value the dissimilarities as well as the complementary factors. They're all important. They all play a role" (10-C20, 24). Importantly, he had integrated the ability to communicate and interact via guided reflection on his actions and reactions and those of the occupational therapist. In this sense, reflection was a vehicle for transformative self-regulation. Through guided reflection, the client was able to discern what adaptations and compensations he used to achieve his goals and to internalize transformative self-regulation.

Examining the three core themes of goal-driven occupational performance, the conflict experience, and transformative self-regulation had revealed important aspects of the client's experience in occupational therapy. Notably, the client's reflection was a prevalent part of his goals and transformative self-regulation. However, a fourth theme appeared, namely, the nature of the occupational therapist's scaffolding for client reflection. This theme differed from the other three because it centered on the therapeutic role of the occupational therapist. The nature of guided reflection had not been revealed as a component of occupational therapy process at the start of the analysis and, therefore, was not measured in content analysis. Because reflection was viewed as a pivotal factor

in the client's transformation, understanding how the occupational therapist guided the client's reflection was the next focus of analysis.

The Nature of Guiding Reflection

At this point, descriptive analysis revealed that learning from therapeutic activity was more complex than merely performing a motor skill, using information processing, or interacting with others, in anticipation that learning would carry over to a client's future participation in society. The core of the client's learning appeared to derive from reflection on his performance of goal-directed therapeutic activities. Specifically, how the occupational therapist guided the client to reflect was not clear yet because guiding reflection, or scaffolding, was not a conscious part of occupational therapy process at the time the guided debriefing interviews were conducted. Understanding scaffolding and guided reflection, however, was essential if the study was to be replicated.

This section of the chapter reports on how the occupational therapist used scaffolding to guide the client's reflection. The client's responses to scaffolding had been examined, so they are not reported at this time. Guided reflection was divided into seven types and examined in relation to occupational performance, the dominant instrumental process component identified in content analysis. The occupational therapist guided the client to explain, analyze, explore, test, accept, reconstruct and integrate his performance of therapeutic activities following routine occupational therapy intervention. The ways in which the occupational therapist guided the client to reflect was described as scaffolding because it helped the client construct a framework for examining his occupational performance. Scaffolding took the form of questions or statements posed to the client, or

it presented a therapeutic perspective and sought the client's reaction, or it provided the occupational therapist's view and asked the client to react.

Scaffolding for explanation—Explanation was sought because it provided insight into how the client perceived causal relationships among activity demands, his performance, and future engagement in occupation or activity. Focused Interview (Appendix D) questions were conducive to guiding the client's explanation of activity demands and his performance relative to the intervention goals. After a brief statement on what the client did, she asked, "How was working on that for you?...Could you tell me more about what you did?" (2-T1, 3), "Can you tell me what you did and how it was for you?" (2-T3), or simply "How did that go for you?" (9-T1). Scaffolding for explanation of activity goals was prevalent in the beginning portion of each guided debriefing interview but less frequent overall because the client needed less scaffolding to explain his activities.

For therapeutic goals, scaffolding for explanation was seen throughout guided debriefing interviews. This type of scaffolding often asked the client to explain his reactions to an aspect of interpersonal relationships that occurred as part of intervention. For example, the occupational therapist asked, "I'm wondering if you could say something about working in this relationship versus what might occur with other?" (1-T25), or "In the beginning, I was consciously trying to be quiet…Did you feel that I didn't care?" (2-T21). When the client began working with a pilot customer to test his product, the occupational therapist modified the focus of scaffolding: "Did you get from working with [your pilot customer] sort of a theme of what his underlying needs were?" (4-T9) or "How would one express it when you're at your maximum level of tolerable

frustration…?" (5-T43). Scaffolding for explanation of the client's communication and interaction was often preceded by an observation or a synthesis of an event so that he could reflect on a specific situation. In addition to guiding the client's explanation, the occupational therapist guided him to analyze the learning experience.

Scaffolding for analysis—The occupational therapist introduced the overall approach to in-depth reflection by framing the client's analysis, "So it was almost by our interaction that we were able to figure out what you needed to do to keep developing this as a small business" (1-T7). Scaffolding to analyze activity demands was frequent, for example, "One thing that seemed to happen today that's different from our last two sessions was …problems with the printer…We brought in some consultation…in the midst of what you were trying to do…and at the same time we were talking about [the power] of a personal computer…sort of all these levels of things happening at the same time" (3-T-13). Later, the occupational therapist focused scaffolding on the client's reflection on how the cost-effectiveness of his small business might be influenced by distractions in the environment. The occupational therapist provided examples of the types of interruptions typical in a business context: "[the future customer] might have to call his boss, or call a third party, or critique what was on the screen, or define their next goal" (3-T15). Seeking his analysis, she asked "do you think [our conversation] kept you on target? Did you feel like these were billable hours? What did it feel like?" (3-T15).

Scaffolding for analysis also referenced the occupational therapist-client relationship as a model for future consultant-customer relationships. The occupational therapist asked the client to analyze their interaction, "The other thing I remember you discovering yesterday was the timing, you know, we had worked for 15 minutes, I think,

and then started talking. And I think your comment was that 30-40 minutes might be good" (1-T39). To guide the client to apply what he experienced in occupational therapy to his future engagement in occupations, she added, "….as we're going through [the computer activities], maybe that's a real important thread, because it has to do with the people nature of the work, you know, how to come up with a way to design [your consulting business] so that it's least difficult for you" (1-T41).

In the latter guided debriefing interviews, however, scaffolding for analysis required less review of their interaction in the intervention session. The occupational therapist simply identified the topic and guided the client to reflect, referring to "talking about how to handle a personal situation in terms of communication… Can you talk a little bit more about that?" (8-T17). These examples illustrated how the client contributed to his therapeutic goal of developing interaction skills following the occupational therapist's scaffolding for analysis. In addition to explanation and analysis, the occupational therapist used scaffolding for exploration.

Scaffolding for exploration—The occupational therapist guided the client to explore different ways of accomplishing his goals. She asked him to consider how to alter the demands of the activity, how to use different equipment, or how to emphasize problem solving over emotional responses to frustrating experiences, for example. Scaffolding for exploration was frequent and though both activity and therapeutic goals were explored, the guiding the client's for exploration of ways to communicate and interact was seen more frequently.

The client provided a lengthy exploration of how to implement an activity and the implications for each step when he was not sure how to manage it. In the example that

follows, the occupational therapist used scaffolding to help him reflect on and to explore his plan to work with a pilot customer from other perspectives. When the client said he wanted to explore the monetary value of his Internet access service, she offered "we'll need somebody from outside the organization for the next level, the budget" (4-T2).

The therapeutic angle of customer relations guided the client to explore their occupational therapist-client relationship and relate it to other interactions he might anticipate. "…one thing that might come up for you is challenging people that you're working with, people that might be more difficult to work with….I'm wondering if you could say something about working in this relationship [the occupational therapist-client relationship] versus what might occur with others?" (1-T25). In another instance, the occupational therapist asked, "If there was somebody different than me sort of jumping in [interrupting] with things, how do you think you'd handle that?" (2-T33).

This type of scaffolding for exploration of future interactions was seen in each guided debriefing interview. Scaffolding was based on an experience the client had in an intervention session. In the earlier guided debriefing interviews, he did not independently explore how he might react. However, exploration in the latter guided debriefing interviews was more spontaneous and inner-directed, often in response to a statement by the occupational therapist rather than a direct question. The occupational therapist guided the client to explain, analyze, explore, as well as to test. Scaffolding for testing is described next.

Scaffolding for testing—The objective of guiding the client to test his actions and reactions was to help him compare the outcome of his actions to his intentions.

Scaffolding for testing was presented in order for the client to become aware of what goals he had mastered and how he had accomplished them.

For activity goals, a general question expanded on the Focused Interview. The occupational therapist routinely asked, "…and how was that for you?" during guided debriefing interviews. This kind of question was sufficient to generate the client's examination of the effects of his actions. In another example, she asked "Is there something about engaging in an activity that helps you process other things in your life?" (6-T15). At times the occupational therapist highlighted the outcome, "So, [developing a bookmark file] almost led you to another product…and some different ideas about how to format that and present it" (8-T3) in order for the client to note the outcome of his efforts.

Scaffolding for acceptance—The occupational therapist guided the client to accept that conflict was inevitable, but it was manageable. This type of scaffolding took several forms. One was to validate his critique of the environment by asking more questions about his concerns or noticing when he compensated. For example, the occupational therapist said, "I noticed you made the type font larger so it was easier to see while you were working on it" (2-T7). Another was to empathize, "I want to say that the frustration that you're dealing with in the technology is frustrating for me, too" (4-T35). Demonstrating that his needs were heard was another strategy to help the client accept the conflict: "…we saw some problems with the printer. I called [the computer technology specialist] during the session. We brought in some consultation about how to maneuver the hardware and software…"(3-T13).

In another example, the client was not able to achieve his goals at times, or was not able to perform as he had intended. The occupational therapist guided him to notice

when his illness symptoms interfered with his pacing and persistence in activities. For example, she gave him feedback on the rapid pace of his work, and his fragmented organization, "Well, I noticed when you were working on this, you were really whipping from one concept to the other, trying to put in this bookmark, to try this technique, to fool around with it. And, do you think that was part of the technology, or do you think that's part of how your mood is today?" (5-T25). Presented in non-critical, non-judgmental ways, this kind of guide conveyed that there are aspects of life one may be unable to change, modify, hide, or ignore. The variable, unpredictable, chronic changes in mood consistent with bipolar disorder are certainly conditions that this client had to accept.

Scaffolding for reconstruction—Asking the client how he was incorporating new information about himself, or how he might use new skills, or what he had changed were examples of scaffolding for reconstruction. The occupational therapist's main target of reconstruction was incorporating different communication and interaction skills into the client's repertoire. For example, she provided the requested feedback on his marketing logo indicating that selecting a tiger as the logo gave her the impression that "you're in charge, you have a service to offer, you know, there's the role you're going to be taking in the relationship" (6-T5). Having established a connection between what he wanted to communicate and how his message might be portrayed, and she guided him to see the logo as the mechanism "to set the relationship up that you wanted to have with the [customer]" (6-T5).

In another example, the occupational therapist guided the client to reconstruct his definition of being accomplished and successful. Because the client had been reluctant to admit that he needed help in the earlier guided debriefing interviews, she guided him to

become more comfortable seeking assistance. The occupational therapist provided an example of how reconstruction might occur, saying "…you're talking now about [poor computer equipment] not being your problem…and I remember you said to me, 'How do you remain so calm?' And I said, 'first of all, I know that it's not my problem. And then I get help'….So today, I'm sort of intrigued that it did have some meaning for you" (5-T51). This scaffolding followed the client's angry outburst and her commendation that "you communicated very well about what you needed at the moment" (5-T53). These instances of scaffolding created an opportunity for him to reconstruct his self-view and to incorporate the ability to interact with people, particularly in discordant relationships. The following section describes scaffolding for internalization.

Scaffolding for internalization—The occupational therapist guided the client to internalize what he learned by seeking his insights about what he experienced in performing therapeutic activities. She invited him to comment on emotion regulation during conflict, on customer relations, and on communication and interaction skills. For example, she synthesized the ultimate goal of communication, "...well, my goal as I'm saying those things, is truly to have you choose the way you want your document to be. You know, because you're writing a brochure now for yourself. But to raise some questions, is this really coming across like you want it to come across? So when you ask me if I like it or not, my view…doesn't matter. What matters is that you're satisfied and that it's communication [you want it to be]" (7-T45). In another example, the occupational therapist reviewed an interaction they had, and asked, "we were talking about how to handle a personal situation [outside of occupational therapy] in terms of communication, what some of the options might be…and we were sort of brainstorming

about what this process [occupational therapy] has been for you in terms of not just the task, but other things that had happened…Can you talk a little bit more about that?" (8-T17).

This type of scaffolding was used to determine what the client had internalized from a particular intervention session. Also, it revealed what the client had internalized from occupational therapy as a whole when presented during the latter guided debriefing interviews. Next was scaffolding for application; it is presented in the next section.

Scaffolding for application—The occupational therapist guided the client to apply what he had learned to his future goals and ways of engaging in activities. This type of scaffolding was plentiful. When the client reported that he did not have trouble working with four people in the computer room with the right people, the occupational therapist inquired about the 'right' people, "one of the things that makes these people 'right' is that you have formed a kind of relationship with them, that you feel safe in, right?" (9-T11). Toward the end of guided debriefing interviews, for example, the occupational therapist asked, "Did any part of what you were doing carry over into your life?" (10-T13).

The nature of guided reflection was complex. Though instances of each type of guide have been presented, it was difficult to locate examples that distinguished only the type of scaffolding being discussed. Much of the occupational therapist's scaffolding was multi-layered. Seeking analysis, for example, could also be interpreted as scaffolding for acceptance or for integration. How the occupational therapist guided the client to reflect, however, was an important yet unfamiliar component of accepted occupational therapy intervention.

The results so far, have identified several important aspects of occupational therapy process. First, there were components of that process that set the foundation for learning (goals, transformative self-regulation, and reflection) and other components that serve as instruments for learning (activity demands, occupational performance, and participation). These components have been defined separately and also have been described in relationship to one another.

Goals for this client were separated into activity goals and therapeutic goals and designated as computer-related activities and development of communication and interaction skills. For people with functional impairment or loss, a common goal is the reorganization of their self-concept, preceded by testing of various possible selves, and eventually leading to a revised ideal self competent to engage in occupation and activity and participate in society in meaningful ways despite functional limitations. For this client, that goal translated into being able to develop a fiscally viable, small consulting business that provided Internet access services to customers, a vocational role he could adjust to the fluctuating functional abilities imposed by bipolar disorder.

To achieve this goal, the client performed therapeutic activities and participated in guided debriefing interviews designed to develop underlying performance skills, specifically mental functions. The fundamental impediment to achieving this goal was the client's communication and interaction skills that had resulted in conflict with co-workers and family. The focus of adaptation and compensation for this client was his experience of conflict. The client's evolution through conflict resolution was achieved in eight stages that included expressing needs, justifying goals, exploring other ways to achieve goals, accepting that achieving goals was difficult, accepting his role in conflict, reconstructing

his goals, internalizing communication and interaction skills, and consciously applying them to other contexts. Transformative self-regulation, that is, learning and integrating the capacity for goal-directed adaptation and compensation, emerged as both a process and outcome of the client's performance of therapeutic activities.

The conscious focus of the client was on goal achievement, particularly of activity goals, occupational performance, and future participation in valued social roles. These process components came to be seen as the observable indicators of the client's competence and the measure of the efficacy of his transformative self-regulation. As his competence evolved, he was able to integrate previously unconscious factors that affected his performance, in particular reflection and transformative self-regulation.

Reflection was revealed as a complex component of occupational therapy's process. Examples of several types of reflection were identified: reflection on goals, reflection on transformative self-regulation, reflection on activity demands, reflection on occupational performance, and reflection on engagement in activity to support participation in society. A novel finding was that the occupational therapist guided the client's reflection using scaffolding for explanation, analysis, exploration, testing, acceptance, reconstruction, integration, and application.

In the next chapter, results of this study are interpreted from two vantage points. These interpretations were made from definitions of accepted occupational therapy practice, and from theories of human development, specifically those of Hazel Markus (1983) and L. S. Vygotsky (1978). Implications for occupational therapy and practice are identified. Suggestions for further research are followed by a review of limitations of the study.

CHAPTER FIVE

Discussion

This chapter synthesizes the results of the client's experience of occupational therapy as explained in guided debriefing interviews. Following an overview of the client in this study, the chapter is divided into seven parts. The first part discusses occupational therapy process in light of the results. The second part presents insights from human development theories. The third part addresses implications for occupational therapy practice. The fourth part examines implications for occupational therapy education. The fifth part suggests avenues for further research. The sixth part examines specific extensions of this study. The chapter concludes with limitations of the study.

Case Overview

The client examined in this study contributed 10 guided debriefing interviews that opened a lens on his transformation over the course of occupational therapy. At the start, this mature man, with work experience in computer technology, was interested in developing a small consulting business retrieving Internet searches. Though his technical expertise with the computer was strong, he felt challenged by "difficult people", especially when he perceived conflict or felt disrespected. Irritability, mood swings, and emotional outbursts, all typical sequelae of bipolar disorder, complicated collaborative relationships with co-workers.

Both technical and interpersonal aspects of his business idea were appropriate for occupational therapy. During intervention, he performed computer-related activities,

followed by guided debriefing interviews. The occupational therapist guided his

reflection on both his performance and communication patterns as they influenced his

overall ambition. Specifically, she invited reflection on how he performed a therapeutic

activity, on how well goals were achieved, on his interactions with the occupational

therapist, and on what his experience implied for his small business.

In response, the client emphasized activity goals. He focused on how he adapted

or altered the therapeutic environment to achieve his goals more efficiently and on how

he tried to copy information from the Internet into a word processing document in a

cluttered, noisy, poorly designed work area. He changed the arrangement of the room,

tried to re-program the computer to compensate for insufficient memory, and used

bookmarks to save information for various customers.

Persistent computer failures created frustration, anger, and helplessness that were

suppressed as conflict with the occupational therapist and with the organization escalated.

Acknowledging his frustration, the occupational therapist guided him to examine his

communication patterns. She drew connections between his present experience and his

future role with customers, inviting him to explore and test ways of collaborating despite

conflict. As he accepted that communicating frustration tactfully was "…a wonderful

technique [the therapist used]" (9-C16), he began devising ways to replicate it in the

business arena.

In the end, he was more self-aware, better prepared to use different

communication patterns, and equipped to maneuver productivity demands and

interactions in a small business venture. Guided reflection invited him to examine

transformative self-regulation and then to use it in small business interactions. His

descriptions of the impact of relationships on goal attainment confirmed that he had integrated goal-directed transformative self-regulation into his repertoire of skills.

The client's transformation from start to end of the guided debriefing interviews was apparent from quantitative and qualitative analysis. The results presented in Chapter four identified process components and relationships among them. They also showed that transformative self-regulation became a conscious aspect of performance for this client. Building on the prevalence of reflection in the previous study, this client's reflection, as it was guided by the occupational therapist, yielded new insights into interventions and outcomes of occupational therapy.

Overall, this study validated that there is such a thing as occupational therapy process and that it can be explained. Profoundly, it was explained by the client, in his own words. The next section takes a closer look at occupational therapy process as it is understood in today's routine practice.

Occupational Therapy Process

As shown in Chapter Two, current understandings of occupational therapy process are based on the premise that engaging a client in meaningful occupations builds underlying body functions (physical, cognitive, and psychosocial aspects) and performance skills and patterns (American Occupational Therapy Association, 2002). Actually performing an activity is central to a client's learning to adapt to physical, cognitive, and psychosocial challenges to occupational performance (American Occupational Therapy Association, 2002). Verbally describing an activity, even

demonstrating it for a client, creates resistance to generalizing learned skills to other occupations.

The importance of performing an activity is readily understood if a client cannot eat a meal with his or her family. An occupational therapist might provide adapted utensils, a non-slip table surface, ample time to finish eating, and stress-free conversation during a client's meal. While eating, adaptations are tested and adjusted to strengths and limitations in underlying skills. In this sense, performing a therapeutic activity is contiguous with skill development. Goals to strengthen competence to perform a therapeutic activity are intertwined with goals designed to develop underlying skills.

Within occupational therapy's accepted intervention model, the process of experiential learning introduces "just-right" activity demands so that a client can perform competently while developing underlying skills. For the client in this study, computer-related activities were familiar and selected by him so that they were not overly challenging. On the other hand, communication skills were the bigger detriment to this client's competence to meet customer needs.

The central feature of occupational therapy, as it is currently viewed, is that a client who successfully performs an activity with adaptations can carry-over that performance naturally into his or her "participation in desired roles and life situations in home, school, workplace, and community" (American Occupational Therapy Association, 2002, p. 611). Continuing with the previous example, the assumption is that a client who can successfully use adaptive equipment to eat a meal in the clinic can eat a meal at home. Once learned through therapeutic activities, a client's adapted occupational performance in expected to be integrated and used at will.

The previous study suggested, however, that the accepted practice of occupational therapy may not be comprehensive; perhaps, occupational therapy process was more than it seemed. Content analysis found that half of the client's textual messages validated known principles of occupational therapy process. However, the other half was comprised of information that could not be categorized. Further analysis revealed that reflection was the missing component.

Extending the search to better understand occupational therapy process, this study raised the possibility that reflection was not the only unfamiliar process component. Further examining components of routine intervention uncovered additional processes at work. The most powerful process component was transformative self-regulation as it was seen through the client's testing and analysis of adaptive and compensatory strategies. It was powerful because it was both a process and an outcome of occupational therapy. With each successive competency, this client's self-knowledge evolved and augmented a continual renewal of his self-concept, one in which he incorporated the capacity for transformative self-regulation into his vision for competently engaging in meaningful occupations. Though he espoused a renewed view of himself and his capabilities, his direct application of this reconstructed self to his future life experiences could not be witnessed first-hand.

The depiction of occupational therapy process from this study is intended to complement prevailing theories on intervention and outcome, not replace them. Reflection is an extension of experiential learning; guiding reflection is an aspect of therapeutic use of self; transformative self-regulation places adaptation and compensation

in a dynamic position, creating a meaningful life. The next section examines occupational

therapy process from the viewpoints of human development theorists.

Insights from Human Development Theories

Better understanding occupational therapy process was informed first by the

human development theory of Hazel Markus (1986, 1983). Although the client did not

use the language of "possible selves" as he participated in guided debriefing interviews,

the researcher recognized the construct as it emerged in her interaction with the client.

How the notion of possible selves enriched descriptive analysis of the client's guided

debriefing interviews and the conceptualization of occupational therapy process is

described next.

Markus. As presented in Chapter Two, Hazel Markus (1983, 1986) suggested that

human development is essentially a process of self development in 3 major areas:

competence, self-awareness, and self-concept. For this client, competence was seen in his

evaluation of goal achievement for both activity and therapeutic goals. Self-awareness

was enlightened and augmented as the client became better able to explore, to test, and to

accept his actions and reactions in occupational therapy sessions and to participate in

guided reflection on his experiences. Self-concept was evidenced through the client's self

attributions, his values, beliefs, standards, motives, and behaviors.

Over the course of guided debriefing interviews, the client's self awareness,

competence, and self concept evolved. For example, in the early guided debriefing

interviews, he was unsure of himself, "…I don't want to provide anything more than

assistance because it may not be possible to do something positive for someone" (3-C42).

Later, he was more confident that he could achieve higher standards, saying "…there are

literally a couple of seconds to make that first impression. So [the marketing logo] is a thought. But I don't feel locked into it. I think it's worth a try. If it works, fine; if it doesn't work, something else may work" (7-C7).

Competence was a central issue for this client. Constant breakdowns of the computer did not provide him an opportunity to evaluate his competence with technical aspects of the Internet and word-processing interface as he intended. His preferred work style was to be independent and autonomous, and he took pride in being able to "intuitively figure out how to use [the computer] efficiently" (5-CC64). Asking for help implied incompetence. In fact, at times, he denied that he had problems to manage. By labeling others as "confrontational" (2-C28), he downplayed his role in resolving conflict. His experiences had proved him unable to deal adequately with people's different personalities and interaction styles. Compounding this, his deferential interaction habits prevented him from stating his preferences, instead feeling it was his responsibility to accommodate others.

The challenges inherent in symptom-driven negativity, irritability, and poor relationships were multi-faceted. Though he criticized others for these attributes, they were identical to the client's negative self-views, particularly as he reviewed the impact of his attitudes and behavior during episodes of mania. Unconsciously, what frustrated him about others was equally frustrating for him to self-regulate. For him, mania defined his "real self", one that embarrassed him and fostered helplessness to regulate how he expressed emotions.

At the start of the occupational therapy, the client negatively defined himself as a person with bipolar disorder. The chronic, illness-driven fluctuations in function led him

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to believe that he was incapable of pacing and persisting in productive roles, specifically gainful employment. This negative self-view was founded on frustrating interpersonal experiences. For example, he explained that "…while I'm doing something, to have someone at that moment in time saying, 'No, no, no, no, you don't understand', or some words to that effect, disrupts my thought process. So that's why I find it difficult to go through that" (2-C38). He considered illness symptoms to be personality flaws and had trouble seeing them as typical symptoms of mania, symptoms that fluctuated with mood shifts.

This self-schema over-generalized his past experiences and was based on incomplete awareness and inadequate regulation of illness symptoms. Though disease-related emotions were not possible to control, their expression could be regulated for better conflict resolution. Prior to these occupational therapy sessions, his self-regulatory strategies were not sufficiently discriminating to serve him in provocative interactions that triggered intense negative emotions.

Incomplete self-awareness contributed to his inability to interact successfully with others particularly during conflict; he withdrew socially. To handle nervous people, he concluded that "…it's up to me to terminate that relationship, as pleasantly as I can do it" (1-C30). The client's difficulty distinguishing illness symptoms from stable personality characteristics fueled his negative self-concept. The client's self-understanding became a central focus of occupational therapy intervention because his sense of incompetence, incomplete self-knowledge, and negative self-concept would be likely to undermine his future interactions with future customers.

Using the backdrop of customer relations, the occupational therapist guided the client to reflect on his self-concept, attitudes, and interpersonal behaviors. With exploration and analysis of the role *he* might play in relating to people, the client became increasingly aware of a customer's perspective and complexities of human interaction, he found that he *could* choose how to interact. For example, he anticipated that when a customer was distracting, he could "…train myself to stay on task…stay tuned in and quiet…concentrate…just wait quietly: (7-C12, 14, 16, 20). By the end of the guided debriefing interviews, he saw a different way to regulate himself.

Applying Markus' (1986) framework of possible selves, the client entertained possible selves in reconstruction of his ideal self. At the start of guided debriefing interviews, he felt competent to maneuver around the emerging Internet technology of the time but ineffective at maintaining cooperative working relationships. From occupational therapy's perspective, exploring and testing a variety of possible selves capable of effective social engagement could foster a more positive self-concept.

Guided reflection on interpersonal dynamics helped him realize positive relationships could develop over time, comfortably and spontaneously. "…The initial task may not be what it's about. It may just be the way to get the door open. And from that, I guess, all kinds of things can happen….And this is maybe the way some of these relationships go…" (8-C18). The client explored possible transformative self-regulatory strategies for working with customers. In a trusting, collaborative therapeutic relationship, the occupational therapist gently acknowledged the client's vulnerabilities, offered alternative ways to relate to others, and celebrated his accomplishments. As he was guided to explore communication patterns that incorporated regulation of his illness

symptoms, this client was able to devise a more encompassing sense of his ideal self. He came to accept illness-imposed limitations and reconstructed his definitions of competence based on evaluation and integration of transformative self-regulation.

Much was learned about occupational therapy process by superimposing Markus' (1986) ideas about self-development onto occupational therapy process. From this vantage point, reflection to develop self-awareness, competence, and self-concept was an essential process component. The occupational therapist used clinical reasoning to structure the activity. The client made sense of the experience through guided reflection. Contrasting principles of accepted occupational therapy practice with findings from this study, it became clear that guiding client reflection provided a tool for the client's self-development. Evolving from his perceived "real self" at the start of treatment, the client moved through possible selves to a more inclusive ideal self. Seeing the client revise his ideal self implied that occupational therapy was more than a process of adaptation and compensation of occupational performance.

The accepted model of occupational therapy process starts with defining the real self, before the onset of functional limitations, and uncovering the client's ideal means of re-creating a purposeful life. Intervention using the process of performing therapeutic activities mirrors participation in the client's various social roles. In this sense, occupational therapy seeks to return the client to activities in support of a previous real self. But traditional intervention does not facilitate a client's explicit examination of other possible selves or reconstruct an ideal self. This study indicated that integrated application of adaptive strategies for engaging in occupations could be made explicit

through guided reflection and suggested that this was the genuine outcome of occupational therapy.

Informing this study through the lens of possible selves revealed that transformative self-regulation was integral to occupational therapy process and outcomes. The client's consideration of different ways to achieve his activity goals provided insight into the inner workings of transformative self-regulation. The occupational therapist's role was to guide reflection in a non-judgmental atmosphere while fostering the client's testing, acceptance, and reconstruction of effective transformative self-regulatory strategies. With additional self-awareness, the client could integrate his real and ideal selves to live with a chronic illness.

At this point, analysis of the results turned to other human development theorists to explain the actual process of reconstructing the self through guided reflection more fully. Initially, the work of Dewey (1938) was thought to provide a conceptual framework to organize occupational therapy process (American occupational Therapy Association, 2002). Dewey's (1938) explanation of experiential learning included reflection on occupational performance, and initially this was thought to adequately explain occupational therapy process. However, merely including guided reflection as an integral aspect of intervention was not sufficient to account for the complex learning this client experienced. Vygotsky's (1978) social co-construction of knowledge, or scaffolding, rendered greater delineation of the interplay between the occupational therapist and the client and its role in the client's transformation.

Vygotsky. Exhaustive, longitudinal, recursive consideration of the findings from content and descriptive analyses presented in Chapter Four led to the realization that

Vygotskian constructs (1934/1986, 1978) could illuminate guided reflection following routine occupational therapy. At the time of data collection, guided reflection in occupational therapy process was not a conscious therapeutic strategy for the occupational therapist; it has not been identified as an aspect of occupational therapy intervention until now. Convincingly, this study revealed that guided reflection was integral to the client's integration of adaptation and compensation as a transformative process applicable to his anticipated future engagement in activity.

To put this client's case in context, the occupational therapist came to the therapeutic relationship with the then current, accepted understanding of occupational therapy process. She designed and implemented intervention consistent with traditionally understood orientations to the role of the occupational therapist and of the client in the learning process. To review, she considered the client's valued occupations, life roles, and performance skills and patterns in planning intervention to strengthen his performance skills, underlying body functions and body structures, and to organize contextual factors to support her client's capacity to engage in valued occupations. She implemented both evaluation and intervention implementation collaboratively, structuring activity demands to achieve therapeutic goals. These familiar process components were recognized in the client's guided debriefing interviews as shown in the analysis so far.

In addition, the occupational therapist entered the therapeutic relationship with a definition of outcomes that was consistent with traditional perspectives on a client's ability to generalize learning from occupational therapy experiences. Her responsibility was to help the client to develop performance skills and patterns that he could apply after

discharge to his participation in valued social roles. The expectation was that, once learned, skills naturally would generalize to the client's engagement in occupations and activities.

Missing from this traditional view was evidence for a direct link between process and outcome of occupational therapy. To comprehend occupational therapy process more fully, the social co-construction of knowledge, also referred to as scaffolding in this study, involved the client in an evolving process of increasingly complex explanations of his performance in therapeutic activities. Examining the guided debriefing interviews retrospectively, it became clear that the major therapeutic effort was indeed directed at facilitating the client's skill in communication and interaction using the therapeutic relationship, one that was made less hierarchical through use of the Focused Interview. Though the quality of his reflection was reduced during his experience of conflict, he nonetheless reflected on the occupational therapist's scaffolding in each guided debriefing interview. The consistency and predictability of reflection was structured through the Focused Interview, and was enlightened by the occupational therapist's further queries.

Unexpectedly, routine occupational therapy was transformed by the introduction of guided debriefing interviews as part of the previous study's data collection procedure. However, this was not a conscious process for either the occupational therapist or the client. It was not directed by the occupational therapist but rather it was determined by the client's focus on various aspects of an intervention. In fact, it was not known as guided reflection at the point of data collection; it was thought of as merely an information-seeking mechanism structured by the Focused Interview.

The results of this study provided additional information about guided reflection and the relative roles of the occupational therapist and the client. The client's attention was on his goals, but primarily on activity goals. He wanted to be able to test a product, evaluate the efficacy of a consultative service, and assess his potential for achieving those goals. The occupational therapist's attention was on both types of goals as they interacted to help the client attain his long-term goal. Her perspective on the importance of emotion regulation and expression in human interactions was more complex than that of the client's. Occupational therapy was goal-directed but that meant different things to each person.

Guided reflection emerged as the vehicle for the client's integration of both activity and therapeutic goals. The debriefing interview format highlighted aspects of what had occurred during an intervention session. How the focused interview was guided and how the client responded illuminated the client's and the occupational therapist's views on goal attainment. There was a change across guided debriefing interviews in how the occupational therapist guided reflection and how the client reacted.

Applying Vygotsky's (1934/1986, 1978) model, guided reflection was the means for scaffolding the client's integration of activity and therapeutic goals. The most central aspect of guided reflection was the construction of a shared language, one that distinguished components of occupational therapy process and their effect on goal attainment. This was a developmental process for both the occupational therapist and the client. As the occupational therapist learned the intricacies of the client's activity goals, she came to appreciate his frustration at being unable to achieve them because of restricted resources in the computer room. Similarly, the client came to understand

communication and interaction on much deeper and more complex levels and to appreciate that he played a pivotal role in the outcome of interpersonal relationships. It was by seeking to understand what helped and what hindered the client that a shared language was co-constructed.

Based on mutual respect and openness to each other's viewpoints, the occupational therapist-client interaction initially led to a comparison and contrast of meanings each attributed to the client's performance of therapeutic activities. Over time, they derived a shared sense of word meanings, developed a language able to capture what successful communication meant for this client, and unconsciously used a metaphor that framed their work. The social interaction perspective on developing knowledge was further informed by the metaphor that "things are more than they seem". The notion that occupational performance, contextual demands, and relationships with others, may be more than they seem was an important framework for this client's transformation. Over the course of guided debriefing interviews, he extended the metaphor to reference himself: "I am [can be] more than I seem".

The occupational therapist and the client co-developed words and phrases to discuss activity demands, adaptation and compensation, as well as the nature of human interactions. On a concrete level, the client's language for describing limitations within the environment was detailed, precise, and graphic. Describing the characteristics of the situation established a shared understanding of the conditions this client needed in order to perform competently. Because computer technology was less familiar to the occupational therapist, she learned his language, "I ended up being able to respond exactly to the screen quickly in language that you had taught me" (1-T25). In doing so,

she began to understand the depth of his frustration with equipment that did not support his potential to develop a small consulting business, his conscious motivation for participating in occupational therapy.

The problem this situation established was multi-faceted, therapeutic, and goal-directed for this client. Shared participation in dialogue about the process and outcomes of the client's performance of therapeutic activities started as a data collection tool and came to be understood as an integral component of occupational therapy process. While co-constructing the language to describe activity demands and performance, the occupational therapist and the client clarified ways to explain his frustration, sense of incompetence, and anxiety. This process was assisted by the conflict experience. Conflict and the need to communicate negative emotions to the occupational therapist proved most beneficial. He was required to self-regulate how he expressed negative emotions, a skill made even more difficult due to the high level of emotional intensity consistent with bipolar disorder. The therapeutic work in each successive guided debriefing interview, then, was to uncover what the client had learned and what still needed to be learned about the construct of human interaction. Guided debriefing interviews framed the client's reflection on experience and provided a forum for him to explore and test his capabilities and to re-construct effective interaction patterns.

How the client was guided to reflect, then, was instrumental in his transformation. The meaning of the client's performance in therapeutic occupations or activities had been an unconscious process for him. Inviting the client to reflect after each intervention session provided an arena for him to consider how the interaction of activity demands and his performance, in particular, emotion regulation and emotion expression, influenced his

ability to achieve his goals. Specifically, the act of reflection on his actions and reactions in context increased his self-awareness over time. Guided reflection was the catalyst for translating the client's activity into concepts about working with others that he could integrate and apply.

Through reflection, the client could envision the relationship between self-regulation and successful adaptation and compensation to achieve his goals. Accepting that there were optimal self-regulatory strategies specific to particular situations was transformative for this client; he began to see himself as capable of interacting more successfully with others. Becoming more self-aware enabled him to choose self-regulatory strategies to achieve his goals competently, and in turn, his growing competence facilitated a transformation in his ability to self-regulate, and, by extension, his self-concept.

This study has indicated that there may be various forms of guiding a client's reflection. Seeking answers to questions invited the client to understand that goal attainment was a dynamic, fluid process that was externally-driven as well as internally motivated. Questions were the predominant form of guiding reflection in the earlier guided debriefing interviews. Their shared language became more consistent and explanatory of intervention and its outcome. The occupational therapist provided statements of observations or interpretations intended to provoke the client to reflect more deeply in the latter guided debriefing interviews.

Whether question or statement, the important aspect of guided reflection was that it formed a foundation on which the client could reconstruct self-regulatory strategies that, once integrated, transformed how he achieved his goals. That foundation was built

construct by construct as the client was able to consider, evaluate, and integrate approaches to regulating how he interacted with others. Guiding reflection was described as scaffolding in Chapter Four because it provided an arena for co-constructing the client's framework for self-awareness and self-understanding. Scaffolding created an opportunity for the client to explain, analyze, explore, test, accept, reconstruct, integrate, and apply what he learned about adaptation and compensation of his performance of therapeutic activities *vis a vis* goal attainment.

Guiding reflection was a novel role for an occupational therapist but also the results indicated that it was an important role. Occupational therapists are admonished to collaborate with clients, practical strategies for achieving this are not clarified or standardized in the profession. This study embellished the notion of therapeutic use of self in that, clearly, different outcomes from occupational therapy intervention resulted from the occupational therapist's scaffolding of client reflection. Yet this scaffolding was congruent with accepted occupational therapy practice. The occupational therapist's framework for intervention as it was based on analysis of activity demands, of the client's occupational performance, and of adaptation and compensation shaped her invitations for client reflection. As such, it did not change the nature of occupational therapy intervention, but it did alter the client's perspective on what he did, how he did it, and how it helped or hindered his goals.

Guided reflection empowered the client to understand activity analysis as well as adaptation and compensation in ways that yielded his greater independence in transformative self-regulation. Rather than defining occupational performance as a professional skill for only the occupational therapist, this study suggested that skilled

practice actually rests with the occupational therapist's capacity to translate principles of occupational therapy for each unique client. The abilities to change activity demands independently, to perform occupations and activities using applicable skills, and to practice effective self-regulation are the outcomes that empower a client to live meaningfully regardless of his or her performance limitations.

The transformed self-view this client constructed was based on the realization that transformative self-regulation was inherently a conscious, self-directed evolution. The client's change from lesser to greater awareness of transformative self-regulation was a two-fold change. What had started as skill development in order to adapt came to be understood as transformative self-regulation. Further, his conscious integration of more effective self-regulatory strategies transformed his self-concept; his use of transformative self-regulation was both the means and end of occupational therapy. Once the concept of self-regulation to interact more effectively with others had been integrated, the client focused on transformative self-regulation three-quarters of the time.

Viewing occupational therapy as a process of co-constructing a language, deciphering the complexity of influences on a client's performance, and using the shared learning experience to integrate and apply what was learned experientially is at the heart of Vygotsky's (1934/1986, 1978) notions of experiential learning. As this client illustrated, his increasingly deeper insights helped him generate more refined transformative self-regulatory approaches. He had acquired higher-level mental functions that enabled him to master his behavior using conceptual thinking. Scaffolding through guided reflection established the habit of reflection and integrated transformative self-regulation as his ongoing responsibility in human interactions.

Combining the perspectives of both Markus (1983, 1986) and Vygotsky (1934/1986, 1978) generated a more complex understanding of occupational therapy process and outcome. In essence, the work of the occupational therapist and the client was to individualize and articulate adaptation and compensation for this client. The process of reconstructing the client's capacity to achieve his goals by integrating and applying self-regulatory strategies led to a transformed self-concept. Seeing himself newly capable of achieving his goals helped the client see his real self as one more effective than previously thought. He was able to envision greater alignment between his real self and ideal self, and thereby, became empowered to continue the lifelong process of self-development.

Implications for Occupational Therapy Practice

The philosophical base of occupational therapy is endorsed strongly by this researcher. It was the inability to provide direct evidence for client outcomes that served as the primary impetus for the previous and the present study. By far, the most central finding of this study was that intervention was more complex than currently perceived. Revealing the pivotal role of guided reflection in integrating a client's learning has major implications for occupational therapy. This section of the chapter groups those implications into four categories: definition of occupational therapy outcome, role of an occupational therapist, role of a client, and settings for occupational therapy.

Definition of outcome. The American Occupational Therapy Association (2002) defines the broad outcome of occupational therapy intervention as engagement in occupation to support participation in society. "When clients are actively involved in carrying out occupations or daily life activities that they find purposeful and meaningful

in home and community settings, participation is a natural outcome" (The American Occupational Therapy Association, 2002, p. 619). The premise is that "health and well-being are holistic and that they are developed and maintained through active engagement in occupation" (The American Occupational Therapy Association, 2002, p. 619). Philosophically, the success of a client's future participation in society is extrapolated from his or her competence in performing purposeful activities in occupational therapy.

There are, however, two concerns with this view of outcomes. The first touches on the sources of change in client performance. As discussed in Chapters One and Two, occupational therapy's definition of outcome assumes that changes in the client's occupational performance directly follow from occupational therapy's interventions to promote adaptation and compensation. However, performance changes may not be a direct result of intervention. Other factors, well outside the domain of occupational therapy, may have influenced adaptation of the client's attitude, occupational performance, and insights. For example, other health providers, family members, friends, and clergy all have the potential to shape a client's participation in activities concurrently with occupational therapy intervention.

The second concern with the current view of outcomes is the question of how well a client generalizes learned adaptations to later self-directed engagement in activity. It is not possible to foresee how a client will use performance skills and patterns or how particular activities will support his or her participation in life. The durable application of occupational therapy outcomes cannot be assured even if a client can perform an activity in occupational therapy.

How outcomes are measured presents additional concerns. In the current model, The American Occupational Therapy Association (2002) includes "occupational performance, client satisfaction, adaptation, role competence, health and wellness, prevention, and quality of life" (p. 619) as measures of outcome. Individualized, goal-directed occupational performance is measured at initial evaluation and throughout the intervention process. Outcome measurement, then, is a comparison of performance at baseline, at intervals, and at the conclusion of intervention.

Given the state of outcomes research, it is not possible to measure a precise, demonstrable relationship between occupational therapy's intervention process and client outcomes. Change may indeed occur for a client, but the actual process of integrating adaptation is not clear and is, therefore, impossible to measure. Further, it has been impossible to validate any component of the intervention process because the interplay among goals, activity and its demands, and client performance has not been measurable. Without the ability to isolate process components, outcome measurement cannot support a direct link between occupational therapy intervention, a client's occupational performance, and the outcome of engagement in activity.

The results of this study offered a more comprehensive view of outcomes and their measurement. First, the definition of outcomes was expanded to highlight transformative self-regulation. In the researcher's experience, most clients do not discuss adaptations in self-regulation explicitly; they comment on a piece of equipment, but are not aware of its impact on self-concept. However, this client explained adaptive and compensatory strategies and evaluated their impact. By explaining his perceptions of a therapeutic activity, his performance, and the effect of adaptations, generated a more

profound level of self-awareness. Weighing the advantages and disadvantages of specific transformative self-regulatory strategies, he could integrate them into competent, goal-directed performance and anticipate their future application.

The recognizable outcome was the client's capacity for conscious, explicit transformative self-regulation of performance skills and patterns that was demonstrated to generalize to future life roles. As he became more self-aware, he chose more effective adaptive strategies, leading to increased competence in goal attainment. These gains fostered his positive self-esteem and transformed his self-concept. This perspective envisions development of the self as the essential result of a client's performance of a therapeutic activity.

Viewing outcome as a client's strategic use of transformative self-regulation for self-development has implications for its measurement. The ability not only to use learned adaptations but also to apply learned principles of transformative self-regulation would be additional points of outcomes measurement. Measuring changes in performance skills in conjunction with measuring changes in self-awareness, perceived competence, and self-concept as they are influenced by transformative self-regulation would offer a more complete picture.

This view on measuring outcomes contrasts with the prevailing position that a client's self issues are understood through an occupational profile, the client's "occupational history and experiences, patterns of daily living, interests, values, and needs" (The American Occupational Therapy Association, 2002). Here, a client's self-schema at the time of initial evaluation structures the anticipated outcome. In the therapeutic context of dynamic, client-centered, and interactive intervention, a client

performs therapeutic activities consistent with his or her occupational profile. Though attention to a client's changing goals, needs, and performance skills is mandated, the concept that changes in self-concept are influenced by transformative self-regulation is not articulated fully.

Though measurement of occupational therapy's role in a client's self-development may appear to be impossible, this study demonstrated that occupational therapy process components can be described and quantified. Further, occupational therapy process can be directly related to outcomes. As in this study, mixed method analysis can locate patterns among discrete actions and reactions of an occupational therapist and a client that validate how incremental session outcomes evolve into intervention outcomes. This study demonstrated that uncovering the client's perceptions of both process and outcome of occupational therapy is not only possible, but also may be an important therapeutic tool for fostering a client's generalization of adapted occupational performance.

An important implication was that transformative self-regulation emerged as a process within occupational therapy intervention as well as a key outcome of intervention. For the client in this study, co-constructing his self-awareness and integrating adaptive and compensatory strategies, including the application of transformative self-regulation, had a powerful impact on outcome. Rather than viewing the outcome of occupational therapy primarily as the ability to engage in activity with improved underlying performance skills, the over-arching outcome appears to be farther-reaching. If this client's experience can be shown to generalize to other clients, it may be that self-awareness of transformative self-regulation as an ongoing, moment-by-moment

process that becomes ingrained in a client's self-concept is the preferred outcome to be measured. The notion of transformative self-regulation as both means and end of occupational therapy intervention raises issues about the optimal role of the occupational therapist. This is discussed next.

Role of an occupational therapist. The Practice Framework (The American Occupational Therapy Association, 2002) describes the role of the occupational therapist in the currently accepted view of occupational therapy. In essence, the occupational therapist's role is to facilitate the client's development of performance skills and patterns. To achieve this, evaluation is geared to identifying supports and barriers to occupational performance. Using this information, the occupational therapist not only develops a plan, including objective and measurable goals, intervention approach, intervention setting(s) and discharge plans, but also selects outcome measures and provides referral recommendations.

In this current framework, an occupational therapist is the agent of change. An occupational therapist uses clinical reasoning, selects frame(s) of reference, synthesizes client factors, selects assessments, interprets evaluation results, develops hypotheses about a client's strengths and weaknesses, and identifies intervention strategies while considering evidence for best practice. Though this is done in collaboration with a client, an occupational therapist is thought of as a skilled practitioner who establishes a dynamic, collaborative relationship with a client to set goals and implement the plan.

The collaborative relationship permeates evaluation and intervention throughout the course of occupational therapy. "The very nature of engagement in occupation— which is internally motivated, is individually defined, and requires active participation by

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the client—means that the client must be an active participant in the process. Clients identify what occupations and activities are important to them and determine the degree of engagement in each occupation" (The American Occupational Therapy Association, 2002, p. 615). A periodic collaborative review of goals and outcome is an inherent part of intervention implementation. The focus of that review is a client's occupational performance in therapeutic activities that mirror a client's future engagement in activities that support participation in society.

To plan and implement the client-centered intervention, an occupational therapist not only "determines and carries out the type of occupational therapy intervention(s) to be used" (The American Occupational Therapy Association, 2002, p. 618), but also determines therapeutic use of self, therapeutic use of occupations or activities, consultation, and education in support of a client's goals. An occupational therapist monitors client response and adjusts skilled intervention as needed. An occupational therapist is instrumental in effecting a client's development of restorative, compensatory, and preventive strategies for occupational performance.

However, what occurred for the client in this study implied a different role for the occupational therapist. The occupational therapist did indeed begin routine intervention by facilitating the development of underlying skills and expecting that the client would incorporate them naturally. But, the intervention became more than teaching a module on anger management techniques or stress management. It was different because the occupational therapist guided the client's reflection and that, in turn, allowed him to test transformative self-regulatory strategies and evaluate their outcome. This client's

transformative self-regulation had implications for occupational therapy intervention, specifically the occupational therapist's role.

The results of this study suggest an expanded role for the occupational therapist, one geared to transforming a client's capacity for self-regulation. Therapeutic use of self was revitalized with the realization that guiding a client's reflection on his or her performance of a meaningful activity was the key to unlocking his or her self-directed transformation. When a client's personal journey towards integrating a transformed self-schema is the ultimate goal of occupational therapy, then the role of an occupational therapist is to help a client integrate new information about his or her performance of therapeutic activities. Based on a client's increased self-awareness of his or her performance, an occupational therapist's skill rests on the ability to translate the construct of adaptation for a client so that he or she can internalize learned adaptations. Once internalized, a client is able to self-direct the plan of intervention, evaluate his or her experience, and integrate transformed self-regulation. More than providing an adaptation, the over-arching process of transformative self-regulation and integration of transformed self-regulatory strategies may be the genuine role of an occupational therapist.

In this study, transformative self-regulation was engendered by guided reflection. Though the process was unconscious at the time of the debriefing interviews, the occupational therapist's non-judgmental actions and reactions to the client shed new light on therapeutic use of self. The crucial role was to be curious about what needed to be transformed in order for the client to achieve his goals. The discovery of novel approaches to using the self as a therapeutic agent in occupational therapy intervention was a critical finding from this study.

This study offered insights into therapeutic use of self. Fundamentally, the study suggests that an occupational therapist's role may expand from being an agent of change to being in relationship with a client who is in the process of change. Rather than being behind the scenes, designing a therapeutic activity, and creating an environment for learning, an occupational therapist who becomes an integral player in explicitly guiding a client to reflect on his or her occupational performance, may have a deep impact on a client's generalization of learning. Navigating a client's elaboration on occupational performance may help him or her to anticipate and to incorporate strategies for living with an impairment or chronic disabling condition. It may be that an occupational therapist's ability to trust that a client is capable of co-constructing self-knowledge may be a critical factor in that client's ability to internalize self-regulatory strategies, perhaps leading to greater transfer of learning to everyday life.

Examination of debriefing interviews uncovered variations on therapeutic use of self as the client explained his performance to the occupational therapist. The therapist was vulnerable to a deep interpersonal relationship with the client, notably, one that fostered client reasoning through reflection-on-action. Attainment of transformative self-regulation was incremental and unconscious to the client, so it required repeated, creative, therapeutic re-focusing of the client's attention to self-issues. Making transformative self-regulation an explicit part of occupational therapy intervention was possible only when the client trusted that his self-interests were at the heart of the relationship. In order for the model of occupational therapy process emerging from this study to be effective, trust must be developed quickly for transformative self-regulation

to be effective. Integration of self-knowledge is not a linear process and it requires time, patience, and persistence in a trusting relationship.

Should this study be replicated, the profession's practice framework may expand its description of an occupational therapist's role. An occupational therapist willing to make his or her clinical reasoning explicit to a client has a good chance of helping him or her integrate transformative self-regulation. Guiding a client to look beyond the therapeutic activity, while highlighting what he or she has learned about optimal strategies for self-regulation, may be the most central role of an occupational therapist. Though debriefing interviews sought the client's reflection-on-action (Schön, 1983) in this study, it is surmised that reflection-in-action (Schön, 1983) would be a complementary and powerful therapeutic role for an occupational therapist.

Targeting transformative self-regulation through guided reflection may present an organizing framework that can be integrated by a client. Though there never could be a "script" for therapeutic interaction, the act of incorporating guided debriefing interviews into routine practice merits evaluation. This study did, however, suggest that a set of questions in the guided debriefing interview may elicit a client's reflection about self issues. For example an occupational therapist might ask: How do you feel about what you did today? What helped you achieve your goals? What interfered with your goal? How did you adjust the activity or how you performed it? What would you like to do differently next time? How does your performance of today's activity relate to your future goals? What would you like to take away from today's session? Guiding a client to focus on how a particular adaptation influenced his or her occupational performance may be a pivotal mechanism in translating occupational therapy's implicit outcome into a

conscious self-regulatory process for a client. In this sense, reflection on individualized adaptation of a client's performance of a therapeutic activity, of its context, and of a therapeutic relationship may be vehicles for building a client's self-awareness, for testing and evaluating transformative self-regulation, and for fostering integration of new self-knowledge into his or her self-concept and ideal self.

The approach to intervention implementation suggested by this study places expanded responsibilities on the occupational therapist for awareness of his or her professional and personal selves. Being able to keep a client's self issues distinct is a skilled role for an occupational therapist. The aim of fostering a client's self-awareness through reflection is best modeled by an occupational therapist's keen sense of self, ability to demonstrate self-regulation, and capacity to transform the therapeutic alliance incrementally to incorporate a client's personal development of transformative self-regulation.

Uncovering the role of guided reflection in intervention is a unique finding of this study. Further research may show that different approaches to co-constructing a client's self-knowledge yield variations in his or her understanding of occupational performance, self-awareness, transformative self-regulation, and eventual refinement of his or her self schema. Guided reflection, then, implies a more complex role for the occupational therapist than is currently described. Perhaps it is not merely reflection that is needed in order to learn from experiences, as Dewey (1938) promulgated. It may be that specific scaffolding for reflection, offered at strategic times in a client's intervention, is needed to garner the full impact of a therapeutic occupation or activity.

This study also suggested that variations in the timing of guided reflection may influence a client's learning. This study used guided debriefing interviews that sought reflection on the client's immediate past performance. It would also be possible to guide a client's reflection before or during occupational therapy sessions. For example, reflection-in-action, that is, helping a client reflect on the therapeutic intervention while it is happening, may be more important than previously thought. Overall, guiding a client to open his or her mind to different ways of perceiving occupational performance may be the ultimate facilitator of self-knowledge and of transformative self-regulation.

Extending the role of an occupational therapist in intervention suggests implications for professional development. Opportunities for expanding the accepted practice framework would need to take place at individual, facility, and national organization levels. For the individual practitioner, altering the approach to intervention may require continuing education to develop reflection-in-action and reflection-on-action (Schön, 1983; 1987) as ways to co-construct a client's self-regulatory armory for engagement in activity.

Further, the known functions of an occupational therapist in evaluation, intervention planning, implementation, and re-evaluation may need to be enriched. For example, a more expansive view of reassessment might include not only a client's occupational performance, but also an occupational therapist's skill in guiding reflection. For an occupational therapist, self-assessment cues might ask: "what information do I have about a client's purpose in life, self-schema, ideal self, and self-regulation? How could I facilitate a client's ability to expand his or her range of possible selves in order to integrate transformative self-regulation into adapted occupational performance more

effectively? How could I use myself therapeutically for the greatest impact on a client's transformative self-regulation? What went right with the intervention? What might be more helpful to a client?" This type of self-reflection for an occupational therapist may come to be seen to be as important as a client's.

At an even more elemental level, occupational therapists may benefit from gaining another perspective on client reflection and what it communicates about transformative self-regulation after a debriefing interview has been completed. Professional development may be facilitated by audio-taping clients' reflection in order to distinguish effective approaches to guiding reflection for different client needs. It would be likely that being able to look back at actions and reactions of an occupational therapist and a client, to search for patterns of learning, to identify points where a client's self-awareness became evident, or where self-knowledge was integrated. Individual commitment to personal and professional transformative self-regulation may be the ultimate therapeutic tool for an occupational therapist. Though professional development, on its many levels, may not be a swift, it is a lifelong process worthy of serious consideration.

In the model derived from this study, an occupational therapist takes on distinct roles with a client in intervention aimed at facilitating self-awareness and transformative self-regulation. A client participates in intervention collaboratively, but takes on expanded roles much as the occupational therapist. The role of a client is examined in the next section.

Role of a client. In the current Practice Framework (The American Occupational Therapy Association, 2002), a client is viewed as the recipient of an occupational

therapist's expertise. The role of a client is to participate in a process of change, incorporating adaptations that have been designed by a skilled occupational therapist into occupational performance. A collaborative process between occupational therapist and client is emphasized, but it is implied that an occupational therapist has the knowledge and skills to effect change in a client.

This study suggested that the real agent of change may be a client who must come to accept that learning to live with loss of function will require a motivation to use expanded self-regulatory strategies. Given replication of this study's results, the target of a client's learning may be more than occupational performance and its relationship to engagement in activity. Clients guided to consider performance factors that have been viewed as the skilled contribution of occupational therapists may be better able to incorporate principles of activity analysis, grading of activity, and assessment of occupational performance in different contexts into transformative self-regulatory strategies. Accepting and integrating new information about the capacity for occupational performance, for engagement in valued activities, and for participating in society implicitly requires that new information about the self be integrated into a client's ideal self.

A client who approaches occupational therapy with a willingness to determine how best to live with functional loss is likely to be open to changes in performance that can be integrated into his or her self-regulatory strategies, self-concept, and, by extension, ideal self. Though this process may not be conscious to a client at first, this study suggested that the central work of occupational therapy is to uncover and emphasize a client's transformative self-regulation as the essence of adaptation. Making

transformative self-regulation conscious to a client puts him or her in a position to reconstruct his or her self in order to integrate revised life choices in support of altered performance skills and patterns. For a client, then, the fundamental outcome of occupational therapy may be the ability to make conscious choices to use various transformed self-regulatory strategies to engage in activity that meaningfully supports valued life roles.

No one can decide how another person may choose to define his or her self; the development of self is necessarily an individual process. Occupational therapy framed to help a client create other possible selves, test the efficacy of each, and choose an ideal self that integrates new awareness and acceptance of his or her self with an illness or disability is positioned to help a client's change process. In this sense, a client is in the pilot seat, defining his or her life purpose, analyzing his or her occupational performance, evaluating transformative self-regulatory strategies, and integrating self-knowledge into a revised ideal self. From this perspective, a client chooses the direction of the intervention process and an occupational therapist guides his or her analysis of the experience. The act of performing activities provides opportunities for a client to explore and test remedial or compensatory occupational performance and integrate transformative self-regulation into his or her engagement in future activities.

The pivotal factor appears to be the capacity of a client for reflection, self-awareness, and integration of information about performance into his or her ideal self. This study brought a client's reasoning into sharper focus. If the over-arching goal is for a client is to reason about the impact of an occupational therapy intervention, to synthesize its advantages and disadvantages, and to determine optimal strategies for self-regulation

for future engagement in different kinds of activities, then how a client reasons is very important.

Incrementally, the varying complexity of guided reflection may provide arenas for a client to build a broader range of transformative self-regulatory strategies. Like an occupational therapist's grading of a therapeutic activity, it may be more important for a client to test and analyze various ways of performing an activity to achieve his or her goals. The capacity to participate in guided reflection, then, may be instrumental in a client's process of transformative self-regulation. Once transformative self-regulatory strategies have been integrated, transformed self-regulation may be used by a client consciously in his or her future engagement in activity. It is possible that self-regulatory strategies been refined for a client at the outcome of occupational therapy, and an additional outcome may be the ability to explore and evaluate transformative self-regulation in the pursuit of future engagement in activity and participation in society.

The roles of both an occupational therapist and a client in the collaborative process in occupational therapy may benefit from a shift in emphasis. Rather than an occupational therapist alone using clinical reasoning, perhaps the real work is to guide a client to be able to reason in ways that build his or her skills to self-regulate, that is, to develop a client's reasoning through guided reflection. Roles of an occupational therapist and of a client are compared in Tables 10 - 11, highlighting differences between the currently accepted definitions of occupational therapy and those generated by this study.

Table 10

Comparison of the Roles of an Occupational Therapist in the Current and Revised

Models of Intervention

Process of Intervention	Accepted Model	Revised Model
Role	Facilitator	Facilitator
Goals	Elicit client goals about participation in society and how they are supported by current occupational performance through client narrative	Look for unconscious goals and needs for transformed self-regulation that can be addressed via activity goals
Use of therapeutic activities	Structure a therapeutic activity and context to develop underlying skills	Define potential ways of grading a therapeutic activity for development of performance skills and patterns
Therapeutic use of self	Facilitate performance of a therapeutic activity	Guide reflection
Reasoning	Clinical reasoning includes procedures, conditions, and interactions likely to build underlying skills.	Clinical reasoning to define and describe decisions a client has to make in occupational performance and transformative self-regulation
Outcome	Client's understanding of adaptations and their potential use	Client's choice of how to apply adaptations tested and evaluated in therapeutic activities

Table 11

Comparison of the Roles of a Client in the Current and Revised Models of Intervention

Process of Intervention	Accepted Model	Revised Model
Role	Experiential learner	Experiential learner
Goals	Conscious of activity goals	Conscious of relationship of activity goals and transformative self-regulation
Use of therapeutic activities	Client performs a therapeutic activity as structured by an occupational therapist	Consciously chooses activity in order to develop transformative self-regulation
Therapeutic process	Client receives feedback on performance and product to promote intrinsic motivation and positive self-esteem	Client reflects on activity, occupational performance, and transformative self-regulation
Reasoning	Client reasoning not clearly articulated	Client reasoning to analyze outcome of various transformative self-regulatory strategies and applicability to engagement in activity
Outcome	Client's had an experience that may provide the impetus for adaptation in future engagement in activity	Ability to choose transformed self-regulation to engage in occupations that support participation in society

Refinements in occupational therapy process, roles of an occupational therapist, and roles of a client have implications for the kinds of settings that could support an expanded view of occupational therapy intervention. Settings for intervention are discussed in the next section.

Settings for intervention. The model of practice suggested by this study has implications for the types of settings where occupational therapy intervention may be provided best. If transformative self-regulation is an incremental process that requires time for a client to reflect on incremental changes in occupational performance, then the duration of time available to work with a client is extremely important. Settings with limited lengths-of-stay are not likely to be suitable for facilitating the kind of

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transformation in a client that has been suggested by this study. By working in places that require shorter lengths of stay, occupational therapy may be circumventing a critical component of the therapeutic process.

People of all ages and abilities are confronted with functional changes resulting from the aging process, changes in family constellations, or a move to a different geographical area, for example. These people may best be served by occupational therapy that is available in long-term health settings or in the community. These types of settings may include those supported by the medical model, such as rehabilitation centers and community psychosocial programs. However, transformative self-regulation may be as powerful in settings outside the medical model.

Occupational therapists as life coaches, for example, have the opportunity to apply the approach to practice suggested by this study in disability communities (Kielhofner, 2005) as well as the general public. There may be greater opportunities for occupational therapists in private practice, as life planners, as personal coaches, or as family coaches. Community recreation services may offer another avenue for occupational therapists able to foster transformative self-regulation through various experiential learning opportunities. Vocational opportunities for occupational therapists in settings outside the medical model are plausible.

The important conclusion is that expanding occupational therapy outcome to include transformed self-regulation may lead to greater involvement in the community. If this study is replicated, it may lead to an intervention model that incorporates transformative self-regulation as an intervention choice in any setting. This would,

naturally, have implications for occupational therapy education, the topic addressed in the next section.

Implications for Occupational Therapy Education

This section of the chapter addresses implications for both entry-level occupational therapy education and continuing professional development of occupational therapists. Innovations in occupational therapy practice must find their way into entry-level education if occupational therapists are to enter practice with up-to-date professional skills. If further research validates that transformative self-regulation is indeed at the core of occupational therapy, then strategies must be put in place for updating the profession's emergent and existing workforce. Entry-level professional curricula would benefit from reshaping of material on outcomes and evidence-based practice. Educational needs would arise for occupational therapists practicing as clinicians, administrators, educators, and researchers. For all groups, the main educational issues are what to teach and how to teach it if intervention using guided debriefing interviews to structure client reflection is found through further research to have a measurable effect on outcome.

The first main issue that must be determined by the profession is *what* to teach. Three constructs would be important to convey in educational experiences: expanded theories of human development, transformative self-regulation, and guiding of client reflection. Occupational therapy accreditation standards for entry-level curricula currently require that human development be a part of all academic programs (American Occupational Therapy Association, 1999). For example, an educational program must "demonstrate knowledge and understanding of human development throughout the

lifespan" (American Occupational Therapy Association, 1999, p. 578). The question is not whether human development is included in occupational therapy education, but rather how such an expansive topic is may be addressed.

A basic recommendation from this study would be to include more information about the specific theories of Markus (1986) and Vygotsky (1978) in educational content on transformative self-regulation. This recommendation is based on the belief that co-constructing transformative self-regulation may play a pivotal role in the overall well-being of clients as well as the researcher's considerable clinical experience. In order for emerging and existing occupational therapists to guide reflection toward a client's development and testing of possible selves to create an ideal self, they would need to learn more about the roles of self-awareness, competence, and self-concept in people of all ages. More specifically, curriculum content that includes exploration of how human development across the lifespan is altered by functional loss would better support the additional intervention approach suggested by this study.

In addition, entry-level and continuing education would benefit from theoretical and experiential learning of the principles and practices of the social co-construction of knowledge. Learning the mechanism of guiding reflection would require explicit awareness of the actions and reactions of both an occupational therapist and a client as they affect learning. The essential process of facilitating a client's awareness of self-regulation, his or her testing of transformative self-regulatory strategies, and application of chosen adaptations to performance of activities would need to be included. The main addition to educational curricula would be learning how to foster a client's reasoning through evaluation of his or her occupational performance.

Occupational therapy education would need to expand on the role of self-regulation in human development. In addition to maintaining homeostasis, information on how self-regulation may be used to re-create a client's self-concept and ideal self would be an important addition to entry-level curricula. Further, broadening the construct of occupational therapy intervention as a laboratory for analyzing, exploring, testing, and reconstructing a client's repertoire of self-regulatory strategies would need to be included, that is, if this study can be replicated.

Refinements in occupational therapy education might also target the therapeutic relationship between an occupational therapist and a client. As presented in Chapter Two, intervention using the goal-directed actions and reactions of an occupational therapist to structure a client's environment is described as using the self therapeutically, or therapeutic use of self. This construct acknowledges the role of an occupational therapist in a therapeutic relationship is to "perceive [that] the action on the part of the therapist" (Fidler & Fidler, 1963, p. 40) can either facilitate or hinder a client's goals. The occupational therapist is advised to "anticipate the degree and type of response that will help the patient" (Fidler & Fidler, 1963, p. 41).

This is a broad definition that benefits from a discussion of conditions that might influence an occupational therapist's use of self therapeutically. Empathy for the learner and self-awareness are implicit in applying therapeutic use of self to individualized intervention, as is tolerance for ambiguity, anxiety, and frustration. With the aim of inhibiting a client's dependence, an occupational therapist was advised to encourage and anticipate healthy behavior from a client in order to foster goal attainment, self-awareness, and a positive self-concept (Fidler & Fidler, 1963). It was thought that the

role of the occupational therapist was to "…be as realistic as possible about the patient's concept of himself and, second, to define the differences between the patient's self concept and the patient's real self" (Fidler & Fidler, 1963, p. 45).

These early tenets still hold true. But if the findings from this study can be shown to extend to other clients and occupational therapists, there may be additional choices for using the self therapeutically suitable for occupational therapy students as well as practicing occupational therapists. Specifically, shifting the emphasis to transformative self-regulation, an occupational therapist might help a client distinguish the relationship between the effectiveness of his or her self-regulatory strategies and goal attainment. Building on a client's analysis, transformative self-regulatory strategies might be explored, tested, and evaluated as a way to examine a range of possible selves available to a client.

Framed by a client's goals, then, an occupational therapist could learn to guide a client to reconstruct his or her self-concept and ideal self to include the capacity for choosing transformed self-regulation in support of his or her engagement in activity. To achieve this, students and occupational therapists choosing to develop skill in guiding a client's reflection may benefit from reflecting on their own learning experiences. Further, it may be helpful to approximate the kinds of questions a debriefing interview might structure for client reflection. For example, occupational therapy's learning experiences design to foster personal and professional development might be followed by a variation on the questions considered helpful to clients. These may include: How was this activity for you? What helped you achieve the goals of the activity? What interfered with your performance? How did you adjust how you performed the activity? How might the

activity be structured differently next time? How does what you did today relate to your role as an occupational therapist? What would you like to take from today's experience into your future?

In the model of intervention to test transformative self-regulation, the content of occupational therapy education would shift to emphasize self-issues for both an occupational therapist and a client. For each person, a more explicit discussion of self-regulation, incorporation of transformative self-regulatory strategies for goal achievement, integration of self-concept, and reconstruction of an ideal self would need to transpire. Such a shift would demand a thoughtful evaluation of optimal teaching-learning strategies for occupational therapy educators and students.

The second main issue is *how* to teach the transformative self-regulation approach to occupational therapy intervention derived from this study. If a more complex focus on how to facilitate a client's transformative self-regulation became the aim of entry-level and continuing education, then it would be important for learning experiences to develop the learner's skills in facilitating client reflection, co-constructing knowledge about the self, and framing occupational therapy process as a client's experience and reflection on transformative self-regulation congruent with a revised ideal self. In particular, an embellishment of approaches to building a student's repertoire of ways to use the self therapeutically would be an asset.

This study suggested that it may be helpful to offer opportunities for students not only to experience their own personal and professional development through various experiential learning techniques, but also to be guided to make their own processes of development explicit. If made explicit in the occupational therapy student's education,

the skills needed to foster a client's transformative self-regulation may be more available and appropriately chosen depending on a client's needs.

One's unique development of the self is learned, not taught. So, education that favors reflection on experiential activities is suggested by this study. It would be important for an educator to guide a student articulate how his or her explanation, analysis, exploration, testing, and acceptance of transformative self-regulation helped to construct a professional self. As a student becomes aware of his or her professional journey using transformative self-regulation to acquire professional attitudes, behaviors, and skills, it would be important to highlight not only the outcome but also the process of reconstructing an ideal self that integrated both personal and professional selves. Familiarity with human development principles and processes would support a student's application of guided reflection for a client's transformative self-regulation.

In guiding a student's reflection on learning experiences geared to transformative self-regulation, an occupational therapy educator models the use of guided debriefing interviews following intervention. This aspect of a student's learning activity could be made explicit to illustrate ways an occupational therapist might guide transformative self-regulation. Guiding student reflection on self-regulation as part of his or her learning experiences could provide additional information for therapeutic use of self with future clients.

Classroom learning experiences may also be coupled with observations of peer-reviewed, exemplary occupational therapy sessions and guided debriefing interviews. Whether in videotaped occupational therapy sessions or on-site observations of occupational therapy intervention, the opportunity to pinpoint specific approaches to

guiding reflection and to evaluate their impact on a client could offer a close-up view of the individualized nuances of transformative self-regulation. Observation followed by guided reflection could not only reinforce the process and the outcome of occupational therapy geared to transformative self-regulation, but it could also serve to highlight similarities and difference among occupational therapists as they facilitate clients' transformative self-regulation. Other opportunities for a student to experience and integrate transformative self-regulation in entry-level education might include role-playing, case studies, problem-based learning, or letter writing, for example, given that a student's reflection is incorporated in socially co-constructed knowledge about occupational therapy through interaction with an educator.

Imparting the notion of intervention for transformative self-regulation to occupational therapists already in the field might require individualized teaching-learning methods. Greater emphasis on mentorship in the profession, beyond the required first year in practice, might open an arena for personal and professional development throughout an occupational therapist's career span. The role of a mentor as guide might prolong exposure to guided reflection and transformative self-regulation and, thereby, further reconstruction of an occupational therapist's professional self-concept. As with entry-level education, the process of making transformative self-regulation explicit for an occupational therapist might reconstruct the needed skills for that same occupational therapist to facilitate his or her clients' transformative self-regulation.

In addition to mentorship, videotaped guided debriefing interviews may illustrate clients' evolution of transformative self-regulation as it relates to a therapist's guided reflection. Seeing and hearing actual therapeutic relationships may demonstrate how an

occupational therapist might apply approaches to guiding reflection with different clients. Depicting different occupational therapists with their different clients might illustrate how variable transformative self-regulation can be and might motivate occupational therapists to incorporate transformative self-regulation issues in routine intervention.

In addition to differences among clients, there are certainly differences among occupational therapy practitioners. If occupational therapists wish to incorporate this framework for intervention into their professional repertoire, then the question arises as to whether guiding reflection is a skill able to be incorporated into the routine occupational therapy intervention off existing occupational therapists and whether it is appropriate for all of them or only select sub-groups. If so, what is the best way to add to the therapeutic skill set of diverse occupational therapy clinicians, educators, administrators, and researchers?

As in entry-level education, there is a need to provide opportunities to become familiar with the expanded intervention approaches suggested by this study. A range of learning opportunities could be made available in forms suitable to different learners. The most recently introduced in the profession is the Professional Development Tool (The American Occupational Therapy Association, 2004).

The tool's format is designed to structure an occupational therapist's development through recording and analysis of his or her professional accomplishments. Beyond recording education, work, and scholarly activity, however, the Professional Development Tool asks an occupational therapist to evaluate his or her skills in light of the unique requirements of a particular vocational role and of the career path he or she envisions. The tool is intended to help an occupational therapist explain and reflect on

what he or she has achieved and to consider how to achieve future career goals effectively.

To integrate transformative self-regulation for an occupational therapist, this tool's questions that guide reflection may be shaped using the language of self-regulation, possible selves, and transformative learning explicitly. An occupational therapist's own process of transformation, that is, his or her self-regulation of vocational experiences, and goal-directed choices of educational experiences could be emphasized using language congruent with transformative self-regulation. In this way, an occupational therapist's development throughout the career span could be revealed as analogous to a client's process and outcome in occupational therapy based on guided reflection on transformative self-regulation. Once transformative learning through reflection has become integrated by an occupational therapist in his or her own professional development, he or she is likely to understand better how to guide reflection in the populations he or she serves, whether students, clients, colleagues, or interdisciplinary teams.

Informal sharing of the approach an occupational therapist may have taken to complete his or her Professional Development Tool may be a catalyst to using the language of transformative self-regulation collectively in occupational therapy. Professional discussion of guided reflection and transformative self-regulation may take the form of study groups, mentoring, or staff seminars, for example. The intent would be to make lifelong learning an open discussion in the profession based on reflection on personal experiences of occupational therapists as well as reflection on learning approaches found to be transformative with their colleagues.

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Concurrently, it would be important to develop interviewing skills of occupational therapists to including the ability to guide reflection in clients. This could be accomplished through annual national and state conferences and regional workshops that combined didactic and experiential learning and that directly emphasized the role reflection plays in transformative self-regulation. Observation and reflection on the actions an occupational therapist takes in guiding reflection and a client's reactions in a debriefing interview could be included through watching peer-reviewed videotapes of experienced clinicians, role-playing with faculty-student dyads, or actual doing of guided debriefing interviews. Should the idea of including a client's transformative self-regulation through guided reflection during an intervention session be viable, the same techniques of observing and then reflecting on intervention that were suggested for students would be appropriate to include in continuing education experiences.

The educational aim would be to model various approaches to guiding reflection so that an occupational therapist had an opportunity to consider how he or she might incorporate scaffolding in his or her routine practice. Self-reflection by an occupational therapist, then, would be integral to any real change in routine intervention. Occupational therapists may incorporate the habit of reflection by debriefing each client's intervention with guiding questions. These might include: What do I know about this client's possible and ideal selves? Which underlying performance skills could be developed and incorporated in this client's choice of self regulatory strategies? What about today's intervention helped this client? Was there any part of the intervention that hindered his or her performance? What's next?

Occupational therapy educators would be doubly challenged not only to become skilled at transformative self-regulation through guided reflection, but also to find ways to impart the expanded intervention model to entry-level students. Faculty education would build on the profession's use of the Professional Development Tool. In addition, however, it may be helpful for academicians to incorporate the notion of transformative self-regulation into scholarly activities, research exchanges, and statements about the conceptual model used to frame entry-level curricula. Now that entry into occupational therapy requires a master's degree, students begin occupational therapy education with a greater breadth of knowledge and life experience. This is likely to shape how occupational therapy educators address transformative self-regulation. It may be helpful to develop a module on therapeutic use of self that includes didactic and experiential learning activities for use by faculty.

Emphasizing that guiding client reflection may be a pivotal therapeutic role, possible questions to include in a guided debriefing interview may be offered for testing and evaluation by entry-level students. Experiencing the impact of guided reflection may also be facilitated through problem-based learning, journal keeping assignments, or letter writing between faculty and students. This latter strategy was used successfully by the researcher in previous academic roles where students were asked to use the last five minutes of class to write a letter about their learning experience. Responding to students' reflection by return letter provided a pathway to guide their transformative self-regulation as they evolved into occupational therapists.

In considering the introduction of novel educational content and teaching/learning strategies into occupational therapy education, it became clear that research on the

efficacy and efficiency of educational strategies related to transformative self-regulation would be an asset. If a module were developed and disseminated, it could be accompanied by questionnaires for faculty and students to be returned to the researcher. Feedback on the content and teaching of transformative self-regulation and guided debriefing interviewing could be instrumental in refining entry-level and continuing education materials.

A crucial aspect of any educational endeavor would be ensuring that the language used to convey the construct and process of transformative self-regulation was clear and consistent. This study has created a language for the incremental changes in a client's ability to self-regulate consciously as a result of therapeutic activities graded to build performance skills. That language has to be integrated into routine practice through education in order to build a cadre of clinicians who gain expertise in consciously guiding reflection-in-action and reflection-on-action. Developing a client-centered language would strengthen occupational therapy's armament of intervention approaches that translate skills learned in the performance of meaningful therapeutic activities into a client's future occupations.

If any of the suggested educational strategies are to take hold, there must be a way to validate the practice model derived from this study first. Only then will the profession begin to explore, test, and reconstruct its practice framework to include transformative self-regulation. Suggestions for future research are presented in the next section.

Future Research

Extended research on occupational therapy process is rich with opportunities to understand more fully what occurs for a client during and after performing purposeful activity. Uncovering of client views has the potential to increase the accountability of occupational therapy by adding to the body of evidence for outcomes. This section is presented in four parts. First, methodological issues in light of occupational therapy research are considered, including mixed method research (Tashakkori & Teddlie, 1998; Creswell, 1994). Then, analytic approaches are discussed and followed by issues related to data collection. This section concludes with extensions to the research presented in this study.

Several aspects of the method used in this study were of particular interest. First, this approach to using mixed-method research (Tashakkori & Teddlie 1998) was fruitful. Second was the value of subjecting the data to triangulated analytic approaches. Third were alternatives for data collection.

Mixed method research. The most elemental conclusion to be drawn about the research methodology was that narrative data, subjected to both quantitative and qualitative analysis, yielded a deeper understanding of the occupational therapy process than use of either approach exclusively. Different analysis approaches provided different information. A conscious attempt was made to use content and descriptive analyses to reveal occupational therapy process components and then to compare the findings from both approaches.

Additionally, the interplay between the analytic approaches fostered reliability and increased depth of analysis. Content analysis informed descriptive analysis,

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influencing the salience given to process variables and the interpretation of relationships among process variables. Performance of a therapeutic activity, for example, was the most frequently cited component in content analysis and, therefore, there was justification for an emphasis on occupational performance in searching for meaning in the client's guided debriefing interviews. Observing different patterns among occupational therapy process components in the earlier and later guided debriefing interviews through content analysis reinforced the need to understand the client's evolution throughout the occupational therapy process through descriptive analysis. Flexibly moving from one analytic approach to another revealed levels of meaning not readily apparent from either approach alone.

Analytic approaches. There was an unmet need to understand the language of both client and therapist better and to understand how their communication patterns influenced the therapeutic outcomes. A rich area for future exploration is how language might be used to develop a client's concepts about transformative self-regulation. This study merely has skimmed the surface of this complex topic; however, further linguistic analyses of scaffolding are likely to yield information helpful to therapists in order to guide reflection efficiently. Variations in prompting reflection are likely to be highly unique, but it is anticipated that this line of inquiry may yield principles for guided debriefing interviews that foster a client's ability to explore and test transformative self-regulatory strategies.

This study searched for evidence of various process components, but not how they were expressed. In particular, the role of mitigation in the occupational therapist-client relationship is of particular interest. The therapeutic alliance relies on the ability to

create a collaborative relationship from one that is socially hierarchical. Further

subjecting the data to discourse analysis has the potential to reveal variables affecting

how the occupational therapist and the client were able to co-construct the client's self-

knowledge. These variables, in turn, may suggest additional applications of content and

descriptive analysis.

Data gathering alternatives. This study examined a client's response to a set of

specific questions in guided debriefing interviews. The focused interview framed the

client's explanation of performing an activity during an occupational therapy session.

This method may have yielded only a portion of information useful in understanding

occupational therapy process. It is not clear whether and how the focused interview

questions may have influenced this client's reaction to the learning experiences in

occupational therapy sessions. It may be that a non-focused open-ended interview may

provide additional or different information.

Clarifying how individual differences may influence data collection would open

the potential for occupational therapists to choose interview styles compatible with

different clients. There may be yet undiscovered techniques for guiding reflection

suitable for various client attitudes and attributes. Or there may be unique ways of

guiding reflection depending on whether or not a client is confident in his or her

perceptions and analytic abilities. Determining what kind of guide might be helpful could

be influenced by a client's comfort in relating on a more personal level with an

occupational therapist.

Adjusting data gathering approaches may yield even greater knowledge of

occupational therapy process. The use of guided debriefing interviews to uncover client

perspectives is one approach to data collection, but it offers only the client's self-report. Missing is a lens on the *in vivo* learning from experience, that is, the social co-construction of knowledge between an occupational therapist and a client during intervention. Supplementing the guided debriefing interview with real-time audio or video taping of actual occupational therapy sessions might provide complementary data useful in describing occupational therapy process directly as well as in establishing the reliability and validity of the results. For example, it may be found that client reflection is not isolated in guided debriefing interviews, but rather occurs throughout the learning experience as an occupational therapist and a client interact during an occupational therapy session. Reflection-in-action rather than reflection-on-action may, in fact, be more powerful when in closer proximity to actually engaging in activity. This type of client reflection is worthy of further study.

More closely examining the timing of guided debriefing interviews may open yet another lens on client learning. In this study, guided debriefing interviews were scheduled immediately following occupational therapy sessions. However, reflection can occur at many different times in the sequence of learning. Perhaps, gathering information from a client well after completion of actual intervention could reveal more about the integration and use of transformative self-regulation tested by a client. The potential for administering follow-up debriefing interviews, however, is weak in today's health system, although it may be more possible in longer-term community-based interventions.

Real-time recording of actual occupational therapy sessions and guided debriefing interviews combined with analysis using a blend of content, discourse, and descriptive analyses may broaden the commonly understood principles of effective treatment. In fact,

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more extensive analysis of guided debriefing interviews may yield more approaches, yet undiscovered, to elicit information from clients regarding their reasoning, reflection, and integration during the performance of meaningful activity. There appears to be a wide range of potential research that might further elucidate processes of a client's transformative self-regulation and eventual reconstruction of his or her ideal self. The next section of this chapter examines research leading from the current study that might contribute to the overall understanding of a client's transformative self-regulation in occupational therapy.

Specific Extensions of This Study

Some of the previous suggestions for future research may be addressed by extending the present study. Data collected for the previous study include guided debriefing interviews for 20 clients, with varying diagnoses, conducted by eight different occupational therapists. The length of each interview and the duration of guided debriefing interviews were consistent with routine occupational therapy for each client but varied within a client's set of interviews and between clients. For each of these guided debriefing interviews, there is a corresponding interview with that client's occupational therapist. In an interview with one of the previous study's investigators, the occupational therapist was asked to reflect on the occupational therapy session and the client's guided debriefing interview.

To begin, data from the previous study can be analyzed further in order to validate the constructs derived from this study. In selecting a client with bipolar disorder who did not analyze to the extent that this client did, the aim would be to determine whether the second subject addressed transformative self-regulation, reconstruction of his or her ideal

self, and integration of self-knowledge in order to perform activities. Viewing a second client with the framework of transformative self-regulation may provide additional insights into occupational therapy process, roles of an occupational therapist, and roles of a client. If constructs from this study are not validated in another case, then other clients from the previous study may be subjected to the same kind of analysis with the aim of clarifying transformative self-regulation.

Because different client factors are represented in the sample, it is possible to examine views of subgroups of clients. For example, clients with bipolar disorder could be grouped, male and female clients could be examined as separate groups, or clients could be distinguished by age group. By subdividing the sample, it may be possible to determine whether particular views on occupational therapy process tend to be present in some clients and not others, or whether certain process components are shared among subgroups.

Other client-specific factors may also be analyzed in greater detail. In the previous study, clients addressed different activity goals and different therapeutic goals. Clients could be grouped by type of goal to determine whether goals used to frame occupational therapy intervention may have influenced perceptions of occupational therapy process. Also, there may be differences in the type of activity demands inherent in a client's therapeutic activities that could be used to examine subgroups of the sample. A client's diagnosis may have been another factor influencing how he or she viewed occupational therapy process.

Time may have been an additional influence on the data collected in the previous study. The number of guided debriefing interviews collected from each client varied due

to length of stay, client's ability to participate in occupational therapy, and frequency of routine occupational therapy intervention, for example. Any of these time factors could be chosen for further analysis to determine whether they influenced client perceptions of occupational therapy process. Perhaps clients who participated in guided debriefing interviews over a longer duration came closer to accepting, reconstructing, and integrating self-knowledge.

Also, it may be that integrating what was learned in occupational therapy may require a length of time after intervention has concluded. Perhaps integration and application of transformative self-regulation may be best supported when a client begins to engage in activity in his or her discharge environment. The possibility that integration may occur after discharge suggests that development of a follow-up interview to determine the extent to which transformative self-regulation persists as a viable strategy for a client is important. It may be that the observations from this study are but short-lived therapeutic effects. It would be important to devise better measurements of how well a client may have integrated and applied transformative self-regulation into his or her ideal self.

The current pre-test and post-test measures of client performance, or surveys of client satisfaction and perceived quality of life, may only partially explain outcomes. This study relied on self-report as the source of information about a client's transformative self-regulation and occupational therapy process. Information on client function gathered from other sources might be helpful. If transformed self-regulation has become an integrated aspect of a client's self-concept, it may be observed in the daily engagement of a client in family roles, productive roles, or participation in society. In gathering evidence

from a client's family, for example, the aim would be to seek evidence that a client's conscious choice of transformative self-regulatory strategies did indeed enhance his or her participation in society.

Some data collected in the previous study awaits analysis. Occupational therapists provided their views on occupational therapy process in guided debriefing interviews conducted by another occupational therapist. Examining these data in subgroups may also be valuable. Differences among occupational therapists might emerge as influential factors in the nature of guided debriefing interviews or client outcomes, for example. There may also be differences in how an occupational therapist viewed occupational therapy process for different client diagnoses, ages, or gender factors.

Of particular interest is the development of guided debriefing interview skills in occupational therapists. It would be possible to show relationships between the nature of an occupational therapist's guided debriefing interview and a client's reflection, particularly as they evolve over time. It may be that occupational therapists seek client reflection instinctively as a routine part of intervention. Or perhaps occupational therapists participating in guided debriefing interviews refined their approach to guiding client reflection over the course of debriefing interviews.

Further, there may be other ways to seek client views on occupational therapy process. Data have been collected from an additional 12 clients in another study conducted by the researcher. Two forms of the focused interview were used for guided debriefing interviews. One form duplicated the focused interview from the previous study. Another form contained the same number of questions, but they did not ask specifically about the therapeutic activity, the context, or therapeutic relationship. These

data have not been analyzed yet, but they could reveal more about the relationship between guided debriefing interviews and client reflection.

Analyzing client views on occupational therapy process from guided debriefing interviews that have been collected already has advantages. When data were collected, the notion of transformative self-regulation, guided reflection, and reconstruction of an ideal self were not known. There was no potential for bias to be introduced in data collection because the components that emerged as pivotal in this study were not known at the time. Further, an occupational therapist's role in guiding client reflection was only uncovered after analysis of the guided debriefing interviews in this study.

One of the key issues inherent in using guided debriefing interviews is the interactive nature of learning. Guided debriefing interviews could also be examined for how knowledge about how the client's possible selves and self-regulation were socially co-constructed by occupational therapist and client. This would involve uncovering relationships between how an occupational therapist acted and a client reacted, and, in turn, how that same occupational therapist reacted to that client, and so on. This way of looking at the data may suggest that different approaches to guiding a client yield different kinds of client reflection.

Unlike client education programs that promote self-responsibility for health, the approach discussed in this study is not a solo endeavor. For both the occupational therapist and the client, it required trust, objectivity, insight, collaboration, and willingness to be in relationship with another person. Learning in this fashion is not a quickly mastered process. The outcome of the client's integrated capacity for self-regulation through adaptation of life choices, performance of valued activities, and

accommodative participation in society may require sufficient time to understand, apply, and integrate transformative self-regulation in daily life.

If guided reflection were to be the strategy of choice, then the metaphor that emerged with this client may assist other clients to participate in the process of reflection. Encouraging clients to look beyond the present, to levels of performance, to levels of future participation in society, and to various approaches to self-regulation may help each of them to create their own hologram of a wholly functioning self.

This study suggested that seeking evidence from a client may be beneficial. Also, there may be other sources of data to substantiate or refute a client's perspectives, for example from other health providers or family members. If transformed self-regulation was used by a client, it would be expected to spill over into other contexts, such as the family. A client's transformation, however, may not be welcome to family members who may be required to change to accommodate a client. Family members, co-workers, or colleagues in community organizations may not appreciate changes in a client.

By examining when and how co-constructed knowledge was most powerfully related to a client's transformative self-regulation, it may be possible to build evidence for occupational therapy's role in client outcomes. Though further analysis of data collected from the previous and present studies may contribute more to understanding the inner workings of occupational therapy process, there are also limitations to such research. Limitations of this study are acknowledged in the next section.

Limitations of This Study

There are several limitations to this study, the most important of which is its single subject case study design. This study examined only one client so results cannot be

generalized beyond his unique situation. The nature of this client's functional limitations was unique: he carried a diagnosis of bipolar disorder. These findings may not generalize to people with other mental illnesses and perhaps not to other people with bipolar disorder. Given the detailed description of occupational therapy process provided by this client, he had a high level of verbal fluency, an attribute which may not be present to the same degree in all people participating in occupational therapy. For example, people who have experienced a stroke or head injury may not be able to express reflections on questions about performance, context, or therapeutic relationship. Without further research, the findings from this study cannot be generalized to people with the same or other diagnoses.

Additionally personal, social, and cultural factors are unique to each individual. This client was an accomplished businessman with obvious intelligence and analytic ability to make use of guided debriefing interviews. Other people may not be able to look at his or her self objectively, analyze performance, or draw interpretations from experience. Dissimilar characteristics of other individuals may limit their ability to engage in or to benefit from guided reflection. Culture is a significant variable because the notion of self may not be salient in Eastern cultures such as China, for example.

Age, education, socio-economic status, and life experience are also highly variable within the population of people seeking health services. This client's maturity, developmental level, and experience working to support a family may not be shared with others seen in occupational therapy. These factors may limit a client's choice of a therapeutic activity, or of how it may be performed, that would be likely to require his or

her use of a series of transformative self-regulatory strategies. Individual client factors, then, might alter the therapeutic potential for transformative self-regulation.

Limitations arising from the client in this study were complemented by limitations imposed by the personal, social, and cultural attributes of the occupational therapist. This occupational therapist was extremely experienced with 31 years as an expert in addressing the needs of people with mental illnesses. Specialization in treating people with mental illnesses is not a focus shared by all occupational therapists, nor is the variety of work experiences in a wide array of national and international mental health settings consistent with that of many occupational therapists. Further the analytical aptitude of this occupational therapist may not be shared by other occupational therapists. This occupational therapist's formal occupational therapy education was accumulated after completing higher education in another field, a background dissimilar to many occupational therapists educated before the requirement for a Master's degree to enter the profession in 2007.

These limitations, derived from both occupational therapist and client, strongly limit generalizability of the results. The study also was limited by a threat to validity based on the fact that the researcher was the occupational therapist treating the client in this study. The potential for bias in interpreting the data was certainly present, but the data for this study were collected well before an alternative model of occupational therapy process was even considered. Because transformative self-regulation was not known to be a potential factor in client learning, there was not an opportunity to influence how the client responded to focused interview questions.

The treatment setting also contributed to limitations of this study. The duration of occupational therapy sessions and of guided debriefing interviews, as well as the number of intervention sessions, may have been additional factors limiting generalizability of the results. The client in this study participated in 10 guided debriefing interviews following occupational therapy sessions. This number of occupational therapy sessions may be different than the typical length of intervention for people seen by occupational therapists. The time frame available to this client for reconstructing his ideal self may have contributed to his level of insight into transformative self-regulation and possible selves. It may be that the longer a client is guided to reflect, the more likely he or she is to become conscious of transformative self-regulation issues. To test this limitation, evidence for reflection and transformative self-regulation should be sought in sets of guided debriefing interviews of varying durations.

The facility where occupational therapy was provided and guided debriefing interviews were conducted was replete with resources. This client had access to a dedicated computer room, the expertise of a technology consultant, and individual sessions with the occupational therapist. Limited funds for program development and staffing may make it difficult for guided debriefing interviews to be conducted in other settings.

The methodology used in this study presented additional limitations. Major components of occupational therapy process as it was known at the time of data collection were implicit in the focused interview questions that were used consistently to frame the guided debriefing interviews. Use of a focused interview, however, was intended to leave open the possibility of eliciting further explanation from the client. The

kinds of clarification sought and the depth of analysis to which a client may be guided are likely to vary among clients and among occupational therapists. The particular nature of this client's guided debriefing interviews may have influenced the quality of analytical thinking he attained. The client's capabilities for reflection also may have shaped the quality of the occupational therapist's expanded inquiry to understand his perceptions of occupational therapy process. Again, at the time data were collected, it was not known that analysis prompted by guided reflection might be a prominent component of occupational therapy.

In fact, in subsequent clinical work this researcher has been able to reduce the number of sessions needed to achieve a client's therapeutic goal because she could focus on transformative self-regulation during guided debriefing interviews in a more targeted fashion. An occupational therapist who knew that his or her therapeutic role entailed helping clients translate transformative self-regulation into their self-schema could reduce the amount of time needed for clients to internalize transformative self-regulation. However, whether guided reflection can be included in occupational therapy process more economically is an unresolved empirical question at this time.

The role of guided reflection in self-discovery is not clear from this single case. Reflection may follow from a client's expanded self-knowledge or from a number of other factors including greater comfort expressing oneself during the course of occupational therapy guided debriefing interviews. It may be hard to distinguish self awareness from increased trust to reveal self issues. Or, a client may be aware of how his illness affects function, but be unable to express it. Increased self-awareness and comfort participating in reflection with an occupational therapist may be at work, though with

varying emphasis for a client through the course of routine occupational therapy guided debriefing interviews.

Conclusion

In today's climate of decreasing time and resource allocation for health care, the ultimate need is for clients to become better able to define their needs, prevent health problems as best they can, and adopt conscious approaches to self-regulation. The need for evidence that occupational therapy makes an important contribution to America's health is paramount. This study opened the possibility that truly learning from therapeutic activities was a process of transformative self-regulation emerging from reflection on skill acquisition and goal attainment. It further revealed therapeutic strategies consistent with experiential learning that optimized the client's reflection through guided debriefing interviews; guiding a client's reflection honed his or her habit of reflection (Dewey, 1910/1991, 1929/1958, 1938). This study suggested that transformative self-regulation may be a learned skill that, when generalized to engagement in activity that supports participation in society, can assist clients to live with chronic health conditions with higher quality of life.

Occupational therapy process targeted to developing a client's capacity for self-regulation may enhance the profession's ability to develop evidence for effective practice using data gathered session-by-session. Importantly, this study showed that it is possible to document evidence that change in a client's performance was a direct result of occupational therapy intervention. Guided reflection led to incremental changes in self-regulation for this client that were clearly stated by him and applied by him to future engagement in activity to support participation in valued life roles. Occupational

therapy's role in fostering individual choice of transformative self-regulatory strategies to express feelings, thoughts, and behavior in living with a chronic illness may document the outcomes of occupational therapy intervention more explicitly.

A framework for better understanding the art and science of occupational therapy, as seen in guiding a client to integrate transformative self-regulation, was derived from analysis of one client's experience. This study suggested that an occupational therapist's role in prompting and guiding a client's analysis and reflection in a non-judgmental atmosphere may be an important additional skill for effective intervention. It suggested that process interactions between an occupational therapist and a client, in the context of a therapeutic activity, are not only suitable, but also are ripe for further research in occupational therapy. The question of how to foster client compliance with therapeutic interventions and how to measure a direct impact of occupational therapy on a client's participation in life still lacks a definitive answer. This study is just the beginning of a research program which has the potential to transform occupational therapy process. It may prove to be a fruitful line of inquiry, but it is too soon to tell.

This study has revealed that adaptation in occupational therapy may be more than it seems. It appears to be more than an adjustment to the environment, more than a splint or an adaptive self-care device, more than an accommodation in how an activity is performed by a client, and more than traditional notions of therapeutic use of self by an occupational therapist. The idea that occupational therapy may be more about facilitating a client's conscious capacity for exploring, testing and evaluating self-regulatory strategies is a novel perspective on intervention.

Adaptation may be more a process of accepting and integrating transformative self-regulation. It may be that helping a client choose optimal self-regulatory strategies for his or her changed functional abilities is the essence of occupational therapy. Clients who gain the ability to transform how they adapt through carefully selected self-regulatory strategies may be positioned to transform themselves into whole individuals throughout their lifespan. Attending to self issues may be the way to transform occupational therapy into clearly understood outcomes for clients who then could provide more explicit evidence for its impact on health.

The model derived from this study came out of clinical work, but it may be equally applicable to well populations. Today's health system is increasingly dependent on self-responsibility for health. Practitioners in other health professions, in preventive health programs, in professional life coaching, and in community programs such as fitness gyms and yoga classes might be strengthened by the use of intervention approaches that foster a client's conscious use of transformative self-regulation to attain health goals. Interdisciplinary research may provide the rationale for other helping professions and community prevention programs to justify programmatic changes that incorporate a client's self issues to enhance outcomes. As in occupational therapy, a program's particular activity may be just the needed catalyst for internal changes in a client's self-concept, as long as ways to guide reflection are better understood and implemented. Extensions of this study may have far-reaching results for individual health by opening avenues for people to be the best they can be and, thereby, capping health expenditures as the graying of America accelerates.

Beyond occupational therapy, other health care professions may find that the approach to facilitating transformative self-regulation in clients derived from this study has applicability in other arenas. It is highly conceivable that physicians, nurses, social workers, physical therapists, speech and language therapists, and any other health professional could help a client integrate how to adapt and compensate to an impairment or functional change. People outside the health professions, such as educators or business executives might also find the transformative self-regulation model helpful, particularly given its emphasis on reflecting on the performance of everyday activities applicable in the classroom as well as the boardroom.

Essentially, this study introduced the power of reflection in transforming self-regulation. Importantly, reflection was a consistent part of the social co-construction of the client's self-regulatory strategies. That consistency parallels the notion of habit and raises the question as to whether reflection can become a habit. If so, there is the potential to transform self-regulation through reflection, that is, structured reflection leading to internalization and use of empowering self-regulatory strategies. If healthy approaches to self-regulation become habitual, there is no end to the possibilities for the improvement of society's physical and mental health.

APPENDICES

Appendix A

IRB Approval Letter

The University of Maryland's Institutional Review Board approved the use of archival

data for this study. Their signed authorization may be found on the letter that follows.

January 4, 2006

MEMORANDUM

Application Approval Notification

To:	Dr. Elizabeth Anne Robertson-Tchabo, Ms. Susan C. Robertson Department of Human Development
From:	Roslyn Edson, M.S., CIP IRB Manager University of Maryland, College Park
Re:	IRB Number 05-0650 Project Title: "Socially Co-Constructed Transformative Self-Regulation in Occupational Therapy: The Role of Guided Reflection"
Approval Date:	January 4, 2006
Expiration Date:	January 4, 2007
Type of Application:	New Project
Type of Research:	Nonexempt
Type of Review For Application:	Expedited

The University of Maryland, College Park Institutional Review Board (IRB) approved your IRB application. The research was approved in accordance with 45 CFR 46, the Federal Policy for the Protection of Human Subjects, and the University's IRB policies and procedures. Please reference the above-cited IRB application number in any future communications with our office regarding this research.

Recruitment/Consent: For research requiring written informed consent, the IRB-approved and stamped informed consent document is enclosed. The IRB approval expiration date has been stamped on the informed consent document. Please keep copies of the consent forms used for this research for three years after the completion of the research.

Continuing Review: If you want to continue to collect data from human subjects or analyze data from human subjects after the expiration date for this approval, you must submit a renewal application to the IRB Office at least 30 days before the approval expiration date.

Modifications: Any changes to the approved protocol must be approved by the IRB before the change is implemented, except when a change is necessary to eliminate apparent immediate hazards to the subjects. If you would like to modify the approved protocol, please submit an addendum request to the IRB Office. The instructions for submitting a request are posted on the IRB web site at:
http://www.umresearch.umd.edu/IRB/irb_Addendum%20Protocol.htm.

Unanticipated Problems Involving Risks: You must promptly report any unanticipated problems involving risks to subjects or others to the IRB Manager at 301-405-0678 or redson@umresearch.umd.edu.

Student Researchers: Unless otherwise requested, this IRB approval document was sent to the Principal Investigator (PI). The PI should pass on the approval document or a copy to the student researchers. This IRB approval document may be a requirement for student researchers applying for graduation. The IRB may not be able to provide copies of the approval documer   eral years have passed since the date of the original approval.

Additional Information: Please contact the IRB Office at 301-405-4212 if you have any IRB-related questions or concerns.

Appendix B

The Previous Study

The previous study was an exploratory, descriptive study that used a multiple case study research design (Yin, 2003). This design was chosen to explore the "context of a phenomenon…in the real-life context in which it occurred" (Yin, 2003, p. 13, 15). Multiple case study culls information from more than one case using replication logic with the purpose of mirroring significant findings from the first case in other cases (Yin, 2003, p. 47).

The previous study met the criteria for multiple case study design. Multiple occupational therapy sessions were examined in guided debriefing interviews of each client by his or her occupational therapist. Each guided debriefing interview yielded perspectives on the phenomenon of interest, that is, the inner workings of an occupational therapy session. Each guided debriefing interview yielded one case. Each of the 20 clients was interviewed after least 3 occupational therapy sessions, with 10 guided debriefing interviews being the most provided by any one client. The final data set analyzed in the previous study consisted of three guided debriefing interviews for each client and included the first and last interviews plus one from the mid-point in that client's series. The full set of transcribed debriefing interviews comprised the available data pool from which the data set of 60 cases was identified for the previous study.

Unit of Analysis. Multiple case study design allows one or more than one unit of analysis to be examined within a single case (Yin, 2003) with a unit of analysis being an "identifiable message or message component" (Neuendorf, 2002, p. 71). Each case

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(guided debriefing interview) included multiple units of analysis. A single unit was

defined as one textual message, that is, the narration of one speaker that ended when the

other speaker began. The next speaker's textual message comprised the next unit of

analysis. Guided debriefing interviews, then, were divided into units of analysis that

provided alternating occupational therapist and client perspectives on occupational

therapy process as it had occurred in routine intervention.

Instruments

Data for the previous study were collected using two study-specific instruments

(Patton, 1994; USGAO, 1989). The first was a Client Screening Form (Appendix C)

which was completed by each client's occupational therapist after the initial evaluation.

In this instrument, each client's occupational therapist summarized that client's

performance skills and underlying client factors (The American Occupational Therapy

Association, 2002) gleaned from evaluation results. The client's initial treatment goals

and anticipated interventions using the activity of the personal computer were also

identified.

The second instrument for data collection was a Focused Interview (Appendix D)

constructed to be open-ended, yet unobtrusive (Holsti, 1969; Patton, 1990; Webb,

Campbell, Schwartz, Sechrest, & Grove, 1981). To seek specific information about

theoretically-derived notions of occupational therapy process from a client, it was

necessary to operationalize the accepted framework for occupational therapy intervention

(The American Occupational Therapy Association, 2002). This was achieved through

construction of the Focused Interview. It was designed using specific questions about a

client's goals, demands of the chosen therapeutic activity, occupational performance, and

the therapeutic relationship between an occupational therapist and a client. In this way, information about theoretical constructs consistent with occupational therapy's philosophical base was sought from a client.

The previous study was based on the propositions that occupational therapy addresses client goals (goals) and client performance (occupational performance) of a therapeutic activity (activity demands) in collaboration with the occupational therapist (relationship) to facilitate a client's participation in society (participation). The Focused Interview asked the client to explain his perceptions of his goals, the activity demands, his performance of the activity, and his impressions of the role of the therapeutic relationship in goal achievement.

Data Collection

Following approval of the previous study by the facility's Institutional Review Board, selection of participants began. Occupational therapists in two facilities were oriented to the purpose of the study and its data collection procedures. They were encouraged to identify clients whose routine intervention included use of a personal computer. The occupational therapists choosing to participate in the study completed the Client Screening Form for each potential client interested in participating in the study. Information on the Client Screening Form was reviewed by the study's principal and associate investigators who determined whether the client met the study's inclusion criteria. Clients whose intervention was based on therapeutic activities using the personal computer were included in the study. Following witnessed, informed consent, including permission to audio-tape, data collection began.

Because the previous study was an exploratory, descriptive study, there was no attempt to influence the routine workings of occupational therapy. Intervention sessions consistent with each client's activity and therapeutic goals commenced. Actual time frames for sessions were determined by the daily workings of routine intervention. Sessions ranged from less than 30 minutes to more than an hour, depending on client need, activity focus, nature of occupational performance, and context variables.

Many occupational therapists routinely end their intervention sessions with a brief review. This practice was followed in the previous study, using audio-taped guided debriefing interviews as the vehicle for session review. Guided debriefing interviews extended the routine end-of-session reviews by approximately five minutes on average.

Occupational therapists collecting data in the previous study determined that the intervention session had been completed, and then they turned on the tape recorder, introduced the speakers by pseudonym, stated the session date and date of the guided debriefing interview, and noted the time the guided debriefing interview started. Occupational therapists used the Focused Interview to conduct each session review, inserting additional questions for clarification or expansion of a client's explanation. At the end of each guided debriefing interview, occupational therapists reintroduced the speakers by pseudonym, restated the session date and date of the guided debriefing interview, and noted the time the guided debriefing interview concluded.

Also, the length of guided debriefing interviews varied among clients and between sessions. Guided debriefing interviews in the previous study ranged 3 – 18 minutes, regardless of the length of the actual intervention session. The length of guided debriefing interviews was determined by the number and length of occupational

therapists' guiding questions and the length of client responses. Occupational therapists were encouraged to seek additional information to clarify each client's views on the activity, environment, and therapeutic relationship, including the impact these known occupational therapy process components had on their client's performance. Additionally, because there was no limitation on the frequency and duration of clients' reactions, the length of guided debriefing interviews was variable.

Data management. As mentioned above, the data set for the previous study consisted of transcribed audio-taped guided debriefing interviews that were carefully managed to protect confidentiality of the study participants. Each of the occupational therapists and their clients were assigned an alpha-numeric pseudonym to protect confidentiality. The 8 occupational therapists contributing to the previous study were distinguished by a letter between 'A' and 'H', for example 'therapist B'. The 20 clients were distinguished by a number between '001' and'020', for example 'client 018'. A list of occupational therapists and clients with their assigned pseudonyms was kept locked in a separate place by the study's principal investigator. This system of naming study participants ensured confidentiality and meant that audiotapes as well as transcribed guided debriefing interviews did not reveal the real identity of an occupational therapist or a client.

Each occupational therapist in the previous study set up the tape recorder before the session, participated in routine occupational therapy intervention with a client, used a clipboard with the Focused Interview questions to conduct the interview, and audiotaped guided debriefing interviews. Each audiotape began and ended with the occupational therapist and the client's pseudonyms, for example, "this is therapist E and with me is

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client 004". Immediately following the guided debriefing interview, each audio-tape and tape case was labeled with the occupational therapist and client pseudonyms. Each occupational therapist gave the recorded tape to the principal investigator who labeled the tape as the original and then made a duplicate. Original tapes were stored in a locked file cabinet in the client's folder labeled by pseudonym. Duplicated tapes that were sent for transcription, therefore, did not identify any of the speakers by name.

One typist experienced in recording narration transcribed all tapes in the previous study, numbering and recording verbatim the session's textual messages. For example, the occupational therapist started the interview at textual message 'T1'. The client spoke next in textual message 'C2', followed by 'T3', 'C4', and so on. When transcribed, the typist returned the duplicate tape, a disc containing the word processing file labeled by code, and a paper copy of each interview. All materials for each transcribed guided debriefing interview were filed with their original tapes in their designated client folder in a locked file cabinet.

Overview of Study: NIH Protocol 96-CC-0040

Outline

I. Introduction

Occupational interventions are process-based, beginning with a referral for services. Occupational therapists then formally evaluate a patient's functional abilities and target functional performance through selected occupations. Interventions using the personal computer activity may address patient functioning in performance areas and among performance components. Performance contexts are always considered as they relate to performance areas and components. Occupational therapy process stems from the interactions among performance areas, components, and contexts. Personal computer interventions may, for example, address a patient's sensorimotor functioning, information processing, and psychosocial development of functioning for current or anticipated environments.

II. Study Purpose

The purpose of this non-experimental, exploratory study is to investigate the occupational therapy process using the personal computer modality. The goals are to determine both *if* and *how* the process becomes linked to patient performance.

III. Population

From the population of patients referred to occupational therapy through the Rehabilitation Medicine Department, patients from the following institutes may be eligible to participate: NIAAA, NIDID, NCI, NIAMS, NINDS, NIMH, NICH.

A.   Subjects

Following routine, formal evaluation for occupational therapy services and the routine, collaborative, treatment planning session, it may be decided that the personal computer is appropriate for occupational intervention. The therapist then completes a study screening sheet for the primary investigator.

B.   Selection Criteria

Twenty patient-therapist teams opting to approach occupational therapy goals through computer use will be selected using replication logic. Replication logic uses a rationale for selecting subjects similar to the rationale used for multiple experiments: each case is selected so that it produces either similar results (literal replication), or produces contrasting results but for predictable reasons (theoretical replication).

IV. Informed Consent

A. Therapist's Script

The occupational therapist says to the patient: "We are interested in finding out exactly how the personal computer may be used in occupational therapy. Because your initial treatment goals indicate that the personal computer may be beneficial for you during your stay at the NIH, I would like to explain more about the study." The occupational therapist then says: "Do you think you may be interested in participating? If yes, then the therapist continues with: "We will use the personal computer in occupational therapy in the way in which it is typically used for treatment. Occupational therapists routinely ask patients for their impressions following any therapeutic interventions. The only difference from regular treatment, is that I will ask you a set of questions pertaining to the session that just took place. Normally, I would not follow an exact script for questions or audio-tape our discussion, but for the study, we want to ask our questions in a systematic way. Our discussion will not be longer than ten minutes--the typical time for wrapping up a treatment session."

The occupational therapist then continues with: "We are hoping that each patient will participate in at least four sessions, but it is not mandatory." "There are no formal tests, only routine occupational therapy evaluation, guided by the typical course of treatment." "Results of occupational therapy evaluations and assessment are always shared with patients, and we welcome your feedback."

If the patient agrees to the study, the formal NIH informed consent form is signed and witnessed according to procedure. The patient is then scheduled, and a typical treatment session is planned. Following the treatment session, the questions appearing on the *Patient/Therapist Interview* will be asked.

Informed Consent

"Occupational therapists routinely ask patients for their impressions after an occupation therapy session." "For purposes of the personal computer study, the only difference is that your therapist will use a set format of questions, and the questions and your responses will be audio-taped."

"We hope that you can participate in at least four sessions, but it is not mandatory." "There are no formal tests, only the routine occupational therapy evaluations or assessments that are normally used." "Results of these evaluations are always shared with patients, and we welcome your feedback."

Linking Occupational Process and Patient Performance: The Personal Computer
Activity in Occupational Interventions

Data Management

Introduction

This paper describes the process of data management for the research study Linking Occupational Process and Patient Performance: The Personal Computer Activity in Occupational Interventions. This particular project is divided into task steps and then analyzed in relation to content data analysis.

Purpose

The purpose of this project is to develop systems for organizing data consistent with anticipated data analysis strategies. An integral part of this data management is describing and organizing nominal level data generated from patient interviews. The analysis is both qualitative - examining patterns and realtionships to develop themes, and quantitative - using frequency counts and statistical measurements. The project had three parts:

1. Organizing text-based data for inter-rater reliability to determine construct validity of coding scheme for patient interviews.
2. Developing an abbreviated coding system and 2 levels of organization for coding nominal level data from patient interviews.
3. Organizing information from patient screening sheets.

Inter-rater Reliability/Construct Validity of Coding Scheme

The researchers determined that there were four main categories inherent in the interviews between patients and therapists. These include: Performance, Form, Goals, and Reflection. To test these constructs, they conducted a pilot test of the coding scheme for patient interviews. After a brief presentation about the study, twenty-five OT practitioners attending a workshop presented by study investigators were asked to code 7 segments from patient interviews. Inter-rater reliability scores from htis pilot test were then used to test construct validity.

The responses from the test sample were organized so that they could be statistically evaluated. A spreadsheet for each of the seven text segments was created in Excel indicating subject responses. Dr. Pettigrew, a statistician at the National Institute of Mental Health (NIMH), provided invaluable insight about how to organize and analyze the data. Dr. Pettigrew tested the null hypothesis for each segment by using the Binomial distribution. In addition, she applied the Stepdown Bonferroni procedure due to Holm to correct for multiple comparisons.

Dr. Pettigrew used stringent methods to determine whether or not the data "fit" with the raters coding. In some cases a respondent selected several codes. Dr. Pettigrew accepted codes as congruent, or "fit", with those of the raters only if all matched with the raters' responses. In other words, if a respondent chose three codes that matched and one that didn't, the entire response was scored as "not-fit".

The researchers discovered a high reliability in 5 out of the 7 text segments. The remaining two text segments were related to Reflection - a construct unfamiliar to the participants. Occupational therapists are not trained to examine reflection. These discrepancies, therefore, were expected and used to refine the actual coding of interview data.

A "status" column was created for each text segment to indicate those responses that were congruent with the raters and those that were not to analyze text segments. The Excel spreadsheet was then modified so that it could be imported to JMP, a statistical graphing program. JMP has the capability to do frequency counts on text-based data and produce diverse graphs from this information.

Then the data were cut and pasted to include the information table needed to create particular graphs. Several files were created to accommodate the various ways to analyze inter-rater reliability scores to test construct validity:

1) information from the seven text segments to examine groups of similar responses by topic.

2) status only to examine how many participants chose codes for each text segment that matched those of the raters.
3) status only for each participant on all text segments to examine how much a participant was in agreement with the raters.
4) status information in one column to create one graph for all text segments.

Graphs were then imported to Microsoft Word to manipulate them, i.e. change axis labels, move individual bars.

Coding of Interviews

An abbreviated coding system of the existing coding scheme based on AOTA Uniform Terminology, Nelson's form-performance paradigm, and Mezirow's model on reflection was developed for display in an Excel spreadsheet format. The purpose of this coding was to present the nominal level data from patient interviews for qualitative and quantitative analysis.

Several questions came to mind when developing the abbreviated coding scheme:

1. At what particular level of categories were the data going to be analyzed?
2. How many categories and subcategories exist and how might they relate?
3. How do the researchers want to analyze the data? Do they want frequency counts? Relationships? Patterns?
4. What types of software accommodate nominal level data? Is there one program that can analyze data both qualitatively and quantitatively? If so, is there a way to structure the data so that this could be done?
5. Did the researchers want the information displayed on one page for each session to be able to analyze it? or would grouping data be useful?
6. How well will the data import to a statistical program, namely JMP?

At first it seemed logical to create a system with numbers. However, it became apparent that even though a computer could easily process numerical data for statistical measurements, it was not easy to identify patterns and relationships within the data at a glance. So, text abbreviations were developed that enabled researchers to quickly recognize patterns. Each code was unique and designed to be easily recognized without

referring often to the coding key. Also, each code was five letters or less to allow for adequate room on the spreadsheet and easy importation to JMP.

Coding was designed to examine categories at all levels. Each level of categories, as many as five, was coded so that each level could be analyzed individually. For example, a Performance code was described in the following way: Performance/ Area/ Work Activity/ home management/clothing care= P A W h cloth. A spreadsheet examining the codes in detail and one summarizing the broad categories were made. The data were coded vertically to analyze easily visually and for ready importation to JMP. Graphs were then created in JMP to be able to visually identify how all categories on each level compare to one another, as well as to obtain frequency counts.

Developing abbreviations and presenting them on a spreadsheet was a process in and of itself. The coding scheme was developed, revised, tested, revised and tested again with the nominal data from the interviews.

The coding scheme was revised according to its effectiveness in allowing the researchers to understand the abbreviated codes without having to refer often to the coding key. If a code wasn't acceptable, it was changed to be more representative of the concept represented by the code.

The codes were entered in three columns. The first level was located in the first column, the second, third, and fourth levels (depending on the code) were located in the second column, and the fourth code was located in the third column. The construct Reflection was the only code with both the first and second levels located in the first column.

After the data were entered, they were cleaned by comparing the hard copies with the interviews to make sure the proper codes were entered. The corrections were then made in the saved files.

Patient Demographic and Treatment Plan Information

The therapists completed screening sheets for each patient regarding demographic information as well as therapy goals. This information needed to be presented in a table for several reasons: 1) to summarize demographic information, 2) to analyze performance components addressed by the therapist and patient in comparison with the data from the interviews, and 3) to identify a particular group that might be included for selecting remaining subjects.

A simple table in Excel was created to record data from these screening sheets. Abbreviated codes were developed for the demographic information using a combination of both letters and numbers where appropriate. The goals were recorded using the same codes as those related to Uniform Terminology developed for the nominal data from the interviews. Again, the idea behind the coding scheme was to allow researchers to be able to identify categories at a glance and also perform frequency counts.

Interactive Process Between Data Analysis and Data Management

The data management and data analysis evolved together. While creating a coding scheme, it was realized that there were ideas conveyed in the interviews which didn't fit into the current coding system. So, new categories were created to accommodate for these. For example, when analyzing the construct of Form, "chair" and "table" didn't fit into the established categories of "software" or "hardware". Therefore, a new category "ergonomics" was created. Another category, "adaptation", was added when other types of Form, such as "wrist rest", emerged from the data that did not fit into the three categories mentioned above. As new categories were developed, the coding system reflected these changes.

Collaborative Process

Many experts collaborated during the various steps of this project. My role consisted of integrating information from these experts by discussing and sharing it with each team member, and then using it to carry out data management.

The researchers directed this project through consistent meetings. Ideas were generated, discussed, tested and revisited. Dr. Pettigrew gave feedback regarding data for statistical analysis. In addition, she provided feedback about the scientific soundness of the construct validity and inter-rater reliability process. Jean Daugherty, a statistical Software Consultant at the Scientific Computing resource Center (SCRC), was highly instrumental in providing training and guidance using the JMP program and offering suggestions.

Conclusion

This paper described in detail the process of data management in relation to data analysis. Recommendations include further coding of the interviews for each pattern or relationship that will be analyzed and/or counted.

Appendix C

Client Screening Form

Occupational therapists interested in inviting a client to participate in the previous study first completed the Client Screening Form for review by the study's Principal and Associate Investigators. If applicable, one of the investigators conducted informed consent.

Initial Screening for Study Inclusion (give to PI)

Occupational Therapist_____

Today's date_____   O.T. referral date _____   Current NIH DOA _____

Patient Information

Name_____   Institute_____   Diagnosis_____

Expected discharge: No. of weeks_____   No. of months_____   Unknown _____

Computer experience: None_____ < 1yr_____ 1-5 yrs _____ 5+_____ Work_____ Leisure_____

Accessibility issues? None_____ Describe: _____

Gender: M___ F___   Ethnic/racial: Asian or Pacific Isle.___ Blk or Afro. Amer___ Caus___ Hispan___

Occupational Therapy Information
Initial treatment goal(s):

Performance Areas: ADL_____ Work/Productive Activities_____   Play/leisure Activities_____

Performance Components (please use form on reverse side and circle all that apply)

Performance Contexts (provide additional comments if needed)

Temporal (age, developmental, disability) Aspects:

Environmental (physical, social, cultural) Aspects:

OCCUPATIONAL PERFORMANCE: **Circle priority areas for pc intervention; make notes if needed**

I. PERFORMANCE AREAS

A. Activities of Daily Living

1. Grooming
2. Oral Hygiene
3. Bathing/Showering
4. Toilet Hygiene
5. Personal Care Device
6. Dressing
7. Feeding and Eating
8. Medication Routine
9. Health Maintenance
10. Socialization
11. Functional Competence
12. Functional Mobility]
13. Community Mobility
14. Emergency Response
15. Sexual Expression

B. Work and Productive Activities

1. Home Management
   a. Clothing Care
   b. Cleaning
   c. Meal Preparation/Cleanup
   d. Shopping
   e. Money Management
   f. Household Maintenance
   g. Safety Procedures

2. Care of Others
3. Educational Activities
4. Vocational Exploration
   a. Vocational Exploration
   b. Job Acquisition
   c. Retirement Planning
   d. Volunteer Participation

C. Play or Leisure Activities

1. Play or Leisure Exploration
2. Play or Leisure Performance

II. PERFORMANCE COMPONENTS

A. Sensorimotor Components

1. Sensory
   a. Sensory Awareness
   b. Sensory Processing
      (1) Tactile
      (2) Proprioceptive
      (3) Vestibular
      (4) Visual
      (5) Auditory
      (6) Gustatory
      (7) Olfactory
   c. Perceptual Processing
      (1) Stereognosis
      (2) Kinesthesia
      (3) Pain Response
      (4) Body Scheme
      (5) Right-Left Discrimination
      (6) Form Constancy
      (7) Position in Space
      (8) Visual-Closure
      (9) Figure Ground
      (10) Depth Perception
      (11) SpatialRelations
      (12) Topographical Orient.
2. Neuromusculoskeletal
   a. Reflex
   b. Range of Motion
   c. Muscle Tone
   d. Strength
   e. Endurance
   f. Postural Control
   g. Postural Alignment
   H. Soft Tissue Integrity
3. Motor
   a. Gross Coordination
   b. Crossing the Midline
   c. Laterality
   d. Bilateral Integration
   e. Motor Control
   f. Praxis
   g. Fine Coordination/Dexterity
   h. Visual-Motor Integration
   i. Oral-Motor Control

B. Cognitive Integration and Cognitive Components
   1. Level of Arousal
   2. Orientation
   3. Recognition
   4. Attention Span
   5. Initiation of Activity
   6. Termination of Activity
   7. Memory
   8. Sequencing
   9. Categorization
   10. Concept Formation
   11. Spatial Operation
   12. Problem Solving
   13. Learning
   14. Generalization

PERFORMANCE COMPONENTS
(continued)

C. Psychosocial Skills and
   Psychological Components

   1. Psychological
      a. Values
      b. Interests
      c. Self-Concept

   2. Social
      a. Role Performance
      b. Social Conduct
      c. Interpersonal Skills
      d. Self-Expression

   3. Self-Management
      a. Coping Skills
      b. Time Management
      c. Self-Control

_____

III. PERFORMANCE CONTEXTS

   A. Temporal Aspects

      1. Chronological
      2. Developmental
      3. Life Cycle
      4. Disability Status

   B. Environmental

      1. Physical
      2. Social
      3. Cultural

NIH Protocol 96-CC-0040; NIH-OTP 4/96
(inscrnop.otp)

Appendix D

Guided Debriefing Interview Format

1.   Today you were working on _____ (identify treatment goal).

    a. Could you tell me more about what you did?
    b. Was there anything about the activity today that was helpful?
    c. Was there anything about the activity that got in your way?

2.   The environment and the treatment activity often influence how people work on goals.

    a. Could you tell me about the environment you were working in today.
    b. Was there anything about the setting today that was helpful?
    c. Was there anything that got in your way?

3.   Therapist gives an example of an interaction or dynamic, for example "I noticed that I was asking a lot of questions about…" OR " I saw you…."

    a. Could you tell me what was going on?
    b. Was there anything about our relationship that helped you?
    c. Was there anything about our relationship that got in your way?

Appendix E:

Coding Symbols

Goals			Reflection on Goals
■	Activity Goals: Activity demands		■
•	Activity Goals: Occupational performance		•
▲	Activity Goals: Participation in society		▲
■	Therapeutic Goals: Activity demands		■
•	Therapeutic Goals: Occupational performance		•
▲	Therapeutic Goals: Participation in society		▲
Adaptation			Reflection on Adaptation
■	Activity Goals: Activity demands		■
•	Activity Goals: Occupational performance		•
▲	Activity Goals: Participation in society		▲
■	Therapeutic Goals: Activity demands		■
•	Therapeutic Goals: Occupational performance		•
▲	Therapeutic Goals: Participation in society		▲

Goals

Explanation of intention will be found by phrases "I want to…", "I'm going to…", "I'll …", "it's important to…". The focus of intention will be categorized as:
1. Intention related to activity demands (GF)
   a. Activity demands—objects and their properties, space demands, social demands, sequence and timing, required actions, required body functions, required body structures
   b. Context of the treatment session—cultural, physical, social, personal, spiritual, temporal
2. Intention related to occupational performance (GE)
   a.. Motor skills—posture, mobility, coordination, strength and effort, energy
   b. Process skills—energy, knowledge, temporal organization, organizing space and objects, adaptation
   c. Communication/interaction skills—physicality, information exchange, relations
   d. Performance patterns—habits, routines, and roles
3. Intention related to participation in society (GP)
   a. Areas of occupation—instrumental activities of daily living, education, work, social participation
   b. Roles—worker, family member, father, colleague

Reflection on goals

Analysis of intention will be found by phrases, such as "that means…", "so…", "as I think about it…", "on another level…". The focus of reflection on goals targets the 3 areas listed above. The text may be coded as reflection on intention related to activity demands (RF), occupational performance (RE), and participation in society (RP).

Appendix E (continued)

<u>Self-regulation</u>

Explanation of adaptation and compensation will be found by phrases, such as "I'm going to try…", "another way…", "perhaps this will work…". The targets of self regulation will correspond to the framework designated above. The client may focus on adaptation of activity demands (SF), occupational performance (SE), and participation in society (SP).

<u>Reflection on Self-regulation</u>

Analysis of adaptation and compensation will be found by phrases, such as "that means…", "so…", "as I think about it…", "on another level…". The focus of reflection on self regulation targets the 3 areas listed above. The text may be coded as reflection on self regulation related to activity demands (RSF), occupational performance (RSE), and participation in society (RSP).

Appendix F

Operational Application of Coding Scheme

Foundational Process Components	Instrumental Process Components		
	Occupational Form	Occupational Performance	Participation in Society
Activity goals	"having the paper and pencil available, in addition to the computer" (2-C44)	"being able to look at 2 documents, two pages, side by side" [on the monitor] (2-C8)	"what I'm pursuing on that customer's behalf" (1-C28)
Reflection on activity goals	"a monitor that is appropriate for this kind of activity… [one with] good resolution" (1-C18)	"I got some insight into what needs to be done" (1-C2)	"depending on the users, the customer's needs and the customer's budget" (8-C4)
Therapeutic goals	no evidence found	"tuned in on an in-person situation…tuned into the body language" (2-C24)	"identify what some of the possible considerations are in terms of the [customer] relationship that might develop" (2-C4)
Reflection on therapeutic goals	"[to be] profit-oriented, [a relationship with the customer], that's a good thing" (8-C36)	"[a relationship forming] makes it easier to discuss [with the customer]" (8-C36)	"[guidelines for an interview with the customer] so that there are no misunderstandings a little bit later" (1-C36)
Transformative self-regulation for activity goals	"it's important that the desk or table height…the monitor…the chair are at the right point" (1-P16)	"I can type faster than I can write things" (1-C28)	"there might be a situation where they would have to call their boss… or they might have some other thing going on with themselves" (3-C15)
Reflection on transformative self-regulation for activity goals	"if it's too many [people in the environment], it would be very distracting and disruptive" (2-C19)	"[problems with the computer hardware] were not my problem" (5-C50)	"there are going to be circumstances where the customer is not going to want to stop his or her thought process" (1-C28)

Appendix F (continued)

Foundational Process Components	Instrumental Process Components		
	Occupational Form	Occupational Performance	Participation in Society
Transformative self-regulation for therapeutic goals	no evidence found	"[another person working in the computer room] was okay…she was working on her own thing, there wasn't any cross-conversation, or anything that would be interruptive" (7-C54)	"I was thinking about that technique, and bringing that technique [not blaming others] into the business arena" (9-C16)
Reflection on transformative self-regulation for therapeutic goals	"there needs to be …just something to kind of mask [too much noise in the environment]" (1-C10)	"[just wait quietly]...it's very hard for me to do that" (7-C20)	"[I doesn't have to be a close working relationship with everyone"" (10-C18)

Appendix G

Distribution of Foundational and Instrumental Process Components
Across Guided Debriefing Interviews

Debriefing Interview	Activity Goals			Therapeutic Goals			Total Activity Goals	Total Ther Goals
	Activity demands	Perfor-mance	Partici-pation	Activity demands	Perfor-mance	Partici-pation		
Goals								
1	9	2	10	0	3	4	21	7
2	3	4	1	0	2	2	8	4
3	4	14	0	0	0	1	18	1
4	1	7	3	0	2	0	11	2
5	3	5	2	0	0	0	10	0
6	0	6	1	0	0	0	7	0
7	0	8	2	0	0	0	10	0
8	0	0	2	0	0	0	2	0
9	0	7	1	0	0	1	8	1
10	3	0	3	0	4	0	6	4
Total	23	53	25	0	11	8	101	19
Transformative Self-regulation								
1	11	4	7	0	0	0	22	2
2	9	12	1	0	0	0	22	0
3	2	5	0	0	0	0	7	0
4	2	13	0	0	0	0	15	0
5	5	10	6	0	0	0	21	0
6	2	5	0	0	0	0	7	0
7	4	16	5	0	8	1	25	9
8	5	10	3	0	5	0	18	5
9	1	16	4	0	5	2	21	7
10	1	7	0	0	4	0	8	4
Total	42	98	26	0	22	5	166	27

Appendix G (continued)

Debriefing Interview	Activity Goals			Therapeutic Goals			Total Activity Goals	Total Ther Goals
	Activity demands	Perfor-mance	Partici-pation	Activity demands	Perfor-mance	Partici-pation		
Reflection on Goals								
1	9	4	3	0	1	2	16	3
2	3	5	1	0	2	1	9	3
3	0	8	3	0	2	1	11	3
4	1	6	2	0	0	0	9	0
5	6	4	1	0	0	0	11	0
6	0	4	0	0	0	0	4	0
7	1	2	4	0	0	0	7	0
8	4	0	2	1	3	1	6	5
9	0	3	1	0	1	1	4	2
10	0	1	3	0	1	0	4	1
Total	24	37	20	1	10	6	81	17
Reflection on Transformative Self-regulation								
1	20	7	4	1	1	2	31	4
2	7	15	0	0	2	8	22	10
3	4	3	0	0	1	0	7	1
4	0	6	1	0	0	2	7	2
5	5	12	3	0	2	1	20	3
6	1	6	0	0	0	0	7	0
7	0	5	1	0	10	2	6	12
8	3	11	0	1	3	0	14	4
9	3	13	0	1	11	1	16	13
10	3	4	0	0	15	1	7	16
Total	46	82	9	3	45	17	137	65

GLOSSARY

Accept – a step in this study's operationalization of Vygotsky's theory about the social co-construction of knowledge or scaffolding (See Chapter Four).

Accepted practice framework (known, familiar, prevailing) – the design of occupational therapy evaluation and intervention that conforms to the American Occupational Therapy Association's Practice Framework (2002).

Accommodation – changes a client makes in body functions, performance skills, and performance patterns that facilitate goal attainment.

Activities of daily living (ADL) – basic activities that support care of the body. Also called basic activities of daily living (BADL) or personal activities of daily living (PADL), these self-care activities include bathing, dressing, eating, functional mobility, personal hygiene and grooming, and sleep/rest, for example (The American Occupational Therapy Association, 2002).

Activity – occupation and activity are both used to describe a client's participation in daily life. Activities are goal-directed human actions. "A person may participate in activities to achieve a goal, but these activities do not assume a place of central importance or meaning for the person" (The American Occupational Therapy Association, 2002, p. 610). For example, a person who cooks to put a meal on the table may view that activity as a chore, rather than as fulfilling or meaningful.

Activity analysis – detailed assessment of the physical, social, information processing, and psychosocial demands of an activity, specifically identification of activity demands, cost and time implications, and client factors (Lamport, Coffey, & Hersch, 1989; The American Occupational Therapy Association, 2002) necessary to perform an activity.

Activity demands – the distinguishing aspects of an activity, "which include the objects, space, social demands, sequencing or timing, required actions, and required underlying body functions and structures needed to carry out the activity (The American Occupational Therapy Association, 2002).

Adaptation – an outcome of occupational therapy in which a client changes his or her response to an occupational challenge in order to achieve mastery over the challenge (The American Occupational Therapy Association, 2002). That response may involve adjusting activity demands, changing how mental functions are used, or choosing more appropriate self-regulatory strategies, for example.

Analysis of occupational performance – a part of occupational therapy evaluation where more specific information about client factors, performance assets and limitations, and context is gathered by observation of a client's function (The American Occupational Therapy Association, 2002).

Analyze – a step in this study's operationalization of Vygotsky's theory about the social co-construction of knowledge or scaffolding (See Chapter Four).

Apply/use – a step in this study's operationalization of Vygotsky's theory about the social co-construction of knowledge or scaffolding (See Chapter Four).

Areas of occupation – human activities, including "activities of daily living, instrumental activities of daily living, education, work, play, leisure, and social participation" (The American Occupational Therapy Association, 2002, p. 630).

Avoid/Ignore/Deny -- one of the negative self-regulatory strategies used by the client that was derived from this study (See Chapter Four).

Bipolar disorder, Type I—an illness characterized by dramatic mood swings, from overly high (mania) to sad and hopeless (depression). There may be periods of normal mood in between. Severe changes in energy and behavior accompany mood shifts. Bipolar I disorder involves recurrent episodes of mania and depression. There may be less severe mood shifts called hypomania for upward swings, and dysthymia for slightly depressed mood (National Institute of Mental Health, 2001).

Body functions – physiological aspects of physical, cognitive, and psychological function; how the body functions is a client factor (The American Occupational Therapy Association, 2002).

Body structures – anatomical aspects of the human body, such as heart, limbs, and brain that support body function (The American Occupational Therapy Association, 2002).

Certified occupational therapy assistant (COTA) – a practitioner with a technical knowledgebase in occupational therapy who implements intervention under the supervision of an occupational therapist (Crepeau, Cohn, & Schell, 2003)

Challenge/Confront/Blame -- one of the negative self-regulatory strategies used by the client that was derived from this study (See Chapter Four).

Clarify/Expand/Illustrate -- one of the positive self-regulatory strategies used by the client that was derived from this study (See Chapter Four).

A client – any of a class of individuals who receive occupational therapy services.

The client -- the client who volunteered for this study was a mature adult male with bipolar disorder who used the personal computer as the therapeutic activity in occupational therapy.

Client-centered approach – orientation to occupational therapy intervention that supports client goals and needs (The American Occupational Therapy Association, 2002).

Client Screening Tool – an instrument designed for the previous study in which an occupational therapist noted a client's goals, assets and limitations, an intervention plan, and anticipated outcomes.

Client factors – body functions and body structures unique to a client that affect occupational performance (The American Occupational Therapy Association, 2002).

Clinical reasoning – several forms of thinking occupational therapists use in evaluating client factors, designing and implementing intervention, and interacting with clients. An occupational therapist may use procedural reasoning, interactive reasoning, conditional reasoning, or narrative reasoning to support his or her therapeutic actions (Mattingly & Fleming, 1994).

Co-construction of knowledge (social co-construction of knowledge) – learning that occurs as the result of the nature of interaction between learner and facilitator (Vygotsky, 1978). Learning follows from developing a shared language, explaining rather than describing the learning experience, and organizing the actions and reactions of the learner in ways that lead to mastery and eventual internalization of actions and reactions (Vygotsky, 1978).

Code(s) – the name(s) applied to textual messages that designated pre-determined theoretical constructs that were examined in guided debriefing interviews. Codes were organized first to highlight the purpose and outcome of occupational therapy, that is, goals and transformative self-regulation. These codes were distinguished by their relationship to activity or therapeutic goals. Further, codes were distributed among activity demands, occupational performance, and participation in society for both activity and therapeutic goals. The full set of codes was called the coding scheme.

Coding scheme – a set of constructs specifically defined for this study and organized to show relationships among occupational therapy process components (See Appendix E).

Collaborative relationship – because all interventions must be based on client priorities, an occupational therapist chooses evaluation and intervention with a client so that they are consistent with a client's valued occupations and roles in society (The American Occupational Therapy Association, 2002).

Combination codes –combination codes signified assignment of more than one code to the same portion of the textual message in this study. Combination codes were assigned to a word or phrase. This type of code was not included in the quantitative content analysis. The appearance of combination codes inferred that the data contained rich information obtainable only through descriptive analysis.

Communication/interaction skills – the capacity for a client to convey his or her needs and intentions and to select behaviors that allow him or her to coordinate with other people (The American Occupational Therapy Association, 2002).

Compensation (adaptation, modification) – occupational therapy intervention aimed at changing the activity demands and context of an activity to support a client's performance. Compensation may occur by removing barriers to performance, for example, by adjusting the environment or task demands, or by enhancing cues to performance (The American Occupational Therapy Association, 2002).

Competence – the ability for a client to perform an activity or steps of an activity in ways that facilitate goal attainment.

Conditional reasoning – the kind of reasoning occupational therapists use to consider a client in his or her context and to imagine a possible future with a client (Mattingly & Fleming, 1994).

Conflict experience – the specific areas of disagreement the client had with the occupational therapist in this study. The conflict focused on availability of adequate computer resources.

Content analysis – a quantitative approach to data analysis the applies a pre-determined coding scheme to narrative data and then tabulates frequencies and proportions of codes. The aim is to increase objectivity, use an a priori design, foster intercoder reliability, and examines hypotheses and research questions developed before data is examined (Holsti, 1969; Krippendorf, 1980; Neuendorf, 2002; Weber, 1990).

Context(s) – the environment, conditions, surroundings, and relationships that influence a client's performance. These factors may be physical, social, personal, spiritual, cultural, temporal, and virtual (The American Occupational Therapy Association, 2002).

Descriptive analysis – a qualitative approach to interpreting narrative data that includes "sorting information into categories, formatting the information into a story or picture, and writing the qualitative text" (Creswell, 1994, p. 153). This involves reducing information into parts and then re-organizing it into classifications that account for the data (Creswell, 1998).

Development – growing, evolving, and maturing (Webster's Universal Unabridged Dictionary, 1996). Theories of human development address relationships between biologic maturation and the influence of the environment on human behavior (Case-Smith, 2001). Prescott's (1957) six area framework organized the overall conceptualization of human development for this study.

Earlier guided debriefing interviews – this client's guided debriefing interviews of the first 6 occupational therapy sessions.

Education – "activities needed for being a student and participating in a learning environment" (The American Occupational Therapy Association, 2002, p. 631).

Emotion regulation – the use of coping strategies to manage a response to an emotional condition, such as anger management. Regulating a response can diminish the intensity of an emotion.

Engage – a step in this study's operationalization of Vygotsky's theory about the social co-construction of knowledge or scaffolding (See Chapter Four).

Engagement in activity – an outcome of occupational therapy intervention (The American Occupational Therapy Association, 2002). This describes a client's participation in chores or activities with little meaning for a client.

Engagement in occupation – considered "the overarching outcome of the occupational therapy process" (The American Occupational Therapy Association, 2002, p. 615). The act of engaging in an occupation infers that a client is committed and motivated to perform a valued, meaningful activity of his or her choice. "Engagement in occupation includes both the subjective (emotional and psychological) aspects of performance and the objective (physically observable) aspects of performance" (The American Occupational Therapy Association, 2002, p. 611).

Environment—the composition of surrounding things, conditions, or influences (Webster's Universal Unabridged Dictionary, 1996). In occupational therapy, environment comprises the context in which clients engage in activity. The environment includes both human and non-human elements, such as the furniture, lighting, noise level, and presence of others (Youngstrom, et al., 2002).

Evaluation – the procedure for gathering information from occupational therapy clients in order to design an intervention plan.

Evidence-based health care – health care practices driven by a synthesis and application of research findings in order to select appropriate intervention approaches.

Experiential learning – The process of learning through engagement in activity and analysis of that learning experience promoted by Dewey (1938).

Explain (explanation) – in guided debriefing interviews, the client's description of activity demands, his occupational performance, or engagement in occupation and activity. Explanation was given when the client was asked what he did in an intervention session, how he did it, or how his performance might relate to future demands of social participation. As such, explanation was oriented to the present and provided the client's views of causal relationships and justifications for his actions and reactions.

Explore – a step in this study's operationalization of Vygotsky's theory about the social co-construction of knowledge or scaffolding (See Chapter Four).

Focused interview – an interview with general guidelines that organize the respondent's reactions (USGAO, 1989).   This type of interview allows additional dialogue to explain or expand concepts introduced by the respondent. The focused interview used in this study was constructed to be open-ended, yet unobtrusive (Holsti, 1969; Webb, Campbell, Schwartz, Sechrest, & Grove, 1981); it sought participant observations about the occupational therapy process.

Foundational process components – a category of occupational therapy process components developed to analyze the results of this study. Foundational process components included goals, reflection on goals, transformative self-regulation, and reflection on transformative self-regulation. The foundation for therapy was seen as the client's goal-driven learning of adaptive self-regulatory strategies that was integrated via the occupational therapist's guides for client reflection.

Frame of reference – a frame of reference defines theoretical assumptions and related intervention practices that guide the occupational therapist's choices of evaluation, intervention implementation, and intervention review (Mosey, 1970).

Goals—Problems the client is motivated to solve during occupational therapy. Goals are derived from how the client is able to function in valued occupations; they may be short-term or long-term, and must be negotiated and prioritized so that realistic expectations are set by both client and therapist (Crepeau, Cohn, & Schell, 2003).

Grading an activity – "gradation of activity means that the activity should be appropriately paced and modified to demand the client's maximum capacities at any point in his or her progress" (Pedretti, 1981, p. 103).

Guide – the therapist's textual message designed to elicit information or a response from the client. Guides were either general in nature ("how was that for you?") or sought specific information from the client ("Was there something about working on the computer right after [community meeting] that made it different today?").

Guided debriefing interview – A set of questions designed for the previous study that guided the client's discussion about routine occupational therapy during debriefing interviews. The treating therapist used a focused interview to engage the client in describing and reflecting on what was helpful or hindering about the task, environment, and therapeutic relationship. The guided debriefing interview was conducted in the treatment setting. It began when treatment ended; it ended when the client had no further comments.

Guides (therapist guides) – Invitations by the occupational therapist for the client to reflect on an aspect of occupational therapy process. These include guides for the client to explain, analyze, explore, test, accept, reconstruct, integrate, and use.

Hypomania – See Bipolar Disorder

Ideal self – the self concept that incorporates positive self-attributes, capabilities, and personality characteristics (Markus, 1986).

Insight – knowledge or understanding patients have of their illness (Markova & Berrios, 1995); capacity for self-observation and self-knowledge of psychopathology (Sanz, Constable, Lopez-Ibor, Kemp, & David, 1998).

Instrumental activities of daily living (IADL) – more complex activities that relate to the environment, including care of others, care of pets, child rearing, community mobility, financial management, health maintenance, home management, meal preparation, and shopping, for example (The American Occupational Therapy Association, 2002).

Instrumental process components – a category of occupational therapy process components developed to analyze the results of this study. Instrumental process components included activity demands, occupational performance, and participation in society. These process components provided the vehicle for client learning. They specifically related to the client's doing of meaningful occupations and activities that comprised the client's therapeutic learning experiences.

Interactive reasoning – the type of clinical reasoning used by occupational therapists to develop strong collaborative relationships with clients in the cooperative doing of activities with the client (Mattingly & Fleming, 1994).

Internalize – a step in this study's operationalization of Vygotsky's theory about the social co-construction of knowledge or scaffolding (See Chapter Four).

Intervention implementation – "ongoing actions taken [by an occupational therapist] to influence and support improved client performance. Interventions are directed at identified outcomes. Client's response is monitored and documented" (American Occupational Therapy Association, 2002, p. 614).

Intervention plan – "a plan that will guide actions taken [by an occupational therapist] and that is developed in collaboration with the client. It is based on selected theories, frames of reference, and evidence. Outcomes to be targeted are confirmed" (American Occupational Therapy Association, 2002, p. 614).

Intervention review – "a review of the implementation plan and process as well as its progress toward targeted outcomes" (American Occupational Therapy Association, 2002, p. 614).

Intervention session – the specified time spent by an occupational therapist and a client in the pursuit of client-centered, goal-directed therapeutic activities.

Latter guided debriefing interviews – the client's debriefing interviews that showed great attention to transformative self-regulation

Low and high functioning clients – the degree to which an individual's symptoms affect cognitive, social, physical, and emotional function. People with severe illness symptoms have lower levels of function; they have difficulty with complex information processing, social interactions, and emotional regulation, and may have an early age of onset of illness. High functioning clients are better able to adapt to symptomatology and perform valued productive and social roles; they have residual skills to help them compensate for functional limitations imposed by severe mental health symptoms.

Maintain (maintenance) – "an intervention approach designed to provide the supports that will allow clients to preserve their performance capabilities that they have regained, that continue to meet their occupational needs, or both. The assumption is that without continued maintenance intervention, performance would decrease, occupational needs would not be met, or both, thereby affecting health and quality of life" (American Occupational Therapy Association, 2002, p. 627).

Major depression – symptoms of this illness include persistent sad or anxious mood, feelings of hopelessness and helplessness, guilt and worthlessness, loss of interest and pleasure in activities, decreased energy, poor concentration and memory, sleep disturbances, appetite and weight change, suicidal thoughts, irritability, and persistent physical symptoms. These combine to interfere with work, sleep, eating, and enjoying life (National Institute of Mental Health, 2002).

Mature adult – a person fully developed in body and mind (Webster's Universal Unabridged Dictionary, 1996). A human adult is considered mature at middle age, 45-55 years of age.

Metaphor – "our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature…Our concepts structure what we perceive, how we get around in the world, and how we relate to other people. Our conceptual system thus plays a central role in defining our everyday realities" (Lakoff & Johnson, 1980, p. 3).

Mixed method research – research that blends two paradigms: the positivist/empiricist approach of quantitative research and the constructivist/phenomenological orientation of qualitative research (Tashakkori & Teddlie, 1998). Combining research methods can evaluate the convergence of findings, can use one method to inform the other, or may enrich the breadth and scope of the findings (Creswell, 1994).

Modify (compensation, adaptation) – "an intervention approach directed at finding ways to revise the current context or activity demands to support performance in

the natural setting, including compensatory technique" (American Occupational Therapy Association, 2002, p. 627).

Motor skills – the abilities required to move and interact with an activity, objects, and the environment" (American Occupational Therapy Association, 2002). For example, a client's posture, coordination, mobility patterns may be observed in bending, manipulating objects, or reaching for distant objects.

Multiple case study design – multiple case study research seeks to understand a phenomenon, using more than one case to replicate findings from the first case in other cases (Yin, 2003).

Narrative reasoning – a type of reasoning used by occupational therapists to make a therapeutic experience meaningful for a client. Inviting a client to tell a story about the disability experience, to develop prospective stories about goals, or to structure life through time through narrative are examples of narrative reasoning (Mattingly & Fleming, 1995).

Negative self-regulatory strategies – a category of strategies developed for this study that capture the client's approaches to self-regulation that hindered him for accomplishing his goals. Negative strategies include Avoid/Ignore/Deny, Protect/Justify/Rationalize, and Challenge, Confront, Blame.

Notice/Compliment/Affirm -- one of the positive self-regulatory strategies used by the client in this study.

Occupation – occupation and activity are both used to describe a client's participation in daily life. "Occupations are generally viewed as activities having a unique meaning and purpose in a person's life" (The American Occupational Therapy Association, 2002, p. 610). For example, persons who cook may view that as an occupation, seeing part of their identity in being cooks, and attain satisfaction and fulfillment from this occupation.

Occupational performance – the doing of daily life activities, including, "instrumental activities of daily living, education, work, play, leisure, and social participation" (American Occupational Therapy Association, 2002, p. 612).

Occupational profile – "the initial step in the evaluation process that provides an understanding of the client's occupational history and experiences, patterns of daily living, interests, values, and needs. The client's problems and concerns about performing occupations and daily life activities are identified, and the client's priorities are determined" (American Occupational Therapy Association, 2002, p. 614).

An occupational therapist – an individual who has completed an accredited educational program, completed at least 6 months of fieldwork, and successfully

completed the national certification examination is certified by the National Board of Certification in Occupational Therapy.

The occupational therapist – the treating therapist in this study was a mature woman with 24 years of experience in clinical care, education, and administration as a licensed occupational therapist specializing in treatment of mental illnesses.

Occupational therapy evaluation – "…the evaluation process is focused on finding out what the client wants and needs to do and on identifying those factors that act as supports or barriers to performance" (American Occupational Therapy Association, 2002, p. 616).

Occupational therapy intervention plan -- See Intervention plan

Occupational therapy outcome – the overarching outcome of occupational therapy is a client's ability to engage in occupation to support participation in life. Engagement refers to "the commitment made to performance in occupations or activities as the result of self-choice, motivation, and meaning, and includes the objective and subjective aspects of carrying out occupations and activities that are meaningful and purposeful to the person" (American Occupational Therapy Association, 2002, p. 618).

Occupational therapy practitioner – the general term that includes occupational therapists and certified occupational therapy assistants in the pool of practitioners of occupational therapy.

Occupational therapy process – in this study, the inner workings of an intervention session. The core elements are a client performing a therapeutic activity in a therapeutic context and in a therapeutic relationship with an occupational therapist. In occupational therapy, process refers to evaluation, intervention planning, intervention implementation, and intervention review.

Occupational therapy session – the discrete time and space shared by client and occupational therapist while collaborating on therapeutic goals related to function, valued occupations, and adaptation. Time intervals vary depending on client needs, the setting, and scheduling.

Participation in society (participation) – "involvement in a life situation" (World Health Organization, 2001, p. 10). In occupational therapy, engaging in valued occupations and activities establishes a client's potential to participate meaningfully in valued social roles.

Performance (performing) – performance is the doing of activity that is grounded in observable elements of action, such as motor skills, process skills, and communication/interaction skills (American Occupational Therapy Association, 2002).

Performance patterns – "performance patterns refer to habits, routines, and roles that are adopted by an individual as he or she carries out occupations or daily life activities" (American Occupational Therapy Association, 2002, p. 612).

Performance skills – skills are the features of action that occur when an individual performs an activity. They may include grasping tools, initiating sequential steps to accomplish a task, and pacing energy expenditure, for example (American Occupational Therapy Association, 2002).

Physical therapist—the individual licensed in the practice of rehabilitation specializing in gait and mobility who volunteered to work with the client as he tested the procedures for a small business in internet consultation.

Pilot customer – see Physical Therapist.

Positive self-regulatory strategies – a category of strategies developed for this study that capture the client's approaches to self-regulation that helped him accomplish his goals. Positive strategies include Notice/Compliment/Affirm, Clarify/Expand/Illustrate, and Synthesize/Profess/Use.

Possible self (selves) – any of a variety of constellation of self-attributes that are evaluated for their potential to approximate an individual's ideal self (Markus, 1986).

Practice Framework – an official document of the American Occupational Therapy Association that "affirms and articulates occupational therapy's unique focus on occupation and daily life activities and the application of intervention process that facilitates engagement in occupation to support participation in life" (American Occupational Therapy Association, 2002, p. 609).

Present study – the single case study of a man with bipolar disorder that was the focus of the research presented in this document. This study used archival data from the previous study.

Previous study – a multiple case study conducted with 20 participants in occupational therapy who described their experiences in occupational therapy in a focused interview that was audio-taped and transcribed.

Prevent – "an intervention approach designed to address clients with or without a disability who are at risk for occupational performance problems. This approach is designed to prevent the occurrence or evolution of barriers to performance in context. Interventions may be directed at client, context, or activity variables" (American Occupational Therapy Association, 2002, p. 627).

Procedural reasoning – the type of reasoning used by occupational therapists to "identify their patients' functional problems and to select procedures that might be

employed to help people reduce the effects of those problems" (Mattingly & Fleming, 1994, p. 137).

Process components – in this study, elements of the inner workings of occupational therapy intervention that occur while a client performs a therapeutic activity, in a therapeutic context, and in a therapeutic relationship with an occupational therapist.

Process skills (processing skills): "aspects of process skills include energy, knowledge, temporal organization, organizing space and objects, and adaptation" (American Occupational Therapy Association, 2002, p. 612). These skills may be observed while a client performs an activity, for example, when attending to a task, organizing a workspace, or choosing materials and supplies.

Promote health (health promotion) – "an intervention approach that does not assume a disability is present or that any factors would interfere with performance. This approach is designed to provide enriched contextual and activity experiences that will enhance performance for all persons in the natural contexts of life" (American Occupational Therapy Association, 2002, p. 627).

Protect/Justify/Rationalize -- one of the negative self-regulatory strategies used by the client in this study.

Purposeful activity (meaningful, valued) – a goal-directed activity used in occupational therapy intervention that has significance for a client. Purposeful activity "allows a client to engage in goal-directed behaviors or activities within a therapeutically designed context that lead to an occupation or occupations" (American Occupational Therapy Association, 2002, p. 628).

Real self – attributes of the self that correctly describe an individual's true characteristics (Markus, 1986).

Reconstruct – a step in this study's operationalization of Vygotsky's theory about the social co-construction of knowledge or scaffolding (See Chapter Four).

Reflection – a thoughtful analytic process of examining a situation. Reflection may occur during an activity (reflection-in-action) or at the conclusion of an activity (reflection-on-action), or both (Schön, 1987, 1983).

Reflection on goals – in this study, one of the components of occupational therapy process that established a foundation for the client's learning. Here, the client analyzed his activity and therapeutic goals.

Reflection on transformative self-regulation – in this study, one of the components of occupational therapy process that established a foundation for the client's

learning. Here, the client analyzed approaches to self-regulation as they evolved over the course of routine occupational therapy intervention.

Refractory illness – an illness that may respond to medication for a time, but the medication stops working even though it is taken as prescribed. Clients who are refractory to medication re-experience illness symptoms (Charney, et. al., 1999).

Remediation (restoration) – "an intervention approach designed to change client variables to establish a skill or ability that has not yet developed or to restore a skill or ability that has been impaired" (American Occupational Therapy Association, 2002, p. 627).

Rich text – the inclusion of complex personal and cultural meanings inherent in dense, thick language, a term coined by Agar (1992).

Routine intervention – the non-experimental, naturalistic use of therapeutic activity, therapeutic context, and therapeutic relationship in occupational therapy.

Scaffolding – in education, the interplay between teacher and learner where the teacher introduces concepts that build on those already mastered by the learner. Vygotsky (1938) calls this the social co-construction of knowledge. The terms are used interchangeably in this study.

Self awareness – the degree of ability of an individual has to take an objective view of him or herself. Individuals may be aware of various aspects of the self and not others. The principle in human development, and in psychotherapy specifically, is that greater self-awareness contributes to better self-regulation.

Self-development – the growth and mastery of self issues, such as anger management, need gratification, or conflict resolution that assist an individual to become more self-aware and better able to choose effective self-regulation strategies.

Self issues – the myriad of references to self-development, such as self-concept, self-esteem, self-awareness, self-attributes

Self-regulation – the ongoing process of self-direction people use to navigate through competing external and internal influences in order to maintain personal standards and engage in valuable activities. Self-regulation proceeds from self-examination, self-monitoring, judgment, and self-editing (Bandura, 1986).

Single case study – an in-depth analysis of a phenomenon of interest (Yin, 2003).

Single codes—single codes signified the assignment of only one code to portions of textual messages. A single code was assigned to a word or phrase.

Social participation – see participation in society.

Socially co-constructed –see co-construction of knowledge

Splinter skills – performance skills that can be trained; portions of an activity pattern that can be separated as a splinter from a block of wood.

Success – a client's achievement of goals, mastery of performance skills, and improved ability to engage in occupations and activities.

Synthesize/Profess/Use -- one of the positive self-regulatory strategies used by the client in this study.

Test – – a step in this study's operationalization of Vygotsky's theory about the social co-construction of knowledge or scaffolding (See Chapter Four).

Textual message – the units of narration, separated by the narration of the other speaker, within a debriefing interview are textual messages. The first speaker's message ends when the other speaker begins. When the next speaker begins, their narrative comprises the next textual message that ends when the first speaker begins, and so on. Textual messages are sequentially numbered and labeled by speaker, for example T1 represents the first chunk of narration by the therapist. This is followed by C2, the second textual message, which is spoken by the client. The sequence continues T3, C4, T5, C6, etc.

Therapeutic activity – "occupations and activities selected for specific clients that meet therapeutic goals" (American Occupational Therapy Association, 2002, p. 628).

Therapeutic goals – the end targets of intervention; in occupational therapy, facilitating adaptation toward desired performance in valued roles is built on a complex of small accomplishable steps. Each step is a therapeutic goal.

Therapeutic relationship – in keeping with client-centered approach to intervention, the roles an occupational therapist takes on in order to facilitate a client's intrinsic motivation to be an active participant in evaluation and intervention.

Therapeutic use of self – "a practitioner's planned use of his or her personality, insights, perceptions, and judgments as part of the therapeutic process" (American Occupational Therapy Association, 2002, p. 628).

Transformative self-regulation--a term coined for this study that designated both a process component and the fundamental outcome of occupational therapy. Occupational therapy intervention helps a client adapt to functional changes and to reconstruct his or her repertoire of performance skills. Transformative self-regulation refers to the client's use of adaptive self-regulatory strategies in performing valued occupations. It is an internal process of testing and analyzing actions and reactions that transform a client's capacity for goal achievement through self-regulation.

       <u>Unfamiliar process components</u> – elements of routine intervention that were not identified in the accepted view of occupational therapy process.

       <u>Unit of analysis</u> – the identified focus of inquiry in case study research (Yin, 2003). In this study, the unit of analysis was occupational therapy process as it was described by the client following each intervention session.

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2006	Doctor of Philosophy Human Development, Department of Education	University of Maryland College Park, MD
1977	Master of Science Occupational Therapy	San Jose State University San Jose, CA
1973	Certificate Occupational Therapy	San Jose State University San Jose, CA
1969	BA Psychology/Anthropology	Pitzer College Claremont, CA

Continuing Education

1977-1989	Graduate courses in program evaluation, educational policy and governance, statistics, management and administration, introduction to public administration at Virginia Commonwealth University, Department of Public Administration; University of Virginia, Department of Education; University of Maryland, Department of Agricultural and Extension Education
Ongoing	Extensive continuing education programs and courses in management and administration, psychiatry, education, international health care, technology, occupational therapy, and word processing.

Honors and Awards

1999   Recognition of Achievement for mental health advocacy, research, and education from the American Occupational Therapy Association

1999   Special Acts Award for computerized data base to capture statistics for quarterly submission through the Chief of Occupational Therapy, Rehabilitation Medicine Department, National Institutes of Health

1998   Clinical Associate of Occupational Therapy, Boston University, Sargent College of Allied Health Professions, Occupational Therapy Department in recognition of fieldwork supervision

1998   Quality Step increase, Rehabilitation Medicine Department, National Institutes of Health

1996   Grade Level increase to GS-12, Mental Health Specialist, Rehabilitation Medicine Department, National Institutes of Health

1996   Special Acts Award for Development of Personnel Manuals, Rehabilitation Medicine Department, National Institutes of Health

1996   Performance Award, Rehabilitation Medicine Department, National Institutes of Health

1995   Who's Who Among Women in America, 19th Edition

1995   Special Acts Award for Occupational Therapy Discharge Planning Group, Rehabilitation Medicine Department, National Institutes of Health

1995   Performance Award, Rehabilitation Medicine Department, National Institutes of Health

1994   Named member of Alpha Sigma Lambda, National Adult Education Society, Epsilon Omicron Chapter, Towson State University

1993   Departmental Merit, Occupational Therapy Department, Towson State University, Towson, MD

1993   Certificate of Recognition: Distinguished Alumna. San Jose State University, San Jose, CA

1991   Service Award, Ten Year Recognition, American Occupational Therapy Association

1991   Service Award, Massachusetts Occupational Therapy Association

1989   American Society of Association Executives: Award of Excellence for
        Innovation in Education for *Mental Health Focus: Skills for Assessment and
        Treatment*

1988   American Society of Association Executives: Award of Excellence for
        Innovation in Education for *Mental Health SCOPE: Strategies, Concepts, and
        Opportunities for Program Development and Evaluation*

1988   Member of the Roster of Fellows of the American Occupational Therapy
        Association

1986   American Society of Association Executives: Award of Excellence for
        Innovation in Education for *PIVOT: Planning and Implementing Vocational
        Readiness in Occupational Therapy*

1975   Who's Who Among Students in America's Colleges and Universities, 41st Edition

1973   Invitational Commencement Keynote Address for Occupational Therapy
        Graduation, San Jose State University

1966   *Morality*. Invitational Commencement Keynote Address for High School
        Graduation, Aragon High School, San Mateo, CA

1966   Daughters of the American Revolution Good Citizenship Award

Professional Experience

<u>Clinical Roles</u>

1996 -   Mental Health Specialist, Rehabilitation Medicine Department, National
                Institutes of Health, Bethesda, MD
        • Develop strategic plan for integrating biopsychosocial component of major diagnoses seen in
          Rehabilitation Medicine Department
        • Highlight biopsychosocial perspective in inservice education, including Grand Rounds, Case
          Conferences, and in consultation with Rehabilitation Medicine Department staff
        • Author sections of Rehabilitation Medicine Department publications to provide
          biopsychosocial aspects of evaluation and treatment
        • Foster interdisciplinary focus on mental health as an element of quality clinical care

1994 -   Senior Occupational Therapist, Occupational Therapy Section,
                Rehabilitation Medicine Department, National Institutes of Health,
                Bethesda, MD
        • Design, implement, and evaluate clinical program for patients with major affective disorders
        • Coordinate research on personal computers in occupational therapy; develop design in
          collaboration with consultant, negotiate proposal through IRB, develop procedures for
          management of data
        • Work Therapy Coordinator for Section; develop policies, standard operating procedures, and

documentation for program; negotiate short- and long-term placements for patients from NIMH protocols
- Contribute to Institute research through occupational therapy evaluation
- Coordinator, Occupational Therapy Weekly Discharge Planning Seminar on topics of relevance to discharge planning for people with mental illnesses

1993   **Work Evaluation, Way Station, Inc., Frederick MD**
- Collaborate on the design of an evaluation protocol and pilot test with selected WSI members
- Conduct Assessment of Motor and Process Skills and summarize results
- Design and conduct job site analysis and work analysis of selected members in work settings
- Design Functional Assessment for intake into community psychosocial program
- Draft Assessment Summaries and present implementation plan and strategies to WSI staff

1993-1994   **Dissociative Disorders Unit, Sheppard and Enoch Pratt Hospital, Towson, MD**
- Collaborate with occupational therapy department in implementation of intervention program focusing on work readiness

1992-1994   **Consultant to Shady Grove Medical Center, Professional Rehabilitation Network, Rockville, MD**
- Direct patient care in nursing homes
- Program development for psychiatric unit in nursing home

1974-1977   **Director of Occupational Therapy, Psychiatric Day Centers, Inc., San Francisco, CA**
- Establish, supervise, and implement an occupational therapy pre-vocational program for an out-patient day treatment psychiatric population
- Recommend goals and strategies in treatment planning in collaboration with other members of the treatment team
- Design and construct clinic space to accommodate equipment and supplies; maintain facilities
- Develop close liaison with Volunteer Bureau to place clients in community volunteer jobs and maintain indirect supervision of work skills and appropriate job behaviors through Volunteer Bureau liaison

1974   **Program Assistant, Physical Fitness for Fun, Jewish Community Center, San Francisco, CA**
- Develop comprehensive gross and fine motor activity program for children with learning disabilities
- Facilitate in-home implementation of exercise program with parents

1972-1973   **Psychiatric Aide, Belmont Hills Psychiatric Hospital, Belmont, California**
- Mental health aide in small private psychiatric hospital with acute and out-patient programs

1973   **Occupational Therapy Intern, Mount Zion Hospital, Psychiatric Unit, San Francisco, California**

1973   **Occupational Therapy Intern, General Medical and Surgical Units, Ventura General Hospital, Ventura, California**

1972   **Director of Handicapped Recreation, Los Gatos-Saratoga Recreation Department, Los Gatos, California**
- Develop and manage innovative summer recreation program for children with learning

disabilities, including cognitive, social, and physical activities
- Manage supplies and resources within budgetary constraints
- Supervise support staff to assist in implementing program
- Coordinate with parents on management styles most effective with each child

1971-1972   In-Home Aide, private family, Care of 8 year old cerebral palsy, mentally retarded boy, San Jose, California
- Provide dressing grooming, feeding assistance for 8 year old CP/MR male in the home
- Facilitate gross and fine motor control, instruct in color and word recognition, develop treatment program with parents

1971-1973   Baby-sitter for Private Agency, Palo Alto, California
- Provide on-call baby-sitting for multicultural families

1970   Psychiatric Aide, Waldau Spital, Ostermundigen, Switzerland
- Provide nurses' aide services as team member in very large "state" hospital for individual with chronic psychiatric diagnoses
- Design and implement informal diversional activity program for 250 locked ward chronic female inpatients

1969-1970   Nurse's Aide, Lindenhof Spital, Bern, Switzerland
- Provide nurse's aide services as team member on 30 bed cancer ward of general medical and surgical hospital

Educator Roles

1997 –   Faculty, Occupational Therapy Certification Examination Preparatory Course, International Educational Resources, Ltd., Concord, NH

1997   Consultant, International Educational Resources, Ltd., Concord, NH
- Critique course, develop conceptual model, revise teaching resources, faculty development for *Certification Examination Preparation Course for Occupational Therapists*

1997   Adjunct Faculty, Shenandoah University, Winchester, VA
- Presentation of outcomes model for psychosocial occupational therapy using case study method

1996 –   Fieldwork Supervisor, Clinical Research Apprenticeship, National Institutes of Health
- Marta Pelczarski, Development and Pilot-testing of First Level Coding System, Fall 1996
- Heidi Hvorka, Data Analysis Strategy Testing, Summer 1997
- Michelle Kubacki, Mental Health Fieldwork Specialty, Fall 1997
- Suzanne Harris, Activity Demands January-February, 1999

1996   Adjunct faculty, Psychosocial Module, Shenandoah University, Winchester, VA
- Develop and teach four-day module on mental illness, therapeutic use of self, assessment and intervention approaches, frames of reference, and program development

1995   Fieldwork Coordinator, Occupational Therapy Section, Rehabilitation Medicine Department, National Institutes of Health, Bethesda, MD
- Develop policies for clinical research apprenticeship with Section staff

- Design standard operating procedure for promotion, application, selection, and admission of students for fieldwork II
- Coordinate selection of 1996 students with universities
- Write Procedural Manual for Clinical Educator Coordinator Position in Occupational Therapy Section

1992 - 1994   Assistant Professor, Occupational Therapy Department, Towson State University, Towson, MD
- Content specialization in psychosocial occupational therapy theory and clinical practice, activity theory and skills, research, professional issues
- Department Committees: Audio-visual, Library, Undergraduate Admissions, 1992- Phi Theta Epsilon Faculty Advisor, 1993-
- School Committees: CAHPSE Curriculum Committee, 1992-1993 Gerontology Committee, 1992-1994
- University Committee: Chair, Continuing Studies Committee, 1992-1994
- Pre-OT Student Advisor, 1992-1993; Four-year program Advisor, 1993-1994

1988-1992   Program Manager, Continuing Education Program Development, American Occupational Therapy Association, Rockville, MD
- Design, develop, and implement the national continuing education program for diverse groups of occupational therapy personnel
- Recommend policy and design procedures for curriculum design, logistical support, and liaison with external organizations to support the Association's continuing education efforts
- Develop sources of external funding for project development as available
- Coordinate promotion of program with Division of Advertising and Marketing

1990-1992   Program Manager, Post-professional Program Development, American Occupational Therapy Association, Rockville, MD
- Design and develop strategies to promote post-professional education programs in occupational therapy
- Design and produce Graduate (Post-professional) brochure and other promotional mechanisms for potential students
- Support the planning, resource allocation, funding, and design of new post-professional programs
- Facilitate the development of post-professional students through the Doctoral Student Network

1982-1988   Assistant Director, Continuing Education Division, American Occupational Therapy Association, Rockville, MD
- Develop and implement the national continuing education program for occupational therapy personnel using various approaches to needs assessment, curriculum design, and educational methodology
- Analyze the impact of environmental factors on continuing education for occupational therapy personnel and recommend strategies and policy for continuing education for occupational therapy
- Manage all continuing education components of AOTA Annual Conference
- Implement two federally funded continuing education projects awarded to AOTA (resources in excess of $250,000 from OSERS and AoA)

1981-1982   Continuing Education Specialist and Liaison to the Special Interest Sections, Division of Professional Development, American Occupational Therapy Association, Rockville, MD
- Analyze environmental issues affecting practice and develop plan for AOTA continuing education efforts in response to identified resources and demands
- Manage development and implementation of national continuing education program including

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Regional Workshop Series
- Analyze AOTA continuing education program effectiveness via participant and state association survey and recommend strategies and policies for continuing education in occupational therapy
- Provide National Office liaison to Special Interest Sections in consonance with plans and policies of the Association
- Recommend and implement strategies for the SIS continuing education portion of the AOTA Annual Conference
- Provide resources to occupational therapy personnel seeking re-entry or career development in the field

1977-1980   Assistant Professor, Department of Occupational Therapy, Medical College of Virginia, Richmond, VA
- Design and implement curriculum in graduate and undergraduate programs in the health care system, administration and management, psychiatry, and activity theory and skills
- Chair and serve on university, school, and department committees including Faculty Senate, Graduate Admissions, School of Allied Health Continuing Education Committee, Committee to Define Co-sponsorship and Sanctioning Relationships, Conceptual Model Committee, Faculty Research Seminar, Self Study Committee, Promotions Committee, Scholarship Committee, Grants Committee
- Direct and supervise student research
- Junior and Senior Class Advisor
- Direct and manage department continuing education program in collaboration with the school, university, and external bodies

Management and Administrative Roles

1992-1996   Consultant, Community Mental Health Program Development, Way Station, Inc., Frederick, MD
- Design curriculum for development of frame of reference and strategic plan
- Facilitate staff cohesion, collaborative goal identification, and articulation of philosophical base
- Lead staff in development of mission, strategic plan, action steps, program evaluation

1992-1994   Project Manager, Leadership Project, TriAlliance of Health and Rehabilitation Professions, Rockville, MD
- Design and implement educational program to build interdisciplinary teams to assume leadership roles in health and education reform in communities across America
- Foster collaboration among occupational therapy, physical therapy and speech-language pathologists and audiologists at the national, state, and local levels

1986-1990   Mental Health Program Manager, American Occupational Therapy Association, Rockville, MD
- Manage Association involvement in external liaison to mental health associations, member inquiries concerning mental health issues, Association policy and position on mental health issues
- Editor, Interdisciplinary Update Column, *Hospital and Community Psychiatry* journal
- Develop Annual Conference program on mental health topics

1985-1988   International Coordinator, American Occupational Therapy Association, Rockville, MD
- Direct and manage information about international experiences for members abroad and in the USA
- Provide National Office liaison to the World Federation of Occupational Therapists Delegates

and to the International Committee
- Plan and coordinate site visits for international guests and arrange hospitality

1962-1964   Kelly Girls Temporary Clerical Services, Mills Hospital, San Mateo, CA
             Summer employment

Research Activity

<u>Grants and Research Activity</u>

Deputy Investigator. *A Pilot Study of the Role of Methimazole in Patients with Polymyositis and Dermatomyositis*. NIAMS, National Institutes of Health, 1996-1999.

Principle Investigator. *Linking Occupational Therapy Process and Patient Performance: The Personal Computer Activity in Occupational Interventions.* NIMH 96-CC-0040, National Institutes of Health, 1995 -

Principle Investigator. *The Computer as an Occupational Therapy Treatment Modality.* NIMH, National Institutes of Health, 1995 – 1996.

Deputy Investigator. *A Pilot Study of Fludarabine in Poly/Dermatomyositis.* NIAMS, National Institutes of Health, 1995 -

Deputy Investigator. *A Comparison of the Effects of Tactrine and Dextroamphetamine in Patients with Alzheimer's Disease*. NIMH, National Institutes of Health, 1995.

Deputy Investigator. *Memory and Pharmacologic Agents in Neuropsychiatric Patients and Controls.* NIMH, National Institutes of Health, 1995.

Deputy Investigator. *Modified Convrey in Poly/Dermatomyositis*. NIAMS, National Institutes of Health, 1994.

Principle Investigator. *New Technology for Occupational Therapy Education*. Curriculum Enhancement Grant, Towson State University, Towson, MD. Funded 1994 for $5,000

Principle Investigator. *Fostering Therapeutic Use of Self through Letter Writing*. Faculty Research Grant, Towson State University, Towson, MD. Funded 1993-1994 for $200

Author for Maryland Occupational Therapy Association's submission of *State Association Leadership Development*. Professional Enhancement Projects, American Occupational Therapy Association, Rockville, MD. Funded May 1993 - September 1994.

Principle Investigator. *Teaching Modules in Preventive Geropsychiatry*. Faculty

Development Grant, Towson State University, Towson, MD, October, 1992. Funded 9 months for $1,000.

Research Assistant. *Political Decision-making*. Judith Torney-Purta, PhD, Department of Education, University of Maryland, College Park, MD, 1992.

Primary Investigator. *Stress and Decision-making*. Pilot Study. Department of Education, University of Maryland, College Park, MD, 1991-1992.

Research Assistant. *Female Physical Maturation: A Comparison of Abused and Non-Abused Subjects.* Frank Putnam, PhD and Penny Trickett, PhD. Chesapeake Institute, Wheaton, MD, 1988-1990

Co-author and Curriculum Design/Evaluation Consultant. *Family-Centered Care: Early Intervention Grant*. American Occupational Therapy Association, Rockville, MD, 1987. Funded for 18 months for $150,000.

Co-author and Evaluation Consultant. *The Role of Occupational Therapy with the Elderly*. Administration on Aging, Washington, DC, 1982. Funded for 18 months for $109,000.

Co-Principal Investigator. *Planning and Implementing Vocational Readiness in Occupational Therapy (PIVOT).* Office of Special Education and Rehabilitative Services, Department of Education, Washington, DC, 1982. Funded for 3 years for $149,000.

Principle Investigator. *The Development and Use of a Documentation Tool Incorporating the Occupational Therapy Outcome Criterion in a Psychiatric Day Treatment Center.* Master's thesis. San Jose State University, San Jose, CA, 1977.

Principle Investigator. *Leadership Styles and Their Effect on Group Participation,* Senior Research Project, Occupational Therapy Department, San Jose State University, San Jose, CA, 1973.

Grants and Research Proposed/Not Funded

Principal Investigator. *Health Promotion in Geropsychiatry: Focus on Independent Living*. Faculty Development Grant, Towson State University, Towson, MD. Submitted September 1993.

Author. *Leadership Fellowship*, Kellogg Foundation, submitted 1985 and 1986

Co-Author. *The Use of Occupational Therapy in Vocational Readiness for Learning Disabled Adolescents*. Submitted to the Foundation for Children with Learning Disabilities, 1984

Grant Reviewer

Credentialing Process for Physical Therapy Clinical Educators. American Physical
    Therapy Association, Department of Clinical Education, September 1994

Talent Search Program. Department of Education, Division of Student Services, 1991

Major Publications

Journal Publications

Robertson, S.C. & Colborn, A.P. (2000). Can we improve outcomes by expanding
    research methods? The Issue Is. *American Journal of Occupational Therapy,*
    54(5), 541-543 .

Robertson, S.C. & Colborn, A.P. (1997). Outcomes in rehabilitation: Issues and
    solutions. *Journal of Rehabilitation Outcomes Measurement, 1*(5), 15-23

Dickie, V. A. & Robertson, S.C. (1991). Perspectives on human functioning. *Hospital
    and Community Psychiatry*, *42*(6), 575-576

Robertson, S.C. (1981). Continuing education: A quality assurance approach. *American
    Journal of Occupational Therapy*, *35*(5), 312-31

Books

Allen, C. & Robertson, S.C. (1993). *Study guide: Occupational therapy treatment goals
    for the physically and cognitively disabled*. Rockville, MD: American
    Occupational Therapy Association.

Robertson, S.C. (1992). *Find a mentor or be one*. Rockville, MD: American
    Occupational Therapy Association.

Robertson, S.C. (Ed) (1988). *Mental health focus: Skills for assessment and treatment*.
    Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (Ed) (1986). *Mental health SCOPE: Strategies, concepts, and
    opportunities for program development and evaluation*. Rockville, MD: American
    Occupational Therapy Association.

Kirkland, M. & Robertson, S.C. (Eds.) (1985). *Planning and implementing vocational
    readiness in occupational therapy*. Rockville, MD: American Occupational
    Therapy Association.

Kirkland, M. & Robertson, S.C. (1984). *Vocational readiness assessment in occupational*

therapy. Rockville, MD: American Occupational Therapy Association.

Battes, N., et al (1979). *Occupational therapy practice guidelines*. San Francisco, CA: Occupational Therapy Association of California.

Chapters in Books

Ramsay, D, Starnes, W.P. & Robertson, S.C. (in press). Vocational issues in mental health practice. In B. Kornblau, *Work in Progress*. Bethesda, MD: American Occupational Therapy Association.

Robertson, S.C. (1998). Intervention for mental health: Treatment for psychosocial components. In M.E. Neistadt & E. Crepeau (Eds.). *Willard and Spackman's Occupational Therapy* (9th edition). Philadelphia, PA: J.B. Lippincott.

Gerber LH, Hicks J, Klaiman M, Thornton B, Parks R, Robertson S, Reyburn T, Sonies B, Jain M, Augustine E, McGarvey C, Bernad M, Ballard S, Perkins K. (1997). Rehabilitation of the cancer patient. In DeVita VT, Hellman S, Rosenberg, SA, eds. *Cancer: Principles and practices* (5th ed.). Philadelphia, PA: Lippincott-Raven, 2925-2956.

Robertson, S.C. (1996). Team building and leadership. In J. Bair, *Occupational therapy manager*. Bethesda, MD: American Occupational Therapy Association.

Robertson, S.C. (1993). Shaping Strategic Communication. In S. Carleton (Ed.). *Promoting the profession: A resource guide for marketing and publicizing occupational therapy*. Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1993). Approaches to Communication. In S. Carleton (Ed). *Promoting the profession: A resource guide for marketing and publicizing occupational therapy*. Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1992, 1998). Why we document. In J. Acquaviva (Ed.). *Documentation manual*. Rockville, MD: American Occupational Therapy Association.

Professional Monographs and Newspaper Articles

Stancliffe, B. (1998). Why case study research? Careers Section. *Occupational Therapy Practice, 3*(1), 13-17. Interviewed with A. Colborn for this article.

Robertson, SC. (1997). Mood disorders: Occupational therapy intervention *OT Practice, 2*(9), 34-38 .

Colborn, A.P. & Robertson, S.C. (1997). Outcomes in occupational therapy: Perspectives and suggestions for research. *OT Practice, 2*(6), 36-39.

Robertson, S.C. & Colborn, A.P. (1997). Everyday practice is the basis of research. *OT Practice*, *2*(3), 30-35.

Robertson, S.C. (1997). Use resumes to create your career. *OT Week, Student Edition*. Bethesda, MD: American Occupational Therapy Association.

Mauras-Neslen, E. & Robertson, S.C. (May 18, 1995). Fieldwork NIH Style. *OT Week*. Bethesda, MD: American Occupational Therapy Association.

Robertson, S.C. (1993). Should I Write a Curriculum Vitae or a Resume? *OT Week, Student Issue*. Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1990). American Occupational Therapy Association's approach to continuing education. *Proceedings of the American Society of Association Executives Meeting*. Washington, DC: ASAE.

Robertson, S.C. (1982). *Re-entry Packet*. Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1982). The role of the university in professional continuing education. *AOTA Education Bulletin*. Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1978). *Proceedings of the Chesapeake Bay Fieldwork Council*. Richmond, VA: Occupational Therapy Department, Medical College of Virginia.

Robertson, S.C. (1974). The computerization of occupational therapy. *American Occupational Therapy Association Newspaper.*

Numerous articles in the *Occupational Therapy Newspaper*, *OT Week.*

Curriculum Materials and Audio-visual Instruction

Robertson, S.C. (1994). *Planning and implementation guide for leadership development*. Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1993). *Health promotion: Student guide*. Towson, MD: Towson State University.

Robertson, S.C. (1992). *The Americans with Disabilities Act. Faculty guide*. Rockville, MD: American Occupational Therapy Association.

American Occupational Therapy Association (1992). *The Americans with Disabilities Act: Employer and consumer perspectives*. Videotape editor and production manager of one- hour videotape to accompany workshop. Rockville, MD:

American Occupational Therapy Association.

Robertson, S.C. (1990). *Treatment in groups: A COTA workshop.* Faculty guide. Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1989). *Effective programming: Blueprint for success*. Faculty Guide. Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1989). *Managing in an environment of change.* Faculty Guide. Rockville, MD: American Occupational Therapy Association.

American Occupational Therapy Association (1988). *Principles of Measurement*. Content Consultant and Production Staff. 30 minute videotape to accompany *Mental Health Focus: Skills for Assessment and Treatment*. Rockville, MD: Author.

Robertson, S.C. (1988). *Mental health focus: Skills for assessment and treatment*. Faculty Guide. Rockville, MD: American Occupational Therapy Association.

Acquaviva, J.D. & Robertson, S.C. (1987). *Ethics videotape and instructional packet.* Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1986). *Mental health SCOPE: Strategies, concepts, and opportunities for program development and evaluation*. Faculty Guide. Rockville, MD: American Occupational Therapy Association.

Robertson, S.C. (1984). *Planning and implementing vocational readiness in occupational therapy.* Faculty Guide. Rockville, MD: American Occupational Therapy Association.

Kirkland, M., Robertson, S.C. (1983). *The prospective payment system and its implications for occupational therapy*. Videotape. Rockville, MD: American Occupational Therapy Association.

Book Reviews

Robertson, S.C. (1999). Conceptual Foundations of Occupational Therapy, G. Kielhofner. *American Journal of Occupational Therapy*, *53*(4), 415-416. (invited).

Robertson, S.C. (1996). *Psychosocial Occupational Therapy for Occupational Therapy Assistants,* M.B. Early, Lippincott Press. (invited).

Robertson, S.C. (1993). *Directive Group Therapy*, K. Kaplan. Slack Publishers.(invited).

Robertson, S.C. (1993). The Kohlman Evaluation of Living Skills, L. K. McGourty. *American Journal of Occupational Therapy*, *47*, 370. (invited).

Published Abstracts

Robertson, S.C. & Robertson-Tchabo, E.A. (2006). Therapist-guided debriefing interviews and client reflection on engagement in activity. In Precis Central: American Occupational Therapy Annual Conference and Exposition.

Colborn, AP, Robertson, S.C. (1997). Investigating outcomes through input: Case study methodology. In: American Occupational Therapy Association's 1997 Annual Conference and Exposition. Bethesda, MD: Author: p. 11.

Moricle, L.A. & Robertson, S. (1996). Neurophysiology and Mental Illness. In: Conference Abstracts and Resources 1996: The American Occupational Therapy Association Annual Conference and Exposition, Friday April 19 - Tuesday April 23, Navy Pier, Chicago, IL. Bethesda, MD: The American Occupational Therapy Association. (Diskette).

Parks, R. & Robertson, S. (1996). Self concept and HIV + adolescents. In: Conference Abstracts and Resources 1996: The American Occupational Therapy Association Annual Conference and Exposition, Friday April 19 - Tuesday April 23, Navy Pier, Chicago, IL. Bethesda, MD: The American Occupational Therapy Association. (Diskette).

Presentations

Professional Presentations

Rehabilitation medicine toolbox: Strategies for selecting functional outcome measures in institute research. Poster with Diana Fay Moore, summer research intern. National Institutes of Health Poster Day 2000.

Describing occupational therapy process in outcomes research. Peer-reviewed poster with Anne Colborn. American Occupational Therapy Association Annual Conference, April 1, 2000.

Generating process, performance, and program outcomes from patient treatment. Peer-reviewed poster with Anne Colborn. American Congress of Rehabilitation Medicine Outcomes Conference. Boston, MA, September 12, 1997.

Investigating outcomes through input: Case study research methodology. Peer-reviewed workshop with Anne Colborn. American Occupational Therapy Association, Orlando, FL, April, 1997.

Women and HIV. Peer-reviewed poster with Ruth Meyers and Rebecca Parks. American Occupational Therapy Association Annual Conference, Orlando, FL, April, 1997.

Consumer-driven mental health policy development. Peer-reviewed roundtable with
Diana Ramsay. American Occupational Therapy Association Annual Conference,
Orlando, FL, April, 1997.

Using leadership practices: Leadership forum. The American Occupational Therapy
Association Annual Conference, Orlando, FL, 1997.

Neurophysiology and mood disorders.
Virginia Occupational Therapy Association, March 19, 1997. Invited keynote.
National Institutes of Health Rehabilitation Medicine Grand Rounds, March 1997.

Outcomes in people with mental illness: Part of a bigger outcomes question. Invited 3-
hour seminar with Anne Colborn. Shenandoah University, February 11, 1997.

Practitioner-friendly research: Focus on outcomes.. Poster session with Anne Colborn.
Clinical Research Day, National Institutes of Health, Bethesda, MD, February
1997.

Cerebellar ataxia and depression: Interdisciplinary interventions. Peer-reviewed poster
with Jacqueline Gilbert. USD Public Health Service Commissioned Officers
Annual Meeting, February 9, 1997.

Self concept in adolescents with HIV. Peer-reviewed poster with Rebecca Parks.
American Occupational Therapy Association Annual Conference, April, 1996.
Commissioned Officers Association Annual Meeting, May 12-15, 1996.

The self in self care and
The self in context. Invited Keynote presentations. Occupational Therapy Special Interest
Group, Occupational Therapy Association of California, San Jose, CA, March 15-
16, 1996.

What to develop: A curriculum vitae or resume? Invited 1-hour presentation. ASCOTA
Steering Committee. American Occupational Therapy Association Annual
Conference and Exposition, Chicago, IL, 1996.

Back to the future: Historical perspectives on function. Rehabilitation Medicine Grand
Rounds, National Institutes of Health, April 28, 1995.

Managing cultural diversity. Invited panel moderator. American Occupational Therapy
Association Annual Conference, April 9, 1995.

Mental health practice in occupational therapy. Invited panel presenter. District of
Columbia Occupational Therapy Association, February 7, 1995.

Mentoring and career development. Rehabilitation Medicine Grand Rounds, National
Institutes of Health, Bethesda, MD, October, 1994.

Mentoring and career role(s) development. Invited keynote presentation.
COTA Forum. AOTA Annual Conference, Boston, MA, July 11, 1994.
Connecticut Occupational Therapy Association Annual Conference, October
1994.

Mentoring and fieldwork supervision. Invited Speaker. Maryland Clinical Educator's
Council, Baltimore, MD, July 19, 1994.

Proper domain of research in occupational therapy. Invited discussant for Linda Tickle-
Degnen, Rapport-building Ability in Students. Research Forum. American
Occupational Therapy Association Annual Conference, Boston, MA, July 11,
1994.

Can we predict successful functioning in the community? Invited panel moderator.
American Occupational Therapy Annual Conference, Boston, MA July 9, 1994.

Relationship building: A strategy for assessing student learning. Peer-reviewed poster
session. American Occupational Therapy Association Annual Conference,
Boston, MA July 10, 1994.

Is marketing in your bag of tricks. Invited faculty for short course *This OT Business.*
World Federation of Occupational Therapists. London, England, April 20, 1994.

Teaching health promotion in an entry-level educational program. World Federation of
Occupational Therapists. London, England, April 19, 1994.

Mental handicap: Employment opportunities. Invited panelist. World Federation of
Occupational Therapists, London England, April 20, 1994.

Assessment: The key element in successful supervision. Peer-reviewed poster session.
Maryland Occupational Therapy Association. November 13, 1993.

Operation independence: Community programming for older adults. Virginia
Occupational Therapy Association, October 7, 1993.

Career development: The road not taken. Invited Distinguished Alumna Keynote
Presentation. 50th Anniversary of the Occupational Therapy Program, San Jose
State University. San Jose, CA, February 20, 1993.

Therapy as education. Maryland Occupational Therapy Association Annual Conference.
November 1992.

Occupational therapy: On a carousel of time. Invited Keynote Presentation. Kansas
Occupational Therapy Association State Conference. Lawrence, KS, September
26, 1992.

Education: History andtTrends. Invited presentation. Medical College of Georgia, Augusta. December 1991.

Occupational therapy: On a carousel of time. Invited Keynote Presentation. Massachusetts Occupational Therapy Association State Conference. Marlborough, MA, October 17, 1991.

The road less traveled. Invited Commencement Keynote Address. Occupational Therapy Basic Master's Program Graduation, Virginia Commonwealth University. Richmond, VA, March 23, 1991.

Marketing and communication approaches. Invited Presentation to Payment Workshop. American Occupational Therapy Association, Legislative Affairs and Political Division. Rockville, MD, December 1, 1990.

Change theory. Invited Presentation. Betty Cox Continuing Education Series. Union Memorial Hospital. Baltimore, MD, November 15, 1990.

Occupational therapy: Back to the future. Invited Keynote Address. Directions for the Future for New England Region, Butler Hospital. Providence, RI, October 13, 1990

Occupational therapy: Back to the future. Invited Keynote Address. Ohio State Occupational Therapy Association State Conference. Salt Fork Lodge, OH, October 12, 1990.

Adult learning and *Teaching and selling techniques*. Invited Presentations. District of Columbia Occupational Therapy Association State Conference. Washington, DC, June 10, 1989.

Career development. Peer-reviewed roundtable presentation. American Occupational Therapy Association Annual Conference. Baltimore, MD, April, 1989.

How to teach and *Needs assessment*. Invited presentations. Regional Fieldwork Consultants Meeting, American Occupational Therapy Association. Rockville, MD, October 28, 1988.

Program development. District of Columbia Occupational Therapy Association State Conference. Washington, DC, May 14, 1988.

Career development. Peer-reviewed 1-hour presentation. American Occupational Therapy Association Annual Conference. Phoenix, AZ, April 15-20, 1988.

Needs assessment. Fieldwork Consultants Meeting, American Occupational Therapy Association. Rockville, MD, September 28, 1985.

Overview of the role of occupational therapy with the elderly. Association of
Gerontology in Higher Education. Washington, DC, February 16, 1985.

Competency-based continuing education. American Society of Association Executives
Leadership Symposium. Bethesda, MD, March 16, 1984.

AOTA's competency-based continuing education model. Lifelong Learning Research
Conference. University of Maryland, College Park, MD, February 17-18, 1983.

History of the World Federation of Occupational Therapy. American Occupational
Therapy Association Annual Conference, Philadelphia, PA, May 7-12, 1982.

Prevocational skill development for the chronic patient, Maryland Occupational Therapy
Association State Conference. Towson, MD, March 27, 1982.

Workshops/Seminars

Identifying outcomes in occupational therapy practice with Anne Colborn. Invited
workshop. Maryland Occupational Therapy Association Education Day.
Baltimore, MD, November 8, 1997.

Practitioner-friendly research: Focus on outcomes. DCOTA Workshop and
Rehabilitation Medicine Department Grand Rounds, National Institutes of Health,
January 17, 1997.

Breaking into new markets: Expanding roles in mental health. Peer-reviewed workshop
with Diana Ramsay. American Occupational Therapy Association.
October 18-19, 1996, Bethesda, MD.
May 30-31, 1997, Boston, MA.

*The occupational therapist's role as a consultant in community-based mental health
programs* with Diana Ramsay. Invited workshop. American Occupational
Therapy Association.
Portland, OR, September 30, 1995.
Portland, ME, June 8, 1996.

Neurophysiology and mental illness. Peer-reviewed workshop with Lea Ann Moricle,
MD.
American Occupational Therapy Association Annual Conference, April 1996.
Virginia Occupational Therapy Association, MHSIS, March 1997.
National Institutes of Health , Rehabilitation Medicine Grand Rounds, March
1997.

Leadership forum. TriAlliance of Rehabilitation Professions, American Occupational
Therapy Association Annual Conference.

Orlando, FL, April 1997.
Chicago, IL, April, 1996.
Denver, CO, April, 1995.
Boston, MA, July, 1994.
Seattle, WA, April 1993.
Houston, TX, April 1992.

Operation independence: Promoting technologies for aging in place. Peer-reviewed
institute. American Occupational Therapy Association Annual Conference,
Boston, MA, July 9, 1994.

International seminar: Occupational therapy curriculum design. Invited workshop. Betty
Cox, Associates, Inc., St. John's College, Cambridge, England, August 1-6, 1993.

Team building: Fostering diversity. Invited 1-hour presentation. Walter Reed Army
Medical Center, Washington, DC, July 1, 1993.

Managing in a changing health care system. Invited Workshop. Rehabilitation
Department, Fairfax Hospital, Fairfax, VA, March 22, 1993.

Therapy as education. Peer-reviewed roundtable. American Occupational Therapy
Association Annual Conference, Seattle, WA, June 1993.

Stress and decision-making. Peer-reviewed poster session.
American Occupational Therapy Association, June 1993.
Maryland Occupational Therapy Association, November 1992.

Therapy as education. Peer-reviewed 1-hour presentation. Maryland Occupational
Therapy Association Annual Conference, Timonium, MD, November 7, 1992.

Leadership and management and
Adult education and voluntarism. Peer-reviewed presentations. Maryland Occupational
Therapy Association Annual Conference, Timonium, MD, November 6, 1992.

Diversity: The key ingredient in team building. Invited Pre-Conference Institute. Texas
Occupational Therapy Association State Conference. San Antonio, TX, October
10, 1991.

Mental health programming. American Occupational Therapy Association Workshop
Series. University of Alberta, Canada. May 2-3, 1991.

*American Occupational Therapy Association's competency-based approach to continuing
education*. Workshop presented to the American Society of Association
Executives. Washington, DC, December 11, 1990.

State association management and representative assembly meeting. Workshop

Coordinator and Faculty. American Occupational Therapy Association, Rockville, MD.

Adult education and voluntarism and *Trends in health*, November 8-11, 1990.
　　Teaching adults, communication approaches, and *Trends*, November 2-5, 1989.

Change, *Trends analysis*, and *Adult education and voluntarism*, November 10-13, 1988.
　　How to run a meeting and *Continuing education coordination*, November 5-8, 1987.
　　Planning and *Trends analysis*, November 18-21, 1986.
　　Planning and *Trends analysis*, November 21-25, 1985.

Treatment in groups: A COTA workshop. American Occupational Therapy Association. Cleveland, OH, November 1990: Faculty seminar.

Successful programming in mental health. American Occupational Therapy Association. University of Alberta, Edmonton, Alberta, Canada, October 26-27, 1990.

Approaches to communication. Invited Workshop. Rehabilitation Services, Veteran's Administration Hospital. New York, August 9-10, 1990.

Mental Health focus: Skills for assessment and treatment, American Occupational Therapy Association.
　　Rockville, MD, November 10-11, 1989.
　　New York State Department of Mental Health, Central Islip State Hospital, Islip, Long Island, NY, December 1-2, 1988.
　　Rockville, MD, October 14-15, 1988.
　　New York, NY, September 23-24, 1988.
　　Indianapolis, IN, February 19-20, 1988.
　　New York, NY, October 23-24, 1987: Pilot program.

Practice symposium. Adult Track Project Manager. American Occupational Therapy Association. St. Louis, MO, October 6-8, 1989.

Effective programming: Blueprint for success. 2-day workshop. American Occupational Therapy Association.
　　Corpus Christi, TX, September 15-16, 1989.
　　Rockville, MD, June 22-23, 1989.
　　Restorative Services, Inc., Hobart, IN, October 29-30, 1987.

Documentation workshop. Faculty Training. American Occupational Therapy Association. Baltimore Washington International Airport, May 7, 1989.

Management in an environment of change. 2-day workshop. American Occupational Therapy Association. Houston, TX, December 3-4, 1988.

Developing gerontology education programs: ROTE II. 2-day workshop. American
　　　Occupational Therapy Association.
　　　Indianapolis, IN, July 23-24, 1987.
　　　Boston, MA, July 13-14, 1987.
　　　Birmingham, AL, June 19-20, 1987.

*Mental health SCOPE: Strategies, concepts, and opportunities for program development
　　　and evaluation*. 2-day workshop. American Occupational Therapy Association.
　　　Rockville, MD, March 21-22, 1986.
　　　Gaithersburg, MD, July 12-13, 1986: Faculty training.
　　　New York, NY, November 14-15, 1985: Pilot program.

Program development. Invited workshop. Fieldwork Consultants Meeting. University of
　　　North Dakota, Grand Forks, ND, October 31 - November 1, 1985.

The role of occupational therapy with the elderly. American Occupational Therapy
　　　Association. Rockville, MD, September 26-28, 1985: Faculty training.

Planning and implementing vocational readiness in occupational therapy (PIVOT).
　　　American Occupational Therapy Association.
　　　Dallas, TX, January 25-27, 1985: Faculty training.
　　　Rockville, MD, April 27-29, 1984: Pilot program.

Continuing education model. Lifelong Learning Research Conference, University of
　　　Maryland. College Park, MD, February 16-17, 1984.

<u>Inservice Presentations and Occupational Therapy Education Program Presentations</u>

Examining process outcomes in occupational therapy. Invited 3-hour presentation with
　　　Anne Colborn. Springfield Hospital Center, Sykesville, MD. September 9, 1998.

Values in team building, Diversity Seminar, National Institutes of Health, August 31,
　　　1995.

Diversity: Self exploration. Diversity Seminar, National Institutes of Health, August 3,
　　　1995.

Assessment of motor and process skills. Invited 2-hour presentation. Way Station, Inc.,
　　　Frederick, MD. July 1993.

Managing the changing health care system. Invited 1-day workshop with Karen Eskow,
　　　PhD, OTR/L. Fairfax Hospital, Fairfax, V, March 22, 1993.

Professional presentation techniques. 1-hour invited presentation. National
　　　Rehabilitation Hospital, Washington, DC, October 9, 1992.

Assessment of cognitively impaired patients. 1-hour inservice for Medical Rehabilitation
    Services, Rockville, MD. September 10, 1992.

Resources and functions at national office. 1-hour invited presentation. Occupational
    Therapy Department, Dominican College. New York. April 14, 1991.

The American Occupational Therapy Association: Structure and function. 1-hour
    invited presentation. Occupational Therapy Department, Virginia Commonwealth
    University. Richmond, VA. October 15, 1990.

Team buildingsSeries, Three 1-hour invited seminars on Team Building, Conflict
    Resolution, and Approaches to Communication, Occupational Therapy
    Department, Mt. Vernon Hospital. Alexandria, VA, October 2, December 4, 1990
    and January 4, 1991.

History of AOTA and WFOT. Invited 1-hour presentation. Occupational Therapy
    Department, Thomas Jefferson University. Philadelphia, PA. May 23, 1988.

Trends in mental health. Invited 1-hour presentation. Occupational Therapy Department,
    Towson State University. Towson, MD, May 12, 1986 and May 13, 1985.

Trends analysis. Invited 1-hour presentation. Occupational Therapy Department, Howard
    University. Washington, DC, October 7, 1985.

Community Service Presentations

Occupational therapy evaluation in community mental health program. Invited 1-hour
    presentation. Way Station, Inc., Frederick, MD. Presentation to Department of
    Vocational Services, November 19, 1993.

Health promotion with the elderly. Interviewed for cable television CNN Headlines,
    Baltimore, March 1993.

Occupational therapy: Career overview. Invited 1-hour presentations.
    Wooten High School, Rockville, MD, April 25, 1986.
    Julius West Middle School, Rockville, MD.
    March 13, 1985, March 28, 1984, March 15, 1983, March 24, 1982.
    Jeb Stuart High School, Falls Church, VA, February 6, 1985.
    Damascus High School, Damascus, MD, May 16, 1984.

Normal aging. Invited 1-hour presentation. Rockville Senior Center, Rockville, MD,
    December 6, 1984.

Invited Advisory Contributions

Advisory Committee, *Senior Tech, Easter Seal Association of America*, Baltimore

Chapter, 1993-1994.

Paper Reviewer, *World Federation of Occupational Therapists*. London, England, 1993.

Education Committee, *Annual Conference Committee*, American Occupational Therapy Association, 1993, 1980-1990.

Curriculum Design Consultant, *Design for Accessibility*. Washington, DC, 1990.

Professional Advisory Committee, *Long-term Care Conference Program Advisory Committee*, Hillhaven Foundation. Washington, DC, 1985.

Member, *Admissions Advisory Committee*, Occupational Therapy Department, Howard University, Washington, DC, 1985.

Consultant, *Occupational Therapy Program Design of Continuing Education*, Occupational Therapy Department, University of North Dakota. Grand Forks, ND, 1985.

Consultant, *Competency-based Curriculum Design*, Bureau of Health Professions, Rockville, MD, 1984.

Professional Contributions

Book Reviewer, *American Journal of Occupational Therapy*, 1993-

Editor, Maryland Occupational Therapy Association Newsletter, 1993-1994.

Leadership Coordinator, Leadership Development Seminars, Maryland Occupational Therapy Association, 1992-1994

Curriculum Design Consultant, SPICES curriculum. American Occupational Therapy Association. Rockville, MD, 1990.

Coordinator, Parent Resource Project for Non-offending Parents in Child Sexual Abuse, Chesapeake Institute. Wheaton, MD, 1990.

Book Reviewer, *Hospital and Community Psychiatry*, 1988-1992.

Editor, Interdisciplinary Update Column, *Hospital and Community Psychiatry*, 1988-1990.

Supervision of Occupational Therapy Interns. Division of Continuing Education, American Occupational Therapy Association. Rockville MD, 1983-1992.

International State Liaison, District of Columbia Occupational Therapy Assn., 1985-

1987.

Wilma West Library Committee, American Occupational Therapy Foundation and
Association, 1982-1988.

Written History Committee. Focus on history of the World Federation of Occupational
Therapy. American Occupational Therapy Association. Rockville, MD, 1985 -
1987.

Occupational Therapy Booth. National Conference on Aging. Washington, DC, April 11,
1986.

Independent Study Tour of Britain Psychiatric Facilities, June 30-July 13, 1985.

Independent Study Tour of Britain Psychiatric Facilities, June 23-July 1, 1984.

Chair, Technology Sub-group, American Occupational Therapy Association, 1983.

Staff Liaison, National Institute of Mental Health Advisory Committee. Bethesda, MD,
1981-1982.

Selected Recent Continuing Education

Neurobiology of Mental Illness, National Institutes of Health, 3 credit course, Bethesda,
MD, Fall 2005.

Workshop on Employment of People with Mental Illness, DC Mental Health Consumer's
League, December 1, 1995.

Women and Depression, Institute of Women's Studies, National Institutes of Health,
November 30, 1995.

Depression, Philip Gold, MD. National Institutes of Health, November 21, 1995.

HIV, Anthony Fauci, MD. National Institutes of Health, November 8, 1995.

Annual Conference, Maryland Occupational Therapy Association, October 28, 1995.

Leadership Development Seminar, Maryland Occupational Therapy Association.
Baltimore, MD, October 27, 1995.

Functional Assessment: Design and Measurement. Fran Oakley, MA, OTR/L, FAOTA.
National Institutes of Health, October 20, 1995.

Mental Illness Awareness Week Symposium, American Occupational Therapy
Association, October 3, 1995.

Target Center, US Department of Agriculture, September 22, 1995.

Hormone Replacement Therapy. Institute of Women's Studies, National Institutes of Health, September 11, 1995.

Annual Conference. National Alliance for the Mentally Ill. Washington, DC July 21-22, 1995.

The Problem Supervisor. Lila Nappi. Maryland Clinical Educator's Council, Baltimore, July 1995.

The Student with Problems. Gail Kramer. Maryland Clinical Educator's Council. Baltimore, MD. May 16, 1995.

The Relevance of Activity to Quality of Life. Gail Fidler. Way Station, Inc. Frederick, MD, May 16, 1995

Stress and Depression. Philip Gold, MD. National Institutes of Health. March 8, 1995.

Musician's Dystonia. Rehabilitation Medicine Grand Rounds, National Institutes of Health, January 13, 1995

Cognitive Rehabilitation. Self Study Course. American Occupational Therapy Association. December 1994.

World Congress on Stress. Bethesda, MD, October 1994.

Dystonia. Rehabilitation Medicine Grand Rounds, National Institutes of Health, September 23, 1994.

Leadership Development Seminar, Maryland Occupational Therapy Association, Columbia, MD, May 14, 1993.

Occupational Exposure to Bloodborne Pathogens, Department of Environmental Health and Safety, Towson State University, Towson, MD January 28, 1993.

The Current Status and Future of Occupational Therapy Education, SPOT Annual Conference, Timonium, MD, December 2, 1992.

Assessment of Motor and Process Skills (AMPS) Training Course, Chicago, IL, July 20-24, 1992.

American Sign Language I and II, Montgomery College Continuing Education, Rockville, MD January - June, 1992 and June - September, 1992.

Massachusetts Occupational Therapy Association State Conference. Boston, MA, October 17-18, 1991.

Neuroscience Institute. American Occupational Therapy Association. Baltimore, MD, June 29-30, 1990.

New Directions in Hand Rehabilitation Following Micro-neuro-vascular Surgery. American Occupational Therapy Association. Rockville, MD, July 22, 198.

Ensuring Payment Through Documentation. American Occupational Therapy Association. Rockville, MD, May 6, 1989.

Hospital and Community Psychiatry Institute, American Psychiatric Association.
New Orleans, LA, October 22-27, 1988.
Boston, MA, October 25-28, 1987.

Education Symposium. American Occupational Therapy Association. Crystal City, VA, January 9-10, 1988.

Dysphagia. University Hospitals, Ann Arbor, MI, September 11, 1987.

National Family Violence Research Conference. University of New Hampshire, Durham, NH, July 6-9, 1987.

Target 2000. American Occupational Therapy Association. Nashville, TN, June 22-26, 1986.

World Future Society. Washington, DC. August 8-9, 1985, June 11-15, 1984, January 18, 1983, January 19-22, 1982.

National Council on International Health. Washington, DC, June 3-6, 1985.

Topics in Psychiatry. Harvard Medical School. Cambridge, MA, March 28-31, 1985.

Annual Conference. American Association of Adult and Continuing Education. Philadelphia, PA, December 1-4, 1983.

Lifelong Learning Research Conference. University of Maryland, College Park, MD. February 13, 1982.

Great Southern Occupational Therapy Conference. Atlanta, GA, October 13-15, 1983.

Legislative Update on Aging in 98th Congress. National Council on Aging. Washington, DC, July 25, 1981.

AOTA Annual Conference. Regular attendance since 1972.

Professional Memberships

American Occupational Therapy Association, 1971 - present
The World Federation of Occupational Therapists, 1974 - present
AOTA Mental Health Special Interest Section, 1980 - present
The Maryland Occupational Therapy Association, 1992 - present
The District of Columbia Occupational Therapy Association, 1981-1986
DCOTA Mental Health Special Interest Section 1981-1985
National Council for International Health, 1986-1988