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UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

TAKING CONTROL THROUGH SELF-DETERMINATION:
THE MANAGEMENT OF PERSONAL LIFESTYLES
BY ADULTS WITH MENTAL RETARDATION

A Dissertation

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

SCOTT LYNN ARNETT
Norman, Oklahoma
1997

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THE MANAGEMENT OF PERSONAL LIFESTYLES
BY ADULTS WITH MENTAL RETARDATION

A Dissertation APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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Abstract

This study was based on the idea that self-determination may be used as a vehicle through which individuals with mental retardation may redefine their identities, recast their futures, and take more control of the management of their own lifestyles. On one level, the effectiveness of the intervention package on the acquisition or improvement of choice and decision-making skills in persons with mental retardation was examined because the literature provides evidence that choice and decision-making skills form the basis for the achievement of self-determination. On another level, the effectiveness of the intervention package on increasing self-determining behaviors was examined because research has offered evidence that individuals with mental retardation who consistently engage in self-determining behaviors are indeed self-determined. The intervention package was made up of component elements that were found in the literature to be associated with self-determination. The effects the elements had on the choice and decision-making process and the effects the elements had on the occurrence of self-determining behaviors were examined. Evidence is reported that suggests that this intervention package does increase self-determining behaviors while allowing the

participants to assume more responsibility in the choices and decisions that impact their daily lives.

"Few human concerns are more universally central than that of self-determination" (Deci, 1980, p.3).

TAKING CONTROL THROUGH SELF-DETERMINATION:
THE MANAGEMENT OF PERSONAL LIFESTYLES
BY ADULTS WITH MENTAL RETARDATION

CHAPTER I

Introduction

Our culture places great value on people with high intelligence and much less value on individuals with low intelligence (Farber, 1968). Fortunately for individuals with mental retardation, intelligence is not the only individual characteristic our culture values. Choice and decision-making skills are also valued in our culture. Those individuals with mental retardation who demonstrate choice and decision-making skills, reflect favorably upon their perceived independence, dignity and self-worth (Wehmeyer, 1993). Choice and decision-making skills form the basis for the achievement of self-determination in persons with mental retardation (Deci, 1980; Nirje, 1972; Sands & Wehmeyer, 1996; Schloss, Alper, & Jayne, 1993; Turnbull & Turnbull, 1985; Turnbull, Turnbull, Shank, & Leal, 1995; Wehmeyer, 1992; 1993; Wehmeyer & Berkobien, 1991; Wehmeyer & Kelchner, 1994). The need to emphasize self-determination in adults with mental retardation is

paramount in any effort to enhance the perceived value of these individuals to society. Self-determination in individuals with mental retardation reflects the potential they have to contribute to our communities, thus being viewed as valued assets (Kennedy, 1996).

Acquiring self-determination helps individuals with mental retardation to assume responsibility for their choices and decisions, while removing the feelings of helplessness and liberating themselves from dependency (Deci, 1980). Through self-determination, an individual can take control of his/her life and free him/herself from labels, traditional roles, and expectations that commonly accompany individuals with mental retardation (Fetterman, 1994). Self-determination not only affords freedom but also opportunity for these individuals (Sands & Wehmeyer, 1996). Of most importance, through self-determination, individuals with mental retardation can re-define their identity and their future.

Unfortunately, too many individuals with mental retardation continue to hold little, if any control over the most seemingly mundane aspects of their lives, and are directed or dictated by others. People with mental retardation have the right to experience control in and over their lives, to participate in and make decisions that affect their lives, and to experience the dignity that comes with living self-determined lives (Sands & Wehmeyer, 1996).

Definition of Self-Determination

For the purpose of this study, self-determination will be defined as: self-initiated choices and decisions based upon the individual's own values, beliefs, interests, preferences, and abilities which are meaningful to the individual and are recognized by others as appropriate, in an effort to assume greater control and responsibility of his/her own life. This is a revision of Wehmeyer's (1993) definition to which the terms "self-initiated" (Vogelsberg, et al., 1980), "meaningful" (Calculator & Jorgensen, 1994; Pumpian, 1996; Sands & Wehmeyer, 1996), and the "recognition of others" have been added. This definition will be discussed in detail in Chapter Two.

Background of Self-Determination

The history of self-determination has its background in self-regulation. This concept was emphasized by Skinner and other behaviorally-oriented theorists, who focused almost exclusively on the manner in which external stimuli exert control over behavior (Abery & Stancliff, 1996). To these behavioral theorists, self-regulation was the transfer of externally controlled contingencies to the individual who used the external controls on him/herself (Meichenbaum, 1984).

Lovett and Haring (1989) argued that the use of external control was effective in skill acquisition and

improvement of behavior, but is not necessarily conducive to maintenance and generalization of desired behaviors, nor does it foster self-initiation. As Vogelsberg, et al. (1980) noted, independence for individuals with mental retardation rests in their ability to self-initiate. Due to the inability to foster self-initiation, external controls alone are unable to help individuals achieve self-determination. Techniques that focus on external controls or cues, although effective in changing behaviors, may create a dependency on those external controls. This dependency on external controls may in turn inhibit self-determination. Lovett (1986) comments, "reliance upon and continued direction from external agents may foster this perception of dependence and tend to suppress self-sufficiency" (p.6). He goes on to state, "deficits in self-direction will not be alleviated if an individual depends upon external agents to prompt and sustain performance" (p.8). Thus, an individual is unlikely to demonstrate self-determination if he/she is dependent upon an external cue in order to initiate a behavior.

It is important to understand the difference between self-determining behaviors and self-determination. If an observed behavior (e.g., going into a bank and depositing a check) is initiated by an external cue (e.g., parent or staffmember), this behavior (banking) may be considered as self-determining behavior, but is not necessarily a

valid reflection of a person's self-determination. Whereas the same self-determining behavior (banking) that is self-initiated may indeed be self-determining. This issue will be discussed in more detail in Chapter 2 (see Relevant Issues in the Literature).

Litrownik (1982) noted that operant training leads to the acquisition of specific responses cued by specific situations (external controls), resulting in a lack of generalization to stimuli and a concurrent lack of generalization of responses. This results in mechanical, rote responding. As an example, Litrownik (1982) discussed the case of Pamela, a child with autism who Lovaas used in his 1969 film on language development. When asked what she had for breakfast, Pamela responded "toast, eggs...." Litrownik (1982) noted that this was impressive when comparing this response to her limited initial responses,

but not so significant when I tell you that whenever I, or anybody else for that matter, asked her this question, she responded with the same list of items. (p.318)

Litrownik's (1982) example is of an externally cued self-determining behavior (Pamela responding to a request of what she had for breakfast) that does not necessarily indicate self-determination.

The Social Learning theorists noted that the occurrence of a behavior of a person is determined not

only by the nature or importance of goals or reinforcements, but also by the person's anticipation or expectancy that these goals will occur (Adler, 1927; Bandura, 1977; Lewis, 1935; Rotter, 1954; 1955; Tolman, 1934). According to these theorists, if individuals perceived reinforcement as being determined by external controls, independent of their efforts, the result was that these individuals were less likely to raise expectations that reinforcement will increase (Rotter, 1982). Conversely, their expectancies for future reinforcement were high following success if they perceived the reinforcement to be dependent upon their own efforts (Rotter, 1982). Rotter (1982) gives a very interesting example for clarification. If, on his way home, an individual was to find \$5 laying on the sidewalk, we should not expect that the next time this individual needs \$5 he would return to the same sidewalk (reinforcement being perceived as being independent of his behavior). On the other hand, if this individual had earned the money, say, by mowing the grass, he might be expected to return to the yard and ask to mow it again (reinforcement being perceived as being dependent on his behavior). Rotter (1982) therefore argues for the need for the individual to be in control of his/her own destiny:

A series of studies provides strong support for the hypotheses that the individual who has a

strong belief that he can control his own destiny is likely to (a) be more alert to those aspects of the environment which provide useful information for his future behavior; (b) take steps to improve his environmental condition; (c) place greater value on skill or achievement reinforcements and be generally more concerned with his ability, particularly his failures; and (d) be resistive to subtle attempts to influence him. (p.210)

The influences of the social theorists are present in the literature on self-determination for persons with mental retardation. For example, Wehmeyer (1996) comments:

People who are self-determined act based on their beliefs that (a) they have the capacity to perform behaviors needed to influence outcomes in their environment and (b) if they perform such behaviors, anticipated outcomes will result. (p.633)

In the 1960's a different school of thought evolved. Cognitive science developed out of the work of Miller, Galanter, and Pribram (Rotter, 1982). These authors viewed self-regulation as involving a number of metacognitive skills: schema building, possessing goal-

directed scripts, and perception of both behavioral patterns and conditional probabilities, as well as planning, monitoring, and evaluation (Sternberg, 1981). According to this perspective, individuals possess inherent schemas and scripts with their built-in expectations, procedural routines and knowledge, as well as the skills and disposition to match ongoing performance with internal representations of what should occur. When there is a perceived mismatch, this is the occasion for the individual to alter behavior (e.g., call upon other scripted routines), which in turn is monitored and evaluated (Sternberg, 1981). This more cognitive perspective suggests that self-regulation may be nurtured by helping individuals develop, practice, and discover schemas, and plan, monitor, and evaluate scripts. This approach results in a greater emphasis on how trainers can nurture and guide (e.g., scaffold) such self-regulatory skills without the dependency of external controls.

Sands and Wehmeyer (1996) discuss how the term self-determination is presently being used. Self-determination is being used by disability rights advocates and individuals with disabilities to refer to the individual's right to have control of their lives. This demonstrated control over their lives becomes a quality of life issue. Individuals with disabilities who are in control of the management of their lifestyles are

redefining their identity, their future, and assuming greater responsibilities in the decisions that effect their lives. This current perspective appears to be, in part, an outgrowth of the views previously described.

Summary.

Behavioral theorists who applied external controls to individuals with mental retardation achieved limited success with generalization, maintenance, and self-initiated behavior. Operant techniques, because of their focus on external controls, although effective in changing behavior, generally succeed in creating rote, mechanical responses (Litrownik, 1982).

The social learning theorists pointed out the importance of a person perceiving his/her own actions as the determinant of consequences. This differed from the operant theorists who focused on the consequences of actions that were dependent on external controls, not within the individual (Rotter, 1982).

The cognitive sciences emphasized metacognitive skills which imply a more active role for the learner and alternative ways to teach self-regulation. Through metacognitive skills (e.g., planning, monitoring, evaluation, built-in expectations, etc.) the individual actively engages in decisions which have consequences that are dependent upon his/her actions and not a result of external controls. Metacognitive skills allow for

alternative ways to teach self-regulation because of the ability of the individual to call upon other schemas or scripts when a behavior needs to be altered.

What may be inferred from looking at the background of self-determination is that the best environment to nurture self-determination consists of an environment where: (1) external controls are replaced with self-initiated behaviors; (2) the individual's perception that consequences for his/her behavior are dependent upon his/her action; and, (3) developing, practicing, and discovering schemas, and planning, monitoring, and evaluating scripts are an on-going process. In short, self-determination is related to an individual's sense of self-efficacy (Bandura, 1997).

Statement of the Problem

Research suggests that the vast majority of adults with mental retardation have no choice in where they live, work, who they socialize with. Further, they lack control over who provides them services, and experience limited opportunities for expressing preferences, making choices and decisions (Houghton, Bronicki, & Guess, 1987; Jaskulski, Metzler, & Zierman, 1990; Kishi, Teelucksingh, Zollers, Park-Lee, & Meyer, 1988; Murtaugh & Zettin, 1990; Pumpian, 1996; Sands & Wehmeyer, 1996). Research also suggests that these same individuals often perceive themselves as being helpless (Deci, 1980; Edgerton, 1967;

Hallahan & Kauffman, 1994; Smith & Luckasson, 1992; Turnbull, et al., 1995). Deci (1980) depicts this well when he describes individuals with mental retardation being in situations where their outcomes are always independent of their responses. These individuals learn that they do not have the ability to make decisions, that they are dependent on others, and, as would be expected, soon lose motivation to make an impact on their own lives. Adults with mental retardation that do not display self-determination not only find themselves with the attributes of learned helplessness, but also find themselves in regimented and inflexible lifestyles (Deci, 1980) that afford little or no opportunity for expressing preferences and making choices and decisions (Turnbull & Turnbull, 1985; Turnbull, et al., 1995; Wehmeyer, 1992; 1995).

The key to a better quality of life for adults with mental retardation is tied to the opportunities and the personal growth afforded by self-determination. Through opportunities and personal growth, individuals may be perceived by others as capable of independence, having dignity, and self-worth, while being contributors to their community. Individuals with mental retardation must assume a greater responsibility in this process (Brockett, 1991).

Significance of the Problem

1. Research has suggested that the reason most students with disabilities have not made a successful transition from school to adult community life is due to the students' inability to self-direct the skills they learned in school in adult community settings (Schloss, Alper, & Jayne, 1994). Wagner (1989; 1991) noted that during their school years students with disabilities do not learn how to plan for their future and make goal-directed choices. Miller (1994) reported that students with disabilities leave high school without the perception that they are in control of their lives. As a result of this perception of not being in control of their lives, many students with disabilities enter adult life with less likelihood of success than their peers without disabilities. The aforementioned authors warn that the deficits with which young adults with mental retardation are exiting the schools will negatively impact their quality of life as adults. These deficits can result in social isolation, financial dependence, job losses, and unemployment. Conversely, once an individual obtains self-determination, it is likely that many of these deficits will disappear and the individual may achieve a quality of life closer to that of his/her peers (Wagner, 1989).
2. Self-determination is important for everyone, including adults with severe mental retardation.

Research has demonstrated that these individuals are capable of learning to make choices and express preferences and interests (Kennedy, 1996; Lagomarcino & Rusch, 1989; Schloss, Alper, & Jayne, 1994). For individuals with extensive or pervasive needs, self-determination may be manifested in non-verbal behaviors indicative of preference or participation in their own self-help activities (Schloss, et al., 1994). Opportunities to make choices and express preferences, both qualities of self-determination, may result in a meaningful improvement in the quality of life for adults with severe mental retardation.

3. Harris, et al. (1986) reported that less than one third of all working age adults with intellectual disabilities are employed, compared to the overall employment rate of approximately 95% (also see Chadsey-Rusch, Rusch, & O'Reilly, 1991; Wagner, et al., 1991). Investigators examining reasons for occupational failure among young adults with disabilities report that few individuals fail to secure, or lose jobs because of the inability to perform required tasks. Rather, failure has been linked to the lack of appropriate decision-making skills related to the job (Benz & Halpern, 1987; Schloss, Hughes, & Smith, 1989). Johnson (1988) reported that the ability to identify problems, identify possible alternatives, and select the best alternative are competencies used by employers to define employability.

The Purpose of This Study

The purpose of this study, at one level, was to examine the effectiveness of an intervention package on the acquisition or improvement in choice and decision-making skills. Research has indicated that persons with mental retardation often do not possess choice and decision-making skills (Benz & Halpern, 1987; Schloss, Hughes, & Smith, 1989). As noted, choice and decision-making skills form the basis for the achievement of self-determination in persons with mental retardation (Deci, 1980; Nirje, 1972; Sands & Wehmeyer, 1996; Schloss, Alper, & Jayne, 1993; Turnbull & Turnbull, 1985; Turnbull, Turnbull, Shank, & Leal, 1995; Wehmeyer, 1992; 1993; Wehmeyer & Berkoben, 1991; Wehmeyer & Kelchner, 1994).

At another level, this study examined the effectiveness of the intervention package to increase self-determining behaviors. Research has offered evidence that individuals with mental retardation who consistently engage in self-determining behaviors are indeed self-determined (Wehmeyer, Kelchner, & Richards, 1996). The intervention package was made up of "component elements" (Wehmeyer, 1993) that were known in the literature to be associated with self-determination. This study examined the effects the elements had on the choice and decision-making process, while at the same time examining the effects the elements had on the

occurrence of the self-determining behaviors. Through the use of the intervention package, it was hypothesized that individuals participating in this study would acquire or improve their choice and decision-making skills, while increasing their self-determining behaviors through efforts to take more control in the management of their own lifestyles.

One goal of this study was to gain further understanding of what Fetterman (1994) referred to as the pragmatic view of assisting someone in obtaining self-determinism: "give someone a fish and you feed her for one day; teach her to fish, and she will feed herself for the rest of her life" (p.10). Along with the pragmatic view of promoting self-determination in persons with mental retardation, there exists a moral view. Individuals with mental retardation have stated that achieving self-determination is important to them (Sands & Wehmeyer, 1996). This is sufficient justification to promote self-determination.

Research Questions

This study addressed the following research questions:

1. What effect will this intervention package have on increasing or improving self-determining skills in individuals with mental retardation?
2. To what degree will the participants in the

study be able to perform each component element of the intervention design?

3. Which component elements of the intervention package are most and least effective in improving self-determining skills?

4. What effect will the intervention package have on choices being made by the participants that impact their daily lives?

5. Will the component elements of the intervention package generalize to different and unique settings?

6. Will maintenance of the component elements of the intervention package continue after termination of the study?

7. If participants increase or improve their self-determining skills, as evidenced by their abilities to make appropriate choices and decisions; will "others" allow participants more control in managing their lifestyles'?

Summary

This chapter provided an introduction to self-determination. It addressed the background of self-determination, the statement of the problem, the significance of the problem, the purpose of this study, and the research questions to be explored. Chapter Two is a review of the related literature on self-determination.

"Self-determination is the ability to chart one's own course in life" (Fetterman, 1993, p.10).

CHAPTER II

Literature Review

Introduction

The emphasis on and need for procedures to assist individuals with mental retardation in obtaining self-determination were documented in Chapter I. The literature relating to self-determination is examined in this chapter. This chapter includes: (a) definitions of relevant terms found in the self-determination literature; (b) a discussion regarding the association between the 1992 AAMR definition of mental retardation and self-determination; (c) an introduction and analysis of the models of human adjustment; (d) explanation of the component elements of self-determination; (e) presentation of relevant issues in the self-determination literature; (f) a discussion of previous research conducted and methodologies used; (g) an evaluation of previous assessments used in self-determination studies; and, (h) the results of the pilot studies.

Definitions

To understand the complex concept of self-determination in individuals with mental retardation, it

is important to define some relevant terms.

Mental retardation

In 1907 Sequin defined a person with mental retardation as a "minor legally irresponsible; isolated, without associations; a soul shut up in imperfect organs, an innocent" (p.29). Although intuitive and eloquent, his definition is a long way from the current 1992 American Association on Mental Retardation's (AAMR) definition:

Mental retardation is defined as substantial limitations in present functioning. It is characterized by significantly subaverage intellectual functioning, existing concurrently with related limitations in two or more of the following applicable adaptive skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before the age of 18 (Luckasson, Coulter, Polloway, Reiss, Schalock, Snell, Spitalnik, & Stark, 1992, p.1).

A relevant perspective to this study is to view mental retardation as a self-regulatory disorder.

Self-regulation is a complex response system that enables individuals to examine their

environments and their repertoire of responses for coping with those environments, to make decisions about how to act, to act, to evaluate the desirability of the outcomes of their action, and to revise their plans as necessary (Whitman, 1990, p.373).

Self-determination

A review of the literature revealed eleven definitions of self-determination that are relevant to this paper. An analysis of the definitions identified the most recurring term used in these definitions of self-determination as "choice" (see Table 1). As stated in the introduction, choice and decision-making form the basis for the achievement of self-determination. For the purpose of this study, "choice" will be defined as an uncoerced selection from two or more alternatives (Brigham, 1979). The following authors used the term "choice" in their definition of self-determination: Schloss, Alper, and Jayne, 1993; Wehmeyer, 1992; Wehmeyer and Berkobien, 1991; "choices that impact their lives", Wehmeyer, 1993; "choosing to live one's own life", Turnbull and Turnbull, 1985; Turnbull, Turnbull, Shank and Leal, 1995; "opportunities for choices", Wehmeyer and Kelchner, 1994; and "to have those choices be the determinants of one's action", Deci, 1980. In defining self-determination the emphasis that researchers put on

Table 1

Terms Found in the Definitions of Self-Determination

Authors	Terms			
	Choice	Decision Making	Taking Contrl	Quality of Life
Turnbull, et al., 1995	*	*	*	
Wehmeyer, et al., 1994	*	*	*	*
Schloss, et. al, 1993	*	*		
Wehmeyer, 1993a	*	*	*	*
Wehmeyer, 1993b	*	*	*	*
Wehmeyer, 1992	*			
Wehmeyer, et. al., 1991	*	*	*	*
Wetherby, 1988			*	*
Ward, 1988				
Turnbull, et. al., 1985	*			
Deci, 1980	*			
Total	9	6	6	5

Table 1, Continued

Terms Found in the Definitions of Self-Determination

Authors	Terms		
	Owning Values	Ability	Preference
Turnbull, et al., 1995	*	*	*
Wehmeyer, et al., 1994		*	
Schloss, et. al, 1993		*	
Wehmeyer, 1993a	*		
Wehmeyer, 1993b	*	*	
Wehmeyer, 1992		*	
Wehmeyer, et. al., 1991		*	
Wetherby, 1988			
Ward, 1988			
Turnbull, et. al., 1985	*		*
Deci, 1980			
Total	4	6	2

Table 1, Continued

Terms Found in the Definitions of Self-Determination

Authors	Terms		Total
	Autonomy	External Influence	
Turnbull, et al., 1995			6
Wehmeyer, et al., 1994			5
Schloss, et. al, 1993			3
Wehmeyer, 1993a			5
Wehmeyer, 1993b			6
Wehmeyer, 1992	*	*	4
Wehmeyer, et. al., 1991			4
Wetherby, 1988			2
Ward, 1988		*	2
Turnbull, et. al., 1985	*		4
Deci, 1980			1
Total	2	2	

the term "choice" show its underlying importance.

Other relevant terms found in the definitions of self-determination include "decision making" (Schloss, Alper, & Jayne, 1993; Turnbull, Turnbull, Shank, & Leal, 1995; Wehmeyer, 1993; Wehmeyer & Berkoben, 1991; Wehmeyer & Kelchener, 1994). "Taking control" of one's life is also prominent in the definitions of self-determination (Turnbull, Turnbull, Shank, & Leal, 1995; Ward, 1988; Wehmeyer, 1993; Wehmeyer & Kelchner, 1994; Wetherby, 1988). The importance of "taking control" versus being given control was noted by this author and was reflected in the title of this paper. The definitions of self-determination also includes "owning values" (Turnbull & Turnbull, 1985; Turnbull, Turnbull, Shank, & Leal, 1995; Wehmeyer, 1993), and "beliefs" (Wehmeyer, 1993), having "interests" (Wehmeyer, 1993), and "preferences" (Sands & Wehmeyer, 1996; Turnbull & Turnbull, 1985; Turnbull, Turnbull, Shank, & Leal, 1995; Wehmeyer, 1993). Other terms used include, having the "abilities", "capacities", or "means" to acquire the skills for self-determination (Schloss, Alper, & Jayne, 1993; Turnbull & Turnbull, 1985; Turnbull, Turnbull, Shank, & Leal, 1995; Wehmeyer, 1992; 1993; Wehmeyer & Berkoben, 1991; Wehmeyer & Kelchner, 1994; Wetherby, 1988). Other concepts that should be considered in a definition of self-determination include "autonomy" or "independence" (Turnbull & Turnbull, 1985; Wehmeyer,

1992), "self-regulation" (Wehmeyer, 1992), and "freedom from undue external influences" (Wehmeyer, 1992; Ward, 1988). For the complete definitions of self-determination offered by these authors, see Appendix A.

As noted in the introduction, for the purpose of this study, self-determination will be defined as: self-initiated choices and decisions based upon the individual's own values, beliefs, interests, preferences, and abilities which are meaningful to the individual and are recognized by others as appropriate, in an effort to assume greater personal control and responsibility of his/her own life. This is a revision of Wehmeyer's (1993) definition to which the terms "self-initiated" (Vogelsberg, et al., 1980), "meaningful" (Calculator & Jorgensen, 1994; Pumpian, 1996; Sands & Wehmeyer, 1996), and the "recognition of others" have been added. The following terms found in the definition of self-determination used in this study are discussed further:

Self-initiated.

The term "self-initiated" was added to the definition to emphasize a key point of this study. It is important to assess whether or not the choice-making process occurs only after being cued, or if this process is self-initiated by the participant. The expectation of this project is that the intervention package will foster self-determining behaviors with as little dependence on

external controls or cues as possible. As Vogelsberg, et al. (1980) commented, independence of individuals with mental retardation rests in their ability to self-initiate.

During this study, a participant was observed with excellent self-determining behaviors. She cooked complete meals, washed, dried, folded, and put away her clothes, and cleaned her room and assigned areas without assistance. Although, during the ecological survey, as the researcher observed her it became apparent that she never engaged in any of the above self-determining behaviors without first being cued by a staff person. This prompt dependence which appears to initiate and sustain her performance (Lovett, 1986) has hindered opportunity to become self-determined. The present study attempts to distinguish self-determining behaviors that are externally cued from those self-determining behaviors that are self-initiated.

Choices and decisions.

The ability to make choices and decisions is not the only aspect of self-determination. For example, Wehmeyer (1996) and Kennedy (1996) see the "attitude" of self-determination as an important aspect that should not be overlooked (see Relevant Issues in the Literature). Providing choice and decision-making, although not the only aspect, is the most significant aspect of assisting

individuals with mental retardation to obtain self-determining skills. Those individuals who consistently demonstrate appropriate choice and decision-making skills are viewed by others as self-determining, while those who do not consistently demonstrate choice and decision-making skills are viewed by others as being without self-determining qualities.

Values and beliefs.

The importance of owning one's values and beliefs versus borrowing these from others is critical in obtaining self-determination (Turnbull, et al., 1995). An individual that participated in the pilot study for this project was raised in an environment with contrasting political views. One parent described himself as a "liberal democrat", while the other parent described herself as a "hard-core, conservative republican". From this environment, the participant learned to develop his own political views. Interestingly, he was able to share with others both political views, understanding the differences, and his view which was not borrowed from either parent.

Preferences and interests.

The distinction between interest and preference is evident. Interest is "to engage the attention", whereas preference is "the act of choosing the one that is

preferred" (Webster's New Collegiate Dictionary, 1977). Thus, an individual may have a preference to work outside versus inside, while having an interest in working with animals. Martin, Oliphint, and Weisenstein (1994) note the distinction when they discuss the intent of the Individuals with Disabilities Education Act (IDEA) to re-define special education to focus on quality of life issues. "Each students' transition activities must be based not only on their needs, but upon their preferences and interest" (p.17) (emphasis added). Preferences and interests should not necessarily be seen as being life long. This researcher overheard one of the participants in this study say to his job coach, "At first I liked being out doors, but now I'm tired of always being hot, cold, or wet".

Abilities.

Wehmeyer (1996), in discussing the importance of teaching individuals with mental retardation the abilities they need to be productive in the community, comments,

access to opportunities to control one's life, make choices, solve problems, make decisions, and set goals are, in and of themselves, useless until the person holds the attitudes and has the abilities he or she needs to take advantage of such circumstances. (p.21)

(emphasis added)

Meaningful.

The term "meaningful" was added to emphasize the importance of self-participation in personally valued activities (Calculator & Jorgensen, 1994; Pumpian, 1996; Sands & Wehmeyer, 1996). Inherent in the definition of self-determination that is being used in this study is the concept that individuals will identify choices and decisions that are personally valued by them, rather than others identifying choices and decisions for them. In a study by Lovett and Harris (1987), an adult with mental retardation commented that staff members should

train more people in the areas they want to be trained in, something they are interested in.

(p.355)

When individuals with mental retardation are engaged in activities that are truly meaningful to them, inherent in these activities are all the aspects, including behaviors and attitudes, of self-determination.

Recognition of others.

The term "recognition of others" was added to emphasize the need for "others" (e.g., family and staff members, etc.), who are presently making choices and decisions for individuals with mental retardation, to relinquish control. Many family or staff members have

difficulty perceiving their children or consumers with disabilities as empowered and self-determined adults. A cycle of dependency, for many individuals with mental retardation is perpetuated with new "others" assuming control. Pumpian (1996) commented,

many of us don't want to hear the answers....
many of us don't know what to do once we hear
them....we tend to try and protect the
individual.....we did not want them to
experience failure. (p.xiv)

Kennedy (1996) noted that

assisting someone to make choices, it is always
going to be limited by the helper's beliefs and
expectations. (p.39)

People who are currently in control of others' lives will not relinquish control to the individuals themselves until they recognize, first, what part they play in the transferring of dependency, and second, recognition that individuals with mental retardation can constantly make appropriate choices and decisions for themselves.

Summary and discussion.

In looking at the definition of self-determination being used in this study, it contains not only the major descriptors found in other definitions (e.g., choice, values, abilities, assuming greater control, etc.), but also uses the term "decision-making" which researchers

have suggested as being important for achieving self-determination (Mithaug, 1991; St. Peter, Field, & Hoffman, 1992; Wehmeyer, 1992). This definition also fits the philosophical values inherent to this research. The definition suggests that individuals with mental retardation are capable of participating in, and assuming control of, activities that make a difference in their lives. Through this process of participation, where opportunities to make choices and experience the consequences of these choices occur, individuals are able to contribute not only to themselves but also to the community in which they live. The following terms are not found in the definition of self-determination being used in this study, but are relevant to the literature on self-determination.

Self-management

Self-management consists of techniques used to help individuals to remember what they are taught, to think, to organize their lives, and to solve problems (Smith & Luckasson, 1992). Self-management has three distinct stages: (a) self-monitoring (deliberately and carefully attending to one's own behavior); (b) self-evaluation (comparison between the information obtained from self-monitoring and the person's standards for a given behavior, e.g., identifying any discrepancy between what one is doing and what one ought to be doing); and, (c)

self-reinforcement (the individual's reaction to the information obtained from the self-evaluation process) (Kanfer & Garlick, 1986). Most self-management treatment packages include a combination of two or more of the following techniques: instruction, self-recording, self-scheduling, self-charting, self-evaluation, self-selected reinforcement, and self-administered reinforcement (Lovett, 1986).

Self-regulation

Of interest here is that self-regulation has also been defined with the same terms used in self-management, but with minor differences in the definitions of the terms: self-regulation consists of (a) self-monitoring (observation of one's social and physical environment and what he/she is doing); (b) self-evaluation (making judgments about the acceptability of this behavior through comparing information about what one is doing with what one ought to be doing); and (c) self-reinforcement (Wehmeyer, 1993).

Adaptive behavior

Adaptive behavior is defined as the effectiveness or degree with which individuals meet the standards of personal independence and social responsibilities expected for age and cultural group (Grossman, 1983). Adaptive behavior generally refers to a variety of skills

required in self-care, domestic abilities, social competence, and the ability to function in one's own community. Adaptive behavior comprises many different behaviors, such as communication, self-care, home living skills, community use, self-direction, health and safety, functional academics, and work (Smith & Luckasson, 1992).

Summary

In concluding the definition section of this chapter, it is important to note that many different terms are used interchangeably in the literature regarding the definitions of self-determination. For example, Smith and Luckasson (1992) use the term self-direction, while Turnbull and Turnbull (1985) use the term self-determined, and Whitman (1987) uses the term self-regulation. In the literature, authors often cite other authors who use different terms. For example, Deci (1980) is often cited by authors (Kendall, 1990; Meichenbaum, 1990; Pressley, 1990; & Whitman, 1987) who use a different term than self-determination (e.g., self-regulation). Of interest is that on occasion definitions are more similar than the terms (Kanfer & Garlick, 1986; Wehmeyer, 1993). Although semantic differences do exist (see Appendix A), the philosophical intent of obtaining control and management over one's lifestyle seems very clear and consistent across terms and definitions of self-determination.

The AAMR's 1992 Definition of Mental Retardation and Self-Determination

It is relevant to this study to examine the relationship between the 1992 American Association on Mental Retardation (AAMR) definition of mental retardation and the characteristics of self-determination. As noted previously, mental retardation is defined as substantial limitations in present functioning. It is characterized by significantly subaverage intellectual functioning, existing concurrently with related limitations in two or more of the following applicable adaptive skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before the age of 18 (Luckasson, Coulter, Polloway, Reiss, Schalock, Snell, Spitalnik, & Stark, 1992). The most fundamental change in the 1992 AAMR definition from the previous versions (see Appendix B) is the recognition of the interaction of the three key elements in identifying mental retardation: intellectual abilities, adaptive skills, and the environment. According to the authors of the 1992 AAMR definition, the blame is no longer laid on the individual while ignoring the impact the environment has on the individual (Luckasson, et al., 1992). In fact, mental retardation is viewed as a disabling condition resulting from the

interaction of a person with his or her environment (Reiss, 1994). This is closely associated with how Abery and Stancliff (1996) view self-determination, being the result of a dynamic interaction between individuals and the environment in which they live.

Self-determination does not occur in a vacuum.

The capacities necessary for the exercise of personal control are acquired, refined, and utilized within a variety of contexts. These environments, which change on a moment-to-moment, daily, and long term basis, are likely to have a profound influence on the degree of control an individual exercises. (Abery & Stancliff, 1996, p.113)

Wehmeyer, et al. (1990), while identifying the two key issues needed to support individuals with disabilities in becoming self-determined, described the relationship between the individual and his/her environment.

First, opportunities to learn and practice skills of choice and decision-making must be made available early in life and exist across multiple environments. Second, legislation that increases accessibility and opportunities in multiple environments must be implemented and leveraged so that home, school, and community environments create and nurture choice and self-determination for persons with

disabilities. (p.4) (emphasis added)

Weinstein and David (1987) see the interaction with the environment as a major means to the development of skills associated with self-determination. Wehmeyer, Brotherson, and Cunconan-Lahr (1995) agree, they believe that the interaction with the environment is the means to ensure future ability to become self-determined.

Whitman (1987) noted, the environment may be the major player in identifying mental retardation as a self-regulatory disorder. The environment may be responsible not only for creating the self-regulatory disorder displayed by the inability of individuals to cope with the environment, but also the environment may hold the key to correcting the self-regulatory disorder displayed by the ability of individuals to be self-determined, that is to make appropriate choices and decisions, evaluate the outcomes of their actions, and revise their plans as necessary.

Models of Human Adjustment

The literature revealed eight conceptual models that are relevant to the topic of self-determination of adults with mental retardation. Mithaug (1993), in discussing various types of models, referred to them as "self-regulation models of human adjustment" (p.50). Although it can be argued that all of these models have contributed to the knowledge and understanding of self-

determination and are therefore relevant to this study, the majority of these models have been developed for populations other than individuals with developmental disabilities, and in particular, adults with mental retardation. What separates adults with mental retardation from other populations, are deficits in cognitive, emotional, and personal-social functioning (Litrownik, 1982).

In examining the different models which are intended to explain different phenomena (see Table 2), we find that Jackson and Boag's (1981) model accounts for the effectiveness of self-control for individuals with mental retardation; Kanfer and Hagerman's (1981) model is designed for individuals dealing with depression; Jeffrey and Berger's (1982) model explains the management of obesity; Corno and Mandinach's (1983) model explains self-regulated learning; Carver and Scheier's (1982), Kanfer and Gaelick's (1986), and Mithaug's (1993) models explain self-regulation in general. Only Litrownik's (1982) model is designed to teach self-management skills specifically to individuals with mental retardation.

Component Elements of Self-Determination

The literature identified a host of component elements that are associated with self-determination that should be examined prior to developing a model of human adjustment. The analysis of the literature resulted in

Table 2

Models of Human Adjustment

Litrownik 1982	Jackson & Boag 1981	Kanfer & Hagerman 1981	Jeffrey & Berger 1982
Training	Standards	Unexpected Consequences	Monitor Accurately
Methods	Self-		
Shaping	Monitoring	Signal of	Evaluate
Prompting	Self-	Problem	Realistically
Fading	Recording		
Demonstration etc.	Self-	Onset of	Arrange
	Evaluation	Self-	Antecedents
Process	Self-	Monitoring	
	Assessment	Assess	Practice
Problem		Situation	Behavior
Identification	Self		Provide
	Determined	Affect Long	Consequences
Commitment	Consequation	or Short Term	
Problem	Self	Standards	
Appraisal	Administered	Evaluate	
	Consequation	Magnitude	
Apply		of	
		Discrepancy	
Evaluate and Recycle		Evaluate	
		If Own	
Self-Monitor		Behavior is	
		Responsible	
Self-Reinforce		Identify	
		Problem and	
		Behaviors	
		That Can	
		Solve It	

Table 2, Continued

Models of Human Adjustment

Carver & Scheier 1982	Corno & Mandinach 1983	Kanfer & Gaelick 1986	Mithaug
Self-Focus	Memory	Decision	Actual
Attempt	Network:	Point	Goal
Behavioral	Experience		
Conformity	Knowledge	Self	If No
	Interest	Observation	Correspond-
	Social Skills		ence
Interrupt	Self-	Control	
	Regulated	Behavior	No Regulation
Assess	Learning		
Outcome	Schema	Important	If Yes
Expectancy			Discrepancy
	Task	Performance	
Expectancy	Initiation	Feedback	Expectations
Favorable			
Yes/No	Alertness	Performance	Choices
		Criterion	
If No	Selectivity		Responses
Withdraw	Correcting	Past History	
From		Standards	Gain
Further	Either a or b	Self-	
Attempt		Evaluation	
	a) Self		
Physical	Efficacy	Compare	
Withdraw		Outcomes	
Possible	b) Outcome		
	Expectation	Discrepancy	
If Yes		Cause	
Withdraw	Planning		
Physically		Self-Reinforcement	
	Task		
If No	Completion	Action	
Withdraw			
Mentally	Monitoring		
	Performance		
	Outcome		

fourteen component elements of self-determination that are relevant to this study:

Language training

Language training is supported by Litrownik (1982), Wehmeyer (1993), and Whitman (1987). According to Whitman (1987), it is unlikely that individuals with mental retardation will develop substantial self-regulation without language training. Wehmeyer (1993) noted that specific language skills need to be identified and developed prior to implementing an intervention. Litrownik's (1982) model of human adjustment starts with a language training element that includes shaping and prompting.

Self-monitoring

Self-monitoring is a process whereby the individual agrees to observe his/her own behavior against some specified performance standard (Jackson & Boag, 1981). All the models of human adjustment previously discussed recognize the importance of teaching accurate self-monitoring skills (Carver & Scheier, 1982; Corno & Mandinach, 1983; Jackson & Boag, 1981; Jeffery & Berger, 1982; Kanfer & Gaelick, 1986; Kanfer & Hagerman, 1981; Litrownik, 1982; and Mithaug, 1993).

Recognizing choice

Fetterman (1993) described this ability to recognize a choice as a "capacity to identify and express needs". The recognition of a choice is found in Kanfer and Hagerman's (1981) model and is referred to as the "signal of problem", in which the individual evaluates the magnitude of the choice. Litrownik's (1982) model refers to the need for "problem identification and recognition". Kanfer and Gaelick's (1986) model refers to the recognition of a choice as the "decision point". Abernethy, et al. (1994) recognize the importance for opportunities for choice-making in their "Family Education Curriculum".

Goal statement

Fetterman (1993) discussed the importance of developing goal statements that lead to plans of action to achieve the stated goals.

Gathering relevant information

Kanfer and Hagerman (1986) discussed the activity of gathering relevant information and referred to this as "behavior that can solve the problem". Martin (1994) recognized that individuals "need information to make decisions and choices". Litrownik's (1982) model referred to this activity as "possible solutions".

Options

Wehmeyer (personal communication, April 29, 1996) discussed the importance of the identification of what options are available when gathering relevant information.

Recognizing consequences

Jackson and Boag (1981) discussed the importance of recognizing consequences and cautions researchers to consider the "magnitude of the reward or punishment", while Mithaug's (1993) model refers to the need to be attentive to "expectations of choices". Carver and Scheier's (1982) and Corno and Mandinach's (1983) models point to the need in assessing "outcome expectancy". Kanfer and Hagerman's (1981) model refers to the importance of "assessing the situation". Litrownik's (1982) model refers to the need to look at the "choice demands".

Making choices

In articles by Mithaug (1993) and Wehmeyer (1993), the authors discuss the importance of "choice and decision making". Corno and Mandinach's (1983) model, in reference to making choices, refers to "task initiation". Litrownik's (1982) model, in reference to making choices, refers to how the plan will be "applied". Kanfer and Gaelick's (1986) model refers to "action" as relating to

making choices.

Self-evaluation

Kanfer and Gaelick's (1986) and Jackson and Boag's (1981) models refer to the importance of "self-evaluation". Corno and Mandinach's (1983) model refers to "task completion" when discussing the importance of self-evaluation. Kanfer and Hagerman's (1981) model refers to the evaluation of "one's own behavior". Litrownik's (1982) model refers to the "effectiveness of the plan". Jeffery and Berger's (1982) model attempts to explain the importance of "evaluating realistically", while Mithaug's (1993) model refers to the "gain" as relating to self-evaluation.

External evaluation

Kanfer and Gaelick's (1986) model refers to the importance of "performance feedback" in reference to external evaluation. Mithaug's (1993) model reminds the researcher that "access to information must be complete". Fetterman (1993) and Palincsar (1986), in discussing the need of external evaluation, noted the importance for individuals to get "input and feedback from others".

Negotiation and compromising

Wehmeyer (1993) discussed the importance of negotiation and compromising as strategies to overcome or

remove certain barriers in efforts to obtain the desired goal. "Possessing negotiation skill is essential if one is to navigate the many systemic and interpersonal obstacles to goal achievement". (Powers, et al., 1996, p.271)

Self-reinforcement

Jackson and Boag's (1981) model referred to self-reinforcement as "self administered consequence". Jeffrey and Berger's (1982) model included provisions for "consequences for choices". Kanfer and Gaelick's (1986) and Litrownik's (1982) models included the procedures for self-reinforcement after the task has been completed. Last, it is important to note that Helland, Palluck, and Klein (1976) reported that self-reinforcement may be effective in creating work independent of supervision.

Demonstrations and practice

Jeffrey and Berger's (1982) model has "practice behavior" as an important component in their strategy. Litrownik (1982) discussed the use of "demonstrations" as an important aspect of his model. Calculator and Jorgensen (1994) refer to demonstrations and practice as "prehearsal". An important aspect of "prehearsal" is observing others successfully demonstrating and practicing self-direction.

Summary

Although none of the eight models of human adjustment discussed incorporated all of these component elements, all of these elements are nonetheless relevant to the discussion of obtaining self-determining skills in adults with mental retardation. Litrownik's (1982) model is not only designed to teach self-management skills specifically to individuals with mental retardation, but also contains eight of the fourteen component elements listed above and thus is considered to be the model closest resembling the strategies that are needed to obtain self-determining skills with the population of interest.

Analysis of the Models of Human Adjustment

The following is an analysis of the eight models of human adjustment and their relationship to the fourteen component elements found to be associated with self-determination in the literature (see Table 3).

1. Jackson and Boag's (1981) model recognizes the importance of self-evaluation, self-monitoring, and self-reinforcement.
2. Kanfer and Hagerman's (1981) model recognizes the importance of choice recognition, self-monitoring, recognition of consequences, developing a list of resources, self-evaluation, and self reinforcement.
3. Jeffrey and Berger's (1982) model recognizes the

Table 3

Component Elements of Self-Determination

Elements	Models			
	Litrownik 1982	Jackson & Boag 1981	Kanfer & Hagerman 1981	Jeffrey & Berger 1982
Training	*	*		
Self-Monitoring	*	*	*	*
Recognizing Choice	*		*	
Goal Statement				
Information Gathering				
Resource & Skills			*	
Recognizing Consequences	*		*	
Making Choice	*			
Self-Evaluation	*	*	*	*
External Evaluation				
Negotiation & Compromising				
Self Re-Evaluation				
Self Reinforcement	*	*	*	*
Demonstrations & Practice	*			*
Total	8	4	6	4

Table 3, Continued

Component Elements of Self-Determination

Elements	Models				
	Carver & Scheier 1982	Corno & Mandinach 1983	Kanfer & Gaelick 1986	Mithaug 1993	
Training	*				3
Self-Monitoring	*	*	*	*	8
Recognizing Choice			*		3
Goal Statement					0
Information Gathering					0
Resource & Skills				*	2
Recognizing Consequences	*	*		*	5
Making Choice		*	*	*	4
Self-Evaluation	*	*	*	*	8
External Evaluation			*		1
Negotiation & Compromising					0
Self Re-Evaluation					0
Self Reinforcement	*	*	*	*	8
Demonstrations & Practice					2
Total	5	5	6	6	

importance of self-monitoring, self-reinforcement, self-evaluation, and demonstrations and practice.

4. Carver and Scheier's (1982) model recognizes the importance of consequences, self monitoring, self-evaluation, and self-reinforcement.

5. Corno and Mandinach's (1983) model recognizes the importance of self monitoring, consequences of choices, making choices, self-evaluation, and self-reinforcement.

6. Kanfer and Gaelick's (1986) model notes the importance of recognition of choice, making choices, self-monitoring, self-evaluation, external evaluation, and self-reinforcement.

7. Mithaug's (1993) model notes the importance of recognizing the consequences of choices, self-monitoring, self-evaluation, developing a list of resources, making the choice, and self-reinforcement.

8. Litrownik's (1982) model recognizes the importance of demonstrations and practice, recognizing when a choice needs to be made, self-monitoring, recognition of the consequences of a choice, making a choice, self-evaluation, and self-reinforcement.

Although the models of human adjustment address different phenomena, the similarities in the models are important to note. The models discussed incorporate Kanfer's (1986) three stages of self-management: (a) self-monitoring, involving deliberate and careful attention to one's own behavior; (b) self-evaluation,

which is described as making judgements about the acceptability of this behavior through comparing information about what one is doing and what one ought to be doing; and, (c) self-reinforcement, which refers to the individual's reaction to the information obtained from the self-evaluation process.

Summary

Eight models of human adjustment relevant to self-determination were discussed, although six of those models were designed for populations other than individuals with mental retardation. The literature presented fourteen component elements that were found to be associated with self-determination. Each model was introduced and the component elements utilized in that model discussed. The treatment package designed for this study (presented in Chapter Three) was developed largely through the information gathered while analyzing the models of human adjustment. Information obtained from the literature on self-determination, along with a synthesis of the models of human adjustment allowed for a comprehensive strategy to be proposed for developing self-determining behaviors in adults with mental retardation.

Relevant Issues in the Literature

Barriers to self-determination

Frequently, individuals with disabilities live in home environments that are overly structured or overly protected, deprived of the ordinary risks and challenges necessary for human development (Perske, 1972; Smith & Luckasson, 1995; Wehmeyer, 1995). Ward (1988) reported that a major obstacle in the family is the lack of the "right to fail" (p.3). Failure can provide important opportunities for problem solving, decision making, and responding creatively to difficult situations.

Individuals with mental retardation need to learn that it is all right to fail and start over again. These home environments (overly structured and overly protective) do not provide opportunities to make meaningful choices and decisions nor is there an emphasis on the development of the skills necessary to make decisions and solve problems. Ward (1988) argued that individuals should be given more responsibilities and the support they need to make their own decisions, even when parents or staff members feel that such decisions are not the best ones.

Wehmeyer (1993; 1995) noted the crucial role that the educational system and educators play in developing self-determination, or, as he stated, "the lack thereof" (1993, p.9). He reported that the need to structure the special education classroom to meet educational, behavioral, and administrative requirements may result in

an environment promoting dependence and limiting choice and decision-making. This is ironic, being that the U.S. Department of Education has referred to self-determination as the "ultimate goal in education" (Wehmeyer, 1996, p.18). A study by Ianacone and Stodden (1987) support Wehmeyer's view. These authors reported that rigidly structuring educational environments, fostering dependency and outerdirectedness, and limiting the students' opportunities to participate in decisions which impact their lives, create barriers and limit self-determination. Houghton, Bronicki, and Guess (1987) reported that the majority of observed student initiations that were attempts to participate in classroom decisions were ignored. The focus on self-determination requires teachers to identify students' needs and interest and then to assist students as they develop their own plans to pursue these ends (Mithaug, 1996).

Barriers to obtaining self-determination may be found in all environments in which individuals with mental retardation participate. Individuals must be supported in their choice and decision-making in all environments, whether at home, in school, at work, or at leisure.

Behavior and cognitive aspects

Wehmeyer (1996) notes the strong temptation to

define self-determination in terms of specific behaviors like problem solving, assertiveness, or decision making. This temptation is strong because when we observe self-determined individuals we see them doing behaviors that involve problem solving, assertiveness, or decision making. Wehmeyer (1996) notes the importance of overcoming this temptation and recognizing that self-determination is more than just behaviors. Wehmeyer (1996) gives two reasons to avoid this temptation, first, that any behavior can be self-determined, and second, both the occurrence and nonoccurrence of a behavior can be self-determined. While many efforts to promote self-determination focus on teaching specific skills, it is important to remember that behavior is only one aspect of self-determination. Other aspects of self-determination include the cognitive processes, along with environmental aspects (e.g., ability is worthless without opportunity) and changing others' expectations.

If interventions to promote self-determination are to succeed, we must also alter the environments within which people with mental retardation live, work, and play to allow greater choice and control and examine the attitudes of service providers, educators, families, and others who interact with them. (Wehmeyer, Kelchner, & Richards, 1996, p.632)
(emphasis added)

Kennedy (1996), a self-advocate, discusses the attitude of self-determination. Although he may not be able to do certain physical tasks, "I can direct someone on how to do things even though I can't do it myself" (p.44). Along with this discussion, it is important to note the difficulty in reliably measuring cognitive processes and attitudes.

Although behaviors are only one aspect of self-determination, their importance should not be overlooked.

These component elements provide a starting point for instructional emphasis and direct efforts to alter the environment to provide individuals with disabilities the opportunities to experience choice and control and to change others' perceptions and expectations.

(Wehmeyer, 1996, p.28)

Social aspects of self-determination

An aspect of self-determination that is under examined is the role that social influences play on self-determination. Although not an exhaustive list, the following section will discuss the importance of "others": (1) for providing opportunities to become self-determined; (2) for teaching and participating in teamwork and powersharing strategies; (3) to teach and participate in negotiating and compromising strategies; and, (4) for input and feedback.

1. Wehmeyer (1996) discussed not only the ability to self-determine, but also the importance of having opportunities to self-determine. Ability will not facilitate self-determination if "others" (e.g., parents, teachers, staff members, etc.) lack willingness to relinquish control to individuals with mental retardation who do not have opportunities for choice and decision-making.

2. Kennedy (1996) discusses the importance of assisting individuals with disabilities to learn to team-work and powershare. Working directly with "others" to learn to become part of a team, share in the power, and share in the responsibilities of decisions are essential in becoming self-determined. No one is totally self-determining. There are times in everyone's life that he/she must relinquish control of his/her life over to someone else. Every time a person goes into an operating room for surgery, gets on an airliner, or rides in a car as a passenger, he/she is relinquishing control to "others". Through team work and powersharing, all individuals can share in the decisions that impact their lives even when the individuals must relinquish some control. Through team-work, different opinions and options can be brought to the table for discussion, which can impact quality of life issues. Without the ability to cooperate in team-work and powersharing, it is unlikely that a person can become self-determining

(Kennedy, 1996).

3. Often, the fastest way to overcome or remove barriers is to negotiate and compromise with "others". Unfortunately, many people with disabilities do not effectively compromise or negotiate (Wehmeyer, 1993). Without this ability to negotiate or compromise, choices for adults with mental retardation are too often "all or nothing", resulting in power struggles.

4. In order for individuals with disabilities to make appropriate choices and decisions, "access to information must be complete" (Mithaug, 1993). It is important that individuals with mental retardation get "performance feedback" in the choice-making process (Kanfer & Gaelick, 1986). Individuals who routinely make appropriate choices and decisions are viewed as being self-determined, they continuously seek input and feedback from "others".

In summary, social influences play an important role in self-determination. Ability to appear competent, decisive, and self-determined can be demonstrated only if powerful "others" respect that capacity in individuals with mental retardation.

Complex process

The complexity of the self-determination process is evident. In this process, there exist behavioral, cognitive, and environmental factors with interrelated

parts. Key components of self-determination vary across models. The lack of a strong, empirically grounded basis for the models discussed, suggests a paucity of extant knowledge. At the risk of oversimplifying, the key to managing a complex issue is to develop strategies that are flexible. Although, as Meichenbaum (1978) confessed, the more time he spent in the area of self-management, the more confused he became.

Changing nature of self-determination

One aspect of self-determination that is not given much attention is the changing nature of self-determination from the individual's perspective. Kennedy (1996) described this best when he defined what self-determination meant to him while he was in an institution (survival) and how his perspective of self-determination changed after he left the institution and moved into an apartment in the community. Much like preferences and interests, a person's perspective of self-determination changes during an individual's life.

Summary

Inherently, the nature of issues raise more questions than answers. The relevant issues surrounding self-determination include definitional and measurement problems. Ward (1988) discussed the need to remove barriers to obtaining self-determination. Barriers are

found in all environments that individuals with mental retardation participate in. Individuals must be supported in their choices and decision-making in all environments including home, school, work, and leisure activities.

Wehmeyer (1996) reminds us not to consider self-determination within a narrow behavioristic view. He reminds us that other aspects of self-determination should not be overlooked. For example, cognitive, environmental, and others' expectations are also essential in understanding self-determination. Although, Wehmeyer (1996) admits that self-determining behaviors provide the starting point for individuals with mental retardation to experience the opportunities of making choices, being in control, and influencing others' perceptions and expectations.

There is little attention in the literature on the social aspects of self-determination. "Others" influence self-determination of individuals with mental retardation through: (a) their control of the opportunities for individuals to make choices and decisions that impact their lives; (b) the lack of teaching and supporting efforts of team-work, powersharing, negotiating and compromising strategies; and, (c) not providing input or feedback to support problem solving.

The complexity of the self-determination process was discussed. It was suggested that flexible strategies

be developed to counter the complex issues of the self-determination process. Last, it is important to recognize that an individual's perspective of what self-determination means to him/her changes during the lifespan.

Previous Research

The literature identified five studies specifically addressing self-determination in individuals with mental retardation. In the following section each study will be introduced and critiqued. Following the critique will be a brief discussion relating to the strengths and limitations of the research methodology.

Qualitative research

The literature presented one study (Fetterman and Mithaug, 1993) using a qualitative research design addressing self-determination in individuals with mental retardation.

Introduction.

Fetterman and Mithaug (1993) reported that they were in the process of a qualitative study involving self-determined children with disabilities. These authors are investigating self-determined behaviors, attitudes, and environmentally-related features of self-determination by interviewing self-determined children with disabilities

and their providers. According to the authors, their research is designed to empower both the providers for students with disabilities and the students with disabilities themselves. Fetterman and Mithaug (1993), in using a qualitative research design, have hopes of developing a behavioral checklist to assist providers as they work to recognize and foster self-determination.

Critique.

Although these authors reported that they were currently in the process of the study, Fetterman and Mithaug (1993) gave few details of their project. For instance, the authors gave no information regarding the descriptions, characteristics, or number of participants involved in the study. Other relevant information needed to evaluate a qualitative study consists of: (a) the quality of direct on-site observation; (b) freedom of access to information versus being "steered", the former being necessary to obtain an unbiased picture; (c) the intensity of observations, or how many hours of participant observation were conducted; (d) what data were collected and how this was done; (e) any triangulation, or procedures used to explore and confirm data collected; (f) any attempts to obtain a representative sample of the data; and, (g) noting any unobtrusive measures or cues that provide insight into the behavior being observed (Borg & Gall, 1989). As

Fetterman and Mithaug conclude their study and report the results, it is assumed that more information will be provided.

Qualitative methodology.

Qualitative studies have made important contributions to the scientific community, and specifically, in the field of education (Borg & Gall, 1989). Qualitative research has been defined as direct observation of human activity and interaction in an ongoing, naturalistic fashion (Simpson, 1992). In qualitative research reality is viewed as constantly changing from moment to moment and is a function of the interaction between events and a person's perceptions of those events (Simpson, 1992).

The strength of qualitative research is its ability to contribute to educational knowledge in a very in-depth way which is lacking in other methodologies. Qualitative researchers immerse themselves in the settings or lives of others (Glesne & Peshkin, 1992), and view themselves as an interactive part of the naturalistic situation being studied (Simpson, 1992). The researchers become personally involved with the subjects and attempt to understand their perspective. Qualitative researchers interpret feelings, impressions, and use their judgement in collecting data (Glesne & Peshkin, 1992). Conclusions of the study are drawn from analyzing emerging patterns

provided through direct observation and interviews.

Although this naturalistic or ethnographic process is a valuable resource of in-depth information, like all research designs, has its limitations. The harshest criticism of qualitative research is directed at the subjectivity of the researcher, due to his/her being personally involved. "It is difficult for the researcher to discriminate between results that indicate a true relationship and results that are artifacts of the research process" (Borg & Gall, 1989, p.405).

In examining self-determination of adults with mental retardation, the qualitative approach is valuable in collecting relevant information, especially in the assessment process and during the project evaluation. Through interviews and direct observations an in-depth description and understanding of the participants' perspectives will allow the researcher to have a common sense approach (Simpson, 1992) in assisting those adults in obtaining self-determination.

Quantitative research

The literature presented one study (Kishi, Teelucksingh, Zollers, Park-Lee, & Meyer, 1988) using a quantitative research design addressing self-determination in individuals with mental retardation.

Introduction.

Kishi, Teelucksingh, Zollers, Park-Lee, and Meyer (1988) used a quantitative research design to examine self-determination in adults with mental retardation. These authors compared 24 individuals (14 males, 10 females), 18 to 60 years old, with mild to profound mental retardation, living in eight group homes, to 42 individuals (20 males, 22 females) without mental retardation, using a 5-point Likert type scale. The ten-item survey was concerned with the extent to which the participants were able to make decisions that made an impact on their lives. The following ten items were used in their study. The respondents (those with and without mental retardation) were asked, do you decide:

- (1) what to eat for a meal or snack?
- (2) what to wear?
- (3) activities to do on a day off or after dinner during the evening?
- (4) what TV show to watch?
- (5) how to spend money not committed for expenses?
- (6) whether to agree or say no to participate in a group activity?
- (7) whom I want to live with?
- (8) to make a phone call to a friend or family member?
- (9) whether to stay up late or go to bed earlier than usual?

(10) what job I want to have or what work I want to do?

Although the three interviewers were reported to have had previous clinical experience, no reliability was cited. A table was used to report the mean differences between individuals with mental retardation and individuals without mental retardation:

ITEM	MEAN SCORE		MEAN SCORE	
	INDIVIDUALS W/MR		INDIVIDUALS W/O MR	
1	2.66	(SD .96)	3.93 (SD .26)	*
2	3.46	(SD 1.06)	3.85 (SD .57)	
3	2.79	(SD .78)	3.66 (SD .61)	*
4	2.88	(SD 1.24)	3.54 (SD .87)	*
5	3.04	(SD .96)	3.71 (SD .71)	*
6	3.42	(SD .83)	3.79 (SD .41)	
7	1.37	(SD .88)	3.63 (SD .92)	*
8	2.92	(SD 1.28)	3.93 (SD .46)	*
9	2.67	(SD 1.24)	3.95 (SD .22)	*
10	1.42	(SD .65)	3.43 (SD .94)	*

Responses on a scale from 1 to 5

* $P < .05$, using t tests

These authors reported that: (a) the individuals with mental retardation did not have choices regarding fundamental matters of living; and, (b) those individuals with mental retardation that were identified as lowest functioning had more limited choices than those

identified as having higher functioning.

Kishi, et al. (1988) cautioned the readers regarding the generalizability of their project. They reported that their study should be seen as "tentative", due to the small sample size (n=24) and that this sample was collected in only one region of the United States.

Critique.

The authors of this study provided a good description of their research design. For example, they described the process used in excluding three individuals who failed to pass the "lie" item on their survey, which was intended to make evident that the respondent did not answer the survey reliably or accurately. The authors' attention to the details in their research design may serve to promote replication of this study.

Two limitations of this study exist. The first limitation is due to the lack of alternative explanations for the results. One possible reason for the avoidance of an alternative explanation is that, although the authors caution the reader that the results should be seen as tentative, in their discussion they display a very confident attitude regarding the results. The authors comment that the results are "provocative" (p.435), thus suggesting that, at least to these authors, an alternate explanation is not necessary. The second limitation is due to the lack of suggestions for further

research, again, the authors leave the readers wondering if this study had answered all the questions.

The authors of this study should be commended on their quantitative design. They offered a detailed description of the individuals participating in the study and their interaction with staff members. Although intuitively the readers might expect the results of this study to be as reported by the authors (that the individuals with mental retardation did not have choices regarding fundamental matters of living, and that the residents identified as lowest functioning had more limited choices than those identified as having higher functioning), the methodology was clear and concise, leaving the readers with a study deserving their attention.

Quantitative methodology.

The purpose of educational research is to develop the researcher's confidence that particular knowledge claims about educational phenomena are true or false (Borg & Gall, 1989). Quantitative research is a research design that collects evidence that supports or refutes the knowledge claim. The quantitative researcher is never totally assured that "truth" has been established; but his/her goal is to be able to predict, with reasonable confidence, what might happen in the future when variables and conditions exist that are similar to

those that already have been investigated (Simpson, 1992). The quantitative study attempts to show manipulation and control over the variables and the environment. The quantitative study is concerned with whether or not the study can be replicated (generalized) and whether or not it offers predictability (Glesne & Peshkin, 1992). The major criticism directed at quantitative research is due to the lack of in-depth information being collected.

Characteristics that separate quantitative research from qualitative research include: (a) variables in quantitative research are observable and relationships can be measured; (b) variables in quantitative research are identified in advance; and, (c) the quantitative researcher takes on an objective and unattached role. The quantitative researcher attempts to stay impartial, independent, and non-interactive. The quantitative researcher uses (d) formal instruments, and instead of identifying emerging patterns, the researcher is interested in (e) functional relationships (Glesne & Peshkin, 1992). Where qualitative research is often involved with outliers, quantitative research looks for norms or general laws across people (Glesne & Peshkin, 1992). In evaluating quantitative research, the evaluators should be concerned with whether or not the researchers in the study addressed alternative explanations of the results, discussed the

generalizability of the results of the study, and noted any omission of critical details of the research design (Borg & Gall, 1989).

Applied Behavior Analysis

The literature presented three applied behavior analysis (ABA) designs relevant to self-determination in individuals with mental retardation.

Introduction.

(1) Lovett and Haring (1989) used a ABA design with multiple baseline across subjects and follow up data to examine adult adaptive skills. Nine adults with moderate to mild mental retardation served as subjects for this study. The subjects ranged from 19 to 35 years old. The subjects were divided into two groups. One group, consisting of four subjects, only received training in self-recording. The second group, consisting of five subjects, received full treatment. Full treatment consisted of training in self-recording, self-evaluation, and self-reinforcement. All subjects in both groups improved their performance in task completion over the course of the study. The authors stated that, generally, those subjects who received training on all self-management procedures appeared to have higher levels of task completion than did those subjects who only received training of self-recording techniques. The results of

this study suggested that adults with mental retardation can improve the self-direction of task completion on daily living activities. Their study also gave evidence of the importance of self-recording in improving self-direction of daily living activities.

(2) Martella, Marchand-Martella, and Agran (1993) also used a ABA design with multiple baseline across subjects to examine problem-solving strategies by use of cue cards. Three individuals (two males and one female) with mild mental retardation participated in this investigation. The female was 18 years old, one male was 19 years old, and the other male was 32 years old. None of the participants had received previous problem-solving training. 24 problem-solving situations and responses were developed. 12 of the 24 problem solving situations were used for training. The participants were given a cue card. He or she was instructed to refer to the cue card when formulating a response to a problem situation. For example, if the problem presented to the participant was: "A co-worker does not feel comfortable asking for help when he or she does not understand instructions. What should your co-worker do?" The participant was referred to the card which directed him/her to respond to the problem in four areas: (1) **when** will the problem be solved; (2) **who** should you talk to; (3) **where** would you talk to (name of person); and, (4) **what** would you say.

The authors reported that the training not only

increased the verbal problem-solving skills of all participants when they used cue cards, but also that their skills maintained when the cue cards were removed. The authors stated that the findings suggest that the participants had learned and were using problem-solving strategies. The Martella, et al. (1993) study offers a good example of removing external controls (cue cards) and replacing them with self-initiating behaviors.

(3) Lagomarcino and Rusch (1989) used a changing criterion design with an individual with profound mental retardation (IQ=16) to investigate the effects of self-management training on work performance within a community employment setting. The participant was a male, 19 years old, with a history of maladaptive behaviors including making loud screeching sounds, rocking, and spitting. His language skills were limited, as indicated by his ability to understand only simple gestures one- and two-step verbal directions. The participant worked in a large room which was set up specifically to package liquid soap. He was required to place empty plastic bags in wooden trays and then transport the filled trays to the soap filling station. The number of steps completed independently was selected as the dependent measure. Self-monitoring and self-reinforcement served as independent measures. Self-monitoring occurred when the participant independently picked up a nickel after completing a work unit (i.e.,

filled tray, packaged box). Self-reinforcement occurred when the participant independently placed the nickel in a nickel board (designed to hold the nickels) before beginning a new sequence of work steps. Although there were fluctuations in the participant's performance through out the study, the data indicated that the participant continued to meet the established criteria. Lagomarcino and Rusch's (1989) study demonstrated that an individual with profound mental retardation could learn to self-monitor and self-reinforce his own work behavior.

Critique.

In examining the three applied behavior analysis projects discussed (Lagomarcino & Rusch, 1989; Lovett & Haring, 1989; Martella, Marchand-Martella, & Agran, 1993), the researchers for all three studies were able to rule out factors other than the treatment variables as possible causes of changes in the dependent variables (Borg & Gall, 1989). Lovett and Haring (1989) offered reliable observation via an ecological survey over a two-month period. All three studies showed repeated measurements (providing a clear and reliable description of the intervention process) and a precise account of experimental conditions for replication purposes. One strength found throughout all three of these studies was the detailed descriptions of each of the participants. Participant characteristics are vital in promoting

replication of studies.

The authors of each of these studies pointed out the caveats and areas for future research. Lagomarcino and Rusch (1989) noted the lack of consistency displayed by their subject during self-monitoring and the subject's failure to perform when the criterion was changed. Martella, Marchand-Martella, and Agran's (1993) study left the question of generalization of their findings to "novel" situations for future research. Lovett and Haring (1989) echoed the same concern, "this does not ensure that improved self-direction will be demonstrated in other settings or by other subjects" (p.321). Lovett and Haring (1989) were the only authors of the three studies to discuss alternatives to external controls, via self-management, and offer follow-up results.

Applied behavior analysis methodology.

Applied behavior analysis (ABA) places the focus of investigation on the individual rather than the population of which the individual may be a member (Borg & Gall, 1989). In educational research, ABA is used to determine how the individual learner functions. The ABA researcher places emphasis on reliable observation, repeated measurement, a precise description of experimental conditions for replication purposes, and baseline and treatment stability (Borg & Gall, 1989). The ABA researchers strive for experimental control,

which refers to the researcher's efforts to ensure that changes in the dependent variable are in fact related to manipulations of the independent variable – that a functional relationship exists. The researcher wants to eliminate to the greatest extent possible the chance that other, confounding variables are responsible for changes in the behavior. The strength of ABA is that it,

enables the researcher to make intensive observations over a reasonably long period of time, to play with treatment variations, and to formulate hypotheses. Insight derived from ABA data then can be tested for generalizability in a multi-subject design (Borg & Gall, 1989, p.727).

ABA offers a large variety of treatment designs to indicate cause-effect relationships (e.g., Changing Criterion Design, Multiple Baseline Design, Alternating Treatment Design, Changing Condition Design, etc.).

An important limitation of ABA is that "the findings cannot be generalized beyond the single subject used in the experiment" (Borg & Gall, 1989, p.727). To support the conclusions drawn from ABA, the study needs to be replicated continually in order to determine their generalizability to populations.

In evaluating ABA designs, the evaluators should be concerned with whether or not the researchers provided careful descriptions of baseline and treatment conditions, subject characteristics, and measurement

procedures (Tawney & Gast, 1984).

Summary

Although studies on self-determination of individuals with mental retardation are limited, the literature presents a wide range of interests. Studies relevant to self-determination have been conducted while working with children (Fetterman & Mithaug, 1993; Martella, Marchand-Martella, and Agran, 1993), adults (Kishi, Teelucksingh, Zollers, Park-Lee, & Meyer 1988; Lagomarcino & Rusch, 1989; Lovett & Haring, 1989), and service providers (Fetterman & Mithaug, 1993). Individuals who have participated in studies on self-determination have had support needs in the intermittent to pervasive (Lagomarcino & Rusch, 1989) range. Data on self-determination have been collected from interviews (Fetterman & Mithaug, 1993), a survey (Kishi, et al., 1988), direct observation (Lovett & Haring, 1989) and interventions (Lagomarcino & Rusch, 1989; Lovett & Haring, 1989; Martella, et al., 1993). Areas that have been investigated in self-determination include behavior and attitudes (Fetterman & Mithaug, 1993), ability or opportunity to make life decisions (Kishi, et al., 1988), effects of self-management training on work performance (Lagomarcino & Rusch, 1989), self-directed task completion on daily living activities (Lovett & Haring, 1989), and problem-solving strategies by use of cue cards

(Martella, et al., 1993). The results of these studies include information on choices in fundamental matters of daily living (Kishi, et al., 1988), evidence that adults with mental retardation can improve the self-direction of task completion on daily living activities (Lovett & Haring, 1989), effective problem-solving strategies that continued after the cue cards were removed (Martella, et al., 1993), evidence that an individual with profound mental retardation can learn to self-monitor and self-reinforce his own work behavior (Lagomarcino & Rusch, 1989), and the possibility of a behavioral checklist being developed to assist providers in recognizing and fostering self-determination (Fetterman & Mithaug, 1993).

The decision of which research design to use should be based on the research question(s) being asked (Borg & Gall, 1989; Simpson, 1992). Each research design has its own strengths and limitations. Once a design is chosen which is best at answering the research questions being asked, it is essential that the researcher develop procedures which hold in check the limitations, while taking advantage of the strengths of that particular research design.

In examining the three research methodologies, it was noted that qualitative research bases reality on the perceptions of the subjects. It is often criticized for its subjectivity. The strength of a qualitative research design is in its ability to gather information in a very

in-depth manner. Because of its ability to get information in a very in-depth way, qualitative research will continue to contribute to educational research in the future.

Quantitative research concerns itself with the norms and laws that govern populations. This research design has been criticized for not providing any in-depth information. The strength of quantitative research lies in its ability to control and manipulate the variables, along with its predictive utility. Quantitative research is often referred to as the "classical" or "traditional" approach and will continue to remain the mainstay in the social sciences.

ABA designs place the focus of the investigation on the individual rather than the population of which the individual may be a member. ABA designs attempt to demonstrate functional relationships by displaying control over the variables indicating that the intervention does indeed cause a change in the dependent variable. The main criticism of ABA is that the findings cannot be generalized beyond the study without continual replication.

Assessment

Dr. Ron Taylor, during a workshop on assessment issues in deaf-blindness (Summer, 1994), commented that assessments are worthwhile only "if you know what you

want to know". He discouraged all forms of "shooting in the dark". In choosing an assessment method, the method must be appropriate to the purpose of the study and provide the information necessary to make decisions (Schloss, Alper, & Jayne, 1994). Each individual and the environments he/she participates in must be assessed to determine what changes would most likely enhance self-determination. The literature presented three types of assessments that are relevant to gathering information on self-determination: "general assessment"; "situation specific assessment"; and, the "ecological assessment".

General assessment

Litrownik (1982) used the "general assessment" as the initial step in the process of developing self-management in persons with mental retardation. In using the general assessment, areas such as verbal and cognitive skills should be identified as well as specific problem areas such as behavioral deficits and excesses. Litrownik (1982) also recommended that potentially effective training techniques, such as contingency management, modeling, and rehearsal, be considered in the general assessment.

Situation specific assessment

Schloss, Alper, and Jayne (1994) discussed the "situation specific assessment". This assessment is made

up of three specific evaluations:

1. Learner's potential for making an adverse choice, which has three components to consider in making this decision. The first component includes unstructured interviews with parents and other professionals. The second component includes unstructured interviews with the individuals participating in the study. The third component includes direct observation of the individuals in natural situations in which choices are to be made.
2. Risks associated with adverse choices. These risks are judged by the degree to which any possible response to a choice situation may result in harm to the individuals or others.
3. Input required for optimum choice. The authors noted that direct observation of the individuals in natural situations may provide the most valid information on the extent of input required.

Ecological assessment

Viewed from an ecological perspective, self-determination can be conceptualized as a product of an on-going interaction between individuals and the multiple environments within which they function (Abery & Stancliff, 1996). Lovett and Haring (1989) used an "ecological assessment" to measure self-management. The ecological assessment identified problem areas on task completion, aided in operationally defining tasks,

and was used to develop self-recording schedules used by the subjects.

The ecological survey offers two advantages relevant to the study:

1. The ecological assessment offers a broad range or holistic approach in collecting information. It is not limited, in any manner, in its capacity to gather relevant information.
2. The ecological approach has the ability to collect and verify information through direct observation. The ecological assessment, in using direct observation, helps to socially validate target behaviors as important problems of concern in the lives of the participants (Lovett & Haring, 1989, p.308).

Summary

In examining three assessment methods, the "general assessment" (Litrownik, 1982) contains a wealth of valuable information (e.g., verbal and cognitive skills, behavioral deficits, training techniques, etc.), but lacks the advantage of direct observation for verification purposes. The "situation specific assessment" (Schloss, et al., 1994) offers the advantage of direct observation, but, as the name implies, is too specific or narrow in obtaining information. The "ecological survey" (Lovett & Haring, 1989) allows

information to be gathered from the environments in which the participants live, work, and recreate. It offers a broad range or holistic approach in collecting information, which is lacking in the "situation specific assessment" (Schloss, et al., 1994). The ecological approach offers the advantage of collecting and validating information through direct observation, which is lacking in the "general assessment" as described by Litrownik (1982).

Results of the Pilot Study

Due to the complexity of this project, it was determined that conducting a preliminary evaluation of the key design elements prior to the implementation of the actual study would be beneficial. A pilot study was implemented (Arnett, 1996) involving six adults with mental retardation. The participants of the pilot study were three women and three men; the average age was 43 years old, with a range from 26 to 54 years. The average IQ score of the participants was 48, with a range of 36 to 58 points. Four individuals lived in a metropolitan area and two individuals lived in a small town.

The methods and procedures designed for the actual study were closely followed during the pilot study on all six participants. The pilot study provided additional knowledge that lead to better data collection and improved interrater reliability during the actual study.

The results of the pilot study lead to a more precise testing of the intervention package and added clarity to the findings of the actual study. The following recommendations were made due to the results of the pilot study:

1) It was determined that the simultaneous treatment design could be abandoned. The simultaneous treatment design exposes the learner(s) to all interventions at the same time. In an attempt to be as comprehensive as possible in surveying the literature on self-determination prior to the pilot study, the simultaneous design was thought to offer the best vehicle to incorporate element (m), "demonstrations and practice". In explaining the reasons that the simultaneous treatment design was best suited for answering the research questions being asked, it was stated:

The simultaneous design has the advantage of allowing for repetition (demonstrations and practice) of these elements, thus permitting an increased number of exposures. This increased number of exposures improves the potential for the elements to become incorporated as learning strategies.

The pilot study revealed that the simultaneous design was not parsimonious (Borg & Gall, 1989) for this particular study. Although the repetition desired was

attained and the participants quickly became familiar with and benefited from the learning strategies, the explanations for the changes in the target behaviors (dependent variables) produced by the introduction of the elements (independent variables) were overlapping and left to the investigator's interpretation. The simultaneous design visually depicted (via graphs) the combined totals of the target behaviors being measured. For example, element (a) depicted only those target behaviors associated with the introduction of element (a), although element (d) depicted a combined total of target behaviors associated with the introduction of elements (a), (b), (c), and (d). While the simultaneous design depicted an upward trend of increased target behaviors, it became increasingly difficult to determine which changes in the target behaviors were due to which elements being introduced. This difficulty in interpretation, of which elements caused the changes in the target behaviors, weakened the study to the point that the simultaneous design had to be abandoned.

Due to the experience gained during the pilot study, the research design best suited for this study was determined to be the multitreatment design that allows for more clarity in determining which elements are associated with changes in the target behaviors (see Research Design). It is important to note and discussed in more detail in Chapter Four that the visual depicting

of the multitreatment design will not show the upward trend of combined target behaviors, rather the effect each element has on the occurrence of the target behaviors.

2) It was decided that two of the component elements of self-determination could be omitted from the study, element (a), "terms and concepts" and element (b), "self-monitoring". During data collection, it was observed that elements (a) and (b) consistently were not associated with changes in the target behaviors (dependent variables) for any of the six participants involved in the pilot study. Observations revealed what the investigator refers to as the "home-work effect". All six participants responded to elements (a), "terms and concepts" and (b), "self-monitoring" as an unpleasant homework assignment. They completed the tasks (e.g., recognizing the terms and concepts associated with the target behaviors, and accurately self-monitored, etc.), but did not associate "terms and concepts" and "self-monitoring" with any of the target behaviors being measured.

3) It was determined that the manual could be omitted from the study. During a debate, Pressley (1990) and Whitman (1990) discussed the importance of visual media when working with individuals with mental retardation. Recognizing that Whitman's (1990) observations were insightful, a manual was developed prior to the pilot

study to serve as a visual mediator. The manual was intended to serve as a visual cue to assist the participants in performing the elements of the intervention package. It was designed to provide visual cues for self-recording and the documenting of each procedure by the participants. The manual was designed to be a valuable tool in detecting possible problems, which elements the problems were associated with, and what assistance individuals needed in order to continue with the process. It was thought, prior to the pilot study, that the manual would be used by the participants to build a repertoire of successful and specific routines that could be compared and contrasted.

The pilot study provided evidence that the manual was never used by any of the participants as a visual cue, the only time the participants used the manual was when they were prompted by the researcher. When being prompted by the researcher, the participants reacted, as if the task before them was an unpleasant homework assignment. The participants never associated the manual as a visual cue relating to the choice and decision-making process. The manual never served to detect problems or as a repertoire of experiences to be compared and contrasted.

4) The pilot study revealed that self-reinforcement was naturally occurring. Prior to the pilot study, it was decided that self-reinforcement was to be determined on

an individual and situational basis. Each participant in the study was to collaborate (learning to share power and to work as a member of a team) with the researcher in determining what the reinforcer(s) were to be (Kennedy, 1996). Once a participant had completed the intervention package, the participant was to collect the individualized, pre-determined reward. The pilot study suggested that this collaborative effort to determine an individualized pre-determined reward was not necessary, reinforcers were naturally occurring. For example, the occurrence of the target behavior "library use" resulted in a naturally occurring reinforcer (e.g., checking out a book, looking through a magazine, using a study room for a meeting or drawing pictures, etc.).

Summary

The pilot study provided a practice run allowing for important improvements in the actual study. These improvements included additional information on data collection and interrater reliability training, more precise testing of the intervention package, and more clarity of the results from the actual study. The results of the pilot study showed the limitations of the simultaneous treatment design for this particular study, while favoring the multitreatment design and its ability to add clarity in determining which elements are associated with changes in the target behaviors. The

results permitted abandoning two component elements (a) and (b) which were not associated with any change in the target behaviors being measured. The results allowed for the manual to be omitted, which was never associated as a visual cue relating to the choice and decision-making process. The pilot study revealed that self-reinforcement was naturally occurring and an individualized, pre-determined reinforcement was not necessary. In conclusion, the pilot study provided important additional information that added clarity and a better understanding of the process of self-determination.

"Self-determination is what life is all about. Without it, you might be alive, but you wouldn't be living - you would be existing" (Kennedy, 1996, p.48).

CHAPTER III

Method and Procedures

Introduction

Chapter One provided an introduction to self-determination. The literature related to self-determination was examined in Chapter Two. In this chapter, the method and procedures for implementing an intervention package designed to assist adults with mental retardation in obtaining self-determining skills are examined. Chapter Three examines: (1) an outline of the intervention package for purposes of clarity; (2) the research design that best answers the research question of how an individual with mental retardation obtains the skills associated with self-determination; (3) the identification process for participants in this study; (4) the participants' descriptions and demographic information; (5) the procedures for informed consent; (6) the description of the project setting; (7) the assessment procedures that best identify an individual's strengths and needs in an effort to enhance self-determining skills; (8) the information that was gathered for assessment purposes; (9) the operational definitions of the target behaviors; (10) reference training; (11)

the procedures for collecting baseline data; (12) the development of the intervention package; (13) the intervention package; (14) possible problems associated with the study; (15) the expected outcomes; (16) project-ending assessment; and, (17) the follow-up procedures. The reader is reminded that this study has two objectives. First, to examine the effect of the intervention package on the acquisition of or improvement in choice and decision-making skills, and second, to examine the effectiveness of the intervention package on increasing self-determining behaviors.

Overview of the Intervention Package

The intervention package presented is a synthesis of the elements described in the literature as associated with self-determination. Because of the nature of this study, a brief outline of the intervention package is presented for clarification purposes. The intervention package, which will be discussed in detail later, consists of the following component elements:

- (a) terms and concepts, omitted due to the pilot study
- (b) self-monitoring, omitted due to the pilot study
- (c) recognition of choices
- (d) goal statement
- (e) gathering relevant information
 - 1. consequences of choices
 - 2. options available

3. resources and skills needed

- (f) negotiating and compromising strategies
- (g) making choices
- (h) self-evaluation
- (i) external evaluation
- (k) self re-evaluation
- (l) self reinforcement
- (m) practice and demonstrations

Research Design

The selection of a research design should be based on the research question being asked (Borg & Gall, 1989). As noted in Chapter Two, applied behavior analysis (ABA) is best suited for addressing the research questions concerning how an individual with mental retardation learns self-determination. ABA places the focus of investigation on the individual rather than on the population of which the individual may be a member. ABA is a research strategy developed to document changes in the behavior of the individual, in an attempt to demonstrate a functional relationship between the intervention and a change in behavior.

Due to the insight gathered from the pilot study, the best ABA design for this project was determined to be the multitreatment design. The multitreatment design is used when an investigator wants to evaluate the effects of two or more interventions upon a behavior (Tawney &

Gast, 1984). In this case, several interventions were combined to produce a treatment package. The rationale behind this design is that a variable may not be effective when used alone, but may be effective when combined with other variables. For example, research has suggested that "self-evaluation" may not be effective when used alone, but may be effective when combined with other "self-management" techniques (Lovett, 1986). The multitreatment research design for this study is:

A | B | C | D | .. J

As the criterion or abandonment criterion (AC) of each element were met, the intervention moved to the next element. As discussed previously, the multitreatment design did not show a continuous upward trend of target behaviors as did the simultaneous design, rather how each element separately effected the occurrence of the target behaviors.

Although the ABA design was the primary research design of this project, qualitative procedures (e.g., interviews, direct observations) were also used to collect data for assessment purposes (pre and post), to assist in identifying target behaviors, and to administer project evaluations. Simpson (1992) noted that good research must be characterized by qualitative common sense aspects. The characteristics and techniques of qualitative research (e.g., an in-depth description from an insider's point of view allowing for the investigator

to better understand the participant's perspective) make it ideally suited for obtaining information.

Quantitative analyses including analysis of variance and independent t tests were used to support arguments. As Borg and Gall (1989) noted, a combination of research designs can be superior to any one research design.

Identification of Participants

Participants of this study were identified with the assistance of a community-based program and a university affiliated program (UAP). The community-based program was a private, non-profit state organization whose membership consists of adult service provider agencies (approximately 55 community-based programs) which assist individuals with the primary disability of mental retardation. The community-based program's membership offered a wide array of services: sheltered workshops; enclave employment; supported employment; group home and semi-independent living arrangements; Intermediate Care Facilities for the Mentally Retarded (ICFMR); and, school to work transitioning. The UAP is dedicated to identifying opportunities for collaboration and information exchange in an effort to provide better living environments for people with developmental disabilities and their families.

Meetings were scheduled with the community-based program's Executive Director and a representative of the

UAP, at which time the importance of this study was discussed, questions answered, and their support requested. The community-based program and the UAP were asked to enclose a solicitation for participants of this study in their monthly newsletters (see Appendix F). The solicitation introduced the principal investigator, explained the importance of acquiring and demonstrating self-determination, emphasized that the parents' and staff members' participation in the study was encouraged, and explained how more information about this project could be obtained.

The investigator received four referrals from the two sources. All four referrals and two other individuals from the investigator's personal contacts comprised the six participants used in the pilot study. In the actual study, six participants from the investigator's personal contacts were used. Two individuals (from the investigator's personal contacts) were not included in the study because of the inability of the individuals to give an informed consent (see Informed Consent).

Informed Consent

Prior to participating in this study, informed consent was obtained from everyone involved (i.e., participants, parents, staff-members, etc.; see Appendix C for Informed Consent Forms). In an effort to insure

informed consent, each participant was asked to repeat to the researcher that he/she was aware of what this project would involve and then asked to give an example, cited earlier by the researcher, of this involvement. Each participant was also asked to rephrase a statement made by the researcher that indicated that he/she was aware that it is up to him/her whether to continue participation in this study. Informed consent was solicited in the presence of a reference. References were persons who knew and were actively involved in the lives of the participants and who offered information or sources of information that were used by the participants (see Reference Training).

Initial Screening

Those individuals, who agreed to participate in the study and gave informed consent, went through an initial screening to determine if they had the prerequisite abilities to obtain self-determining skills but were currently having problems demonstrating self-determining behaviors. According to Hughes and Hugo (1993), the best way to do an initial screening is by observing the person's responses and preferences (e.g., can the person repeat instructions, which words are used consistently, etc.).

Participants' Description

Six individuals participated in this study, four males and two females. The average age of the participants was 36 years, with a range from 26 to 43 years. The average IQ score was 50, with a range from 33 to 60 points. References for each participant rated the participant's degree of supports needed in the areas of: communication; self-care; home living; social skills; community use; self-direction; health and safety; functional academics; leisure; and, work (Luckasson, et al., 1992). All participants demonstrated a wide variety of self-determining behaviors, only one participant (Mattie) demonstrated little self-initiation.

Bob

Participant number one is referred to as Bob. Bob is a male Caucasian, 42 years old, single, with mild mental retardation (IQ=59), his own guardian, and lives with his sister and brother-in-law. Bob finished second grade and never returned to school. He lived with his parents until the death of his father. After living at home for 40 years, Bob and his mother moved into the home of his sister because of his mother's illness. Bob, while living with his parents, was never employed. At the age of 40, Bob began working. During the last two years, Bob has been employed in a supported employment program where he has daily contact with people without

disabilities. Bob works five days a week, six hours a day. He is not active in any advocacy organizations. His reference rated his degree of supports needed as: limited in communication, intermittent in self-care, limited in home living, needing no support in social skills, extensive in community use, intermittent in self-direction, extensive in health and safety, extensive in functional academics, intermittent in leisure, and intermittent in work. Bob is described and observed as hard working, very friendly, shy until he gets to know you. His sister reported that she was very pleased with his transition and personal growth while being employed in an integrated setting.

Kelly

Participant number two is referred to as Kelly. Kelly is a male Caucasian, 35 years old, single, with severe mental retardation (IQ=33), his own guardian, and lives in a group home. He is a graduate from high school and lived with his parents until he was 30 years old. He has lived the past five years in a group home with five other residents. Kelly has worked in a sheltered workshop for seven years, two years in enclave employment, and the last three years in supported employment where he has daily contact with people without disabilities. Kelly works five days a week, six hours a day in supported employment. Kelly is not active in any

advocacy organizations. His reference rated his degree of needs as: intermittent in communication, limited in self-care, intermittent in home living, limited in social skills, limited in community use, extensive in self-direction, limited in health and safety, limited in functional academics, intermittent in leisure, and intermittent in work. Kelly is described and observed as very energetic, courteous, pleasant to be around, and resourceful in obtaining things he needs.

Kevin

Participant number three is referred to as Kevin. Kevin is a male Caucasian, 43 years old, single, with moderate mental retardation (IQ=52), his own guardian, and lives semi-independently in an apartment of his own. He is a graduate from high school and lived with his parents until he was 35 years old. He lived five years in a group home and has lived the last three years semi-independently. Kevin worked in a sheltered workshop for four years, three years in enclave employment, and the last two years in supported employment, where he has daily contact with people without disabilities. He is presently employed five days (on occasion six days) a week and works six hours a day. Kevin is not active in any advocacy organizations. His reference rated his degree of supports needed as: intermittent in communication, limited in self-care, limited in home

living, limited in social skills, extensive in community use, extensive in self-direction, intermittent in health and safety, extensive in functional academics, intermittent in leisure, and limited in work. He is described and observed as friendly, caring about others, and very trusting of others.

Renee

Participant number four is referred to as Renee. Renee is a female Caucasian, 32 years old, single, with moderate mental retardation (IQ=54), her own guardian, and lives in a group home. She is a high school graduate and lived with her parents until she was 28 years old. Renee has lived the last four years in a group home. She spent six years in a sheltered workshop. During the last six years, Renee has worked in three supported employment jobs and has had daily contact with people without disabilities. She works five days a week, six hours a day. She has in the past been active in "People First", an advocacy group, but not during the last two years. Her reference rated her degree of supports needed as: intermittent in communication, intermittent in self-care, intermittent in home living, having no needs in social skills, intermittent in community use, intermittent in self-direction, intermittent in health and safety, extensive in functional academics, having no needs in leisure, and intermittent in work. Renee is described

and observed as being shy, keeping to herself, likeable, and relying heavily on her mother's advice on choice and decision making issues.

Chuck

Participant number five is referred to as Chuck. Chuck is a male Caucasian, 38 years old, single, with mild mental retardation (IQ=60), with cerebral palsy, his own guardian, and lives semi-independently in an apartment of his own. He is a graduate of high school and lived with his parents until he was 21 years old. He lived in a group home for thirteen years and has lived the last four years semi-independently. Chuck had worked in a sheltered workshop for thirteen years and has spent this last year in supported employment where he has daily contact with people without disabilities. Chuck works four days a week, six hours a day. He is not active in any advocacy organizations. His reference rated his degree of support needs as: intermittent in communication; intermittent in self-care; intermittent in home living; having no needs in social skills; limited in community use; having no needs in self-direction (although he was rated by his reference as having no needs in self-direction, he participated in this study because of restricted choice and decision-making by "others", having limited access to socialization, and little choice in recreation); limited in health and

safety; limited in functional academics; limited in leisure; and, intermittent in work. He is described by his job coach and observed by the investigator as hard working (although his cerebral palsy does limit his work performance), independent, and prides himself on his abilities to be self-sufficient. Chuck enjoys the freedom his work and his apartment afford, but wishes to meet more people and "get out and do more things".

Mattie

Participant number six is referred to as Mattie. Mattie is a female Caucasian, 30 years old, single, with moderate mental retardation (IQ=43), her own guardian, and lives in a group home. She attended school until she was 21 years old, when she was presented with a Certificate of Completion. Mattie lived with her parents until she was 28 years old. She has lived in a group home for two years. Mattie has worked six years in a sheltered workshop. She has little contact with individuals without disabilities other than those who are paid to supervise her. She has in the past been active in "People First". Her reference rated her degree of supports needed as: extensive in communication, having no needs in self-care, limited in home living, intermittent in social skills, limited in community use, extensive in self-direction, intermittent in health and safety, extensive in functional academics, having no needs in

leisure, and limited needs in work. Mattie is described and observed as having many self-determining behaviors, little self-initiation, pleasant to be around, and well-liked.

Setting

A university campus in the South Central United States was the site for this study. The campus offered many advantages for assisting individuals with mental retardation obtain self-determining skills. The campus was located on a public transit route that was easily accessible to all the participants in this study. The University offered free maps of the campus, assisting in the learning of directions and landmarks (see Target Behaviors). The campus is an active and eventful place which allows opportunities to observe, demonstrate, and practice self-determining behaviors. On campus, the participants were introduced to new events and activities including museums, free music concerts, community and University theater, free movies, presentations by people from all over the world, student activities, etc. The campus offered a variety of eating establishments providing new options for food and dining locations. The library offered access to books, magazines, paintings, computers, a copy shop, a snack room, and quiet study rooms for holding meetings, gathering assessment information, and drawing pictures. The student union

offered a post office for purchasing post cards and sending mail.

Ecological Assessment

Rationale for the ecological assessment as best suited for obtaining information to assess individual's strengths and needs in an effort to enhance self-determining skills were provided in Chapter Two. The ecological assessment included interviews conducted with family members and people who work with and are familiar with the individuals participating in the study (Kishi, Teelucksingh, Zollers, Park-Lee, & Meyer, 1988; Lovett & Haring, 1989; Schloss, Alper, & Jayne, 1994). The information collected from family members and others was compared to information obtained from interviews with the individuals participating in the study (Schloss, Alper, & Jayne, 1994). The information collected through interviews, whether congruent or incongruent with information from other interviews, provided important insight into the dynamics of the family, those who work with the participants, and the participants themselves. Burrello (1985) supports gathering and comparing information from various sources. He notes that a more meaningful approach to validity is achieved by comparing information from multiple sources. Data gathered from all interviews (with family members, others, and the participants) were compared to information collected from

direct observations of the individuals in their natural environments (Lovett & Haring, 1989; Schloss, Alper, & Jayne, 1994). Schloss, et al. (1994) suggests that by using direct observation of the participant in his/her natural environments, the most valid information available may be obtained.

Interviews were conducted in a structured format (as recommended by Sigelman, et al., 1983), in that specific information was solicited regarding self-determining skills that were presently being used by and those skills which were yet to be acquired by each participant (see Appendix D, for structured interview format). However, at the same time, these interviews were flexible enough to allow the pursuit of relevant information when more clarification was desired outside of the structured format (Sigelman, et al., 1983). For example, in soliciting information about specific choices a participant makes regarding the clothing he wears (structured format), a comment by the participant regarding the choices that offered additional information beyond the structured format as to his work, living environment, or personal relationships in which he is involved (e.g., his girlfriend likes him to wear only certain colors) were pursued in an unstructured manner. All interviews (pre and post) were conducted by the principal investigator. The investigator documented the interviews on the interview format (Appendix D).

Information for clarification (unstructured format) was recorded on the back of the interview format.

Information gathered for assessment purposes

Information gathered from interviews with family members, service providers who assisted the individuals, and the individuals themselves, along with direct observations over a one month period of the individuals in their natural environments were analyzed in an effort to develop the most complete picture of the abilities and needs of the individuals participating in this study. Information collected for the purpose of assessment included the "choice assessment" (see Appendix D), where the participants and references answered "always", "sometimes", or "never" to questions concerning the opportunities for the participants to make choices in: personal care skills; daily routines; home environment; and, recreation and leisure (Ammer, 1992). The "choice assessment" also collected information on choices involving: job placement; community use (e.g., libraries, theaters, museums, etc.); transportation; personal relationships; legal rights; health and medical needs; spending and budgeting; and, who they wish to work with (e.g. staff member, case worker, etc.) (Stancliffe, 1995; Wehmeyer & Metzler, 1995).

Included in the assessment was a Likert type scale used to measure the perceived "amount of freedom" of the

individuals participating in this study (see Appendix E). Family members and those who work with the individuals were also asked to rate the amount of freedom the individuals had to make important decisions that influence their everyday life. Tøssebro (1995) used a similar technique and stated:

They will be asked to respond on a 1 to 5 scale, 1 indicating about the same influence as you have, and 5 indicating no influence (Tøssebro, 1995, p.59).

It should be noted that Tøssebro (1995) did not ask the individuals participating in his study to rate their amount of freedom compared to the influence of the staff in his study. In this present study, the individuals were asked to rate themselves, on a scale from 1 to 3 (versus a more "complex" 1 to 5 scale used by the family and staff members) the amount of freedom they felt they had to make important decisions that influenced their lives as compared to the influence of members of their family and/or the people that assisted them on a daily basis. At the termination of this project, post-tests were administered to participants, family members, and service providers in an effort to see if there were any changes in the perceptions of amount of freedom. The results of the pre- and post-tests of Tøssebro's (1995) Likert type scale to measure the perceived "amounts of freedom" are reported in Chapter Four.

Determining the cognitive abilities of the participants in this study to understand the concept of a Likert type scale needed to be addressed. The participants were given opportunities to have the question that was to be rated, "how much freedom do you feel you have to make important decisions that influence your everyday life?", explained to them as many times as necessary. After a participant acknowledged that he/she understood the question, then a response was solicited. If a participant responded to the question by rating himself/herself as a three (indicating no influence), the participant would then be asked to give an example of a three. After an example of a three was given, the participant would then be asked to give examples of what a one (same influence as family or staff member) and a two response would be. The deciding factor for whether an individual had the cognitive abilities to understand the concept of a Likert type scale is the demonstration of a continuum of responses (for an example of a continuum of responses see Appendix E). If a continuum is demonstrated, containing relative amounts of freedom as explained by the individual, it was assumed that the individual had the cognitive abilities to understand the concept of a Likert type scale. Practice items were used to demonstrate to participants the purpose and process of the Likert type scale prior to using it. The researcher documented all continuum responses for analysis.

The assessment process also included developing a list of seven activities that served as opportunities for participants to demonstrate choice and decision-making that were meaningful to the participants and that were not consistently being made. This list of activities served as the target behaviors used in this study.

Target behaviors and operational definitions

The target behaviors for this study were seven activities that served as opportunities for the participants to demonstrate self-determining skills. These activities were meaningful to the participants, reflected their preferences and interests, and not consistently performed. Given the nature of this study, it was not possible, prior to assessment, to identify the target behaviors because for each participant the target behaviors varied with need, content, preference, and interest. The target behaviors that were chosen were frequent in occurrence, observable, and discrete for measurement purposes.

The target behaviors were identified through a collaborative effort involving the participants, the references, and the investigator. This collaborative effort was seen as an opportunity for "powersharing" and "team-work" which has been identified as an important aspect of self-determination (Kennedy, 1996). Turnbull and Turnbull (1985) noted that a self-determining

individual can choose to make decisions singularly and/or choose whose support to invite in his/her decision-making process.

The target behaviors used in this study (see Table 4) that were identified during the assessment process were the following: (1) "map use", operationally defined as the recognition of directions (North, South, East, and West) and landmarks (e.g., statues, flagpoles, etc.); (2) attending "new events", operationally defined as first time-visits to museums, concerts, and community activities (e.g., career fair, "Art in the Park", University Jazz Band concert, etc.); (3) selecting "new food", operationally defined as experiencing new options for food or visiting new eating establishments; (4) "phone use", operationally defined as using the phone to obtain weather information, sports information, or concert information; (5) "library use", operationally defined as checking out or reading books and/or magazines, use of study rooms for meetings or drawing; (6) "postal use", operationally defined as writing and mailing letters and post cards; and, (7) "drawing", operationally defined as producing hand-drawn pictures with titles.

Table 4

Target Behaviors and Operational Definitions

Target Behavior	Operational Definition
(1) map use	recognition of directions (North, South, East, West) and landmarks (statues, flagpoles, etc.)
(2) new events	first time visits to museums, concerts, or community activities
(3) new foods	experiencing new food options or visiting new eating establishments
(4) phone use	using the phone to obtain weather, sports, or concert information
(5) library use	checking out or reading books or magazines or using study rooms for meetings or drawing
(6) postal use	writing and mailing letters and post cards
(7) drawing	producing hand-drawn pictures with titles

The above target behaviors allowed opportunities for the participants to demonstrate and practice self-determining behaviors.

Summary

The interview process was discussed, including who was interviewed, validation of the information collected through direct observation, and the format used during the interviews (structured/unstructured). Information that was collected for the purpose of the assessment

process was introduced. The procedures (including a post test) for the use of the Likert type scale to measure the perceived "amount of freedom" (Tossebro, 1995) of the individuals participating in this study were discussed. Included in this discussion was the assessment of the cognitive abilities needed to demonstrate an understanding of the concept of the Likert type scale.

Seven activities were identified that served as the target behaviors of this study, while also providing opportunities for the participants to demonstrate meaningful self-determining skills.

Reference Training

References were persons who knew and were actively involved in the lives of the participants and who offered information or sources of information that were used by the participants. References were individuals who had been given consent by the participants to be included in this study. The individuals that served as references for this study included two parents and four service providers, all females, with an average age of 38 years old, with a range of 28 to 55 years old. All references agreed to participate in a formal training procedure to clarify their roles.

The references were instructed during reference training to give information including their views and personal experiences only as requested by the

participants, but not to initiate the giving of information. The references were advised that continued disregard of this directive (giving unsolicited information) could cause them to be excluded from any further participation of the study. References were instructed to listen closely to the participants and give honest feedback in a respectful manner (Kennedy, 1996).

During reference training, references were instructed by the researcher not to give any information that was not solicited by the participants except in cases that the lack of information could, in some way, be considered as life threatening or harmful. The references were instructed by the researcher on the difference between potentially harmful choices and, as Ward (1988) described, the "right to fail", even when family or staff members felt that such decisions were not in the best interest of the participants. Although Wehmeyer (1995) discussed the difficult decisions resulting from conflicts between issues of protection and safety versus autonomy and risk, nevertheless, Wehmeyer (1995) concludes, "every human being deserves the right to participate in decisions that impact his or her life" (p.117).

Included in the reference training was the role of the references in negotiating and compromising with the participants. Often, persons without disabilities who are associated with individuals with disabilities

unintentionally or indirectly provide an added barrier to self-determination because they do not know how or have not been given the opportunities to negotiate or compromise with individuals with disabilities (Wehmeyer, 1994).

Baseline

After the ecological assessment was completed, strengths and needs identified, and prior to the implementation of the intervention package, baseline data were collected on the target behaviors. As noted previously, the target behaviors consisted of seven activities that served as opportunities for the participants to demonstrate self-determining skills, that the participants were not consistently making, and that the participants had determined as meaningful to them. The collection of baseline data continued for a minimum of five sessions until stability was achieved. Stability was determined after the participants had demonstrated a consistency in their performance of the target behaviors.

Intervention Training

After the assessment process was completed, the specific training needs of each participant identified, and baseline stabilized, the principal investigator met with each participant and discussed his/her specific

training needs. The training needs, established during the assessment phase, consisted of the skills needed to: (1) effectively interact with the intervention package (e.g., recognizing choices, developing goal statements, gathering relevant information, etc.); and, (2) effectively perform the target behaviors that were to be measured (e.g., map use, library use, attending new events, etc.). The following section is intended to identify possible training areas in the intervention package and offer an explanation of why these training areas are important.

Recognition of choices

Individuals with mental retardation do not always recognize that they have choices (Kennedy, 1996). They need to learn to identify choices as the first step in influencing their environment. According to Brockett (1991), the community is the social context for self-determination. Kennedy (1996) comments,

there is something about just living in the community that supports self-determination (p.43).

Therefore, the task of teaching the recognition of choices was accomplished by practicing recognizing choices that individuals make in the natural settings of the community. All participants identified as needing training in recognizing choices during the assessment

phase were taken individually to various locations on campus and asked to identify choices. Participants were taken to: (a) the library and asked to identify choices in books; (b) eating establishments and asked to identify various types of food; and, (c) a concert hall and asked to identify various types of music. The investigator provided feedback after three choices in each area (library, eating establishment, concert hall) was obtained.

Goal statement

Participants identified as needing training in developing goal statements during the assessment phase, practiced developing goal statements to assist them in keeping their focus on their goals and which led to plans of action. The participant and the investigator met in a study room of the library (the participant chose which study room to use). The investigator would ask "what do you wish to do, that you are not doing now?" Examples of goal statements developed during this study include: "I want to go to new places and meet new people"; "I want to know what is inside those buildings"; and, "I want to use a book, when I want to, not when they want me to". These goal statements led to plans of action that included, for example, gathering relevant information about new events to attend, map use, and library use.

Gathering relevant information

Mithaug (1993) reminds the researcher that in order for individuals with mental retardation to make appropriate choices and decisions access to information must be complete. References were used by the participants as the primary source for gathering relevant information (see Reference Training). During training, information gathered by the participants included: the consequences of the choice (short and long term) and the impact on others as well as on oneself, (Schloss, Alper, and Jayne, 1994); identification of what options are available (M. L. Wehmeyer, personal communication, April 29, 1996); and, the resources and skills needed to overcome barriers. In the case that a participant wanted information regarding attending "new events", the participant could solicit from the references: (a) consequences of attending a new event (e.g., could get lost, might not like new event, etc.); (b) options other than attending the new event (e.g., visiting a friend, watching TV, renting a VCR movie, etc.); and, (c) the resources and skills needed to attend the new event (e.g., transportation, cost of event, when and where event will take place, etc.).

Negotiating and compromising strategies

Individuals participating in this study were introduced to negotiating and compromising strategies,

because many people with disabilities do not effectively compromise or negotiate (Wehmeyer, 1993). Negotiating and compromising strategies are important because choices for adults with mental retardation are too often "all or nothing" (Wehmeyer, 1995, p.117). In developing the skills to negotiate, participants were instructed to: listen to what others want; decide what they can live with; and, compromise, that is, find a solution both parties can accept (Powers, et al., 1996). Once relevant information had been gathered (including consequences of the choice, available options, and skills and resources needed), participants during the training phase practiced negotiating and compromising with others in order to overcome or remove certain barriers (e.g., consequences, skills and resources needed, etc). In the case that a resource needed to attend a new event was transportation, the participant negotiated and compromised with "others" (in this case a person who could arrange transportation) in order to remove this barrier.

It is important that negotiating and compromising are seen as an on-going process which is never fully completed. New information may become available, misinformation could have been collected, and a misunderstanding of information is always possible, leaving the necessity for a continuation of negotiations and compromises.

Making choices

Fetterman (1993) discussed the need for individuals with mental retardation to make rational choices from various alternative courses of action. During training, participants were asked to weigh all the information (including consequences, options, resources and skills needed, and barriers needing to be removed through negotiation and compromising strategies) and then to decide which choices were most pragmatic for accomplishing their goal statements.

Self-evaluation

Self-evaluation or self appraisal (Jackson & Boag, 1981) requires that a set of criteria be established against which individuals can measure their own behavior. Self-evaluation also implies monitoring of the behavior, because a response must be observed and measured before it can be evaluated (Lovett, 1986). During training, the participants evaluated whether: (a) all the relevant information was gathered (including three consequences, three options, three skills and resources needed, and three opportunities to remove barriers); (b) the information was accurate and comprehensive; and, (c) the information gathered was applied appropriately. The participants were able to compare the number of responses (consequences, options, resources and skills, and negotiating and compromising strategies) given by

them to the total number of responses possible. Essentially, after weighing all the information, the participants posed the question to themselves, "How well did I do in making this choice?" Self-evaluations were not concerned with "why" choices were made (the reasons behind the choices), but instead, how well the participants perceived that they followed the process of choice-making.

External evaluation

Although, the participants were not involved with the external evaluations per se, the participants were informed, prior to training, that references would be evaluating their performances. The external evaluations by the references were important because,

This circle of relationships becomes a most important tool for gaining advice, direction, back-up, and support for the decisions we each make (Pumpian, 1996, p.xv).

During the external evaluations, the researcher approached the references and asked them to list the relevant information (e.g., consequences, options, resources and skills needed) and the barriers that would need to be removed or overcome through negotiating and compromising strategies in order to make specific choices associated with the participants' target behaviors.

Self re-evaluation

While being similar to the self-evaluations, the difference in self re-evaluations was that participants were asked to re-evaluate their performances in the process of choice-making by taking into account input from the references. The information collected earlier from the participants (self-evaluations) was compared and contrasted to the information supplied by the references during the external evaluations. Attention was given to opportunities to explore how information from the references was being processed and used differently.

One difference between self-evaluations and self re-evaluations was the amount of relevant information available. Of importance to this study was how the presence of additional or different information, supplied by the references during the external evaluations, affected the outcome of the participants' choices. As in self-evaluations, the focus of self re-evaluations was on the processes used, not the choices made.

Self-reinforcement

Self-reinforcement is defined by Kazdin (1984) as providing oneself with reinforcing consequences contingent upon behavior. Research has suggested that individuals with mental retardation can learn to accurately self-reinforce their own behaviors (Lovett, 1986). The pilot study suggested that reinforcers were

naturally occurring in this project. For example, the occurrence of the target behavior "library use" resulted in naturally occurring reinforcers: checking out a book; looking through a magazine; using a study room; etc.

Demonstrations and practice

The literature emphasized the continual need for repeated demonstrations by the researcher and practice in various natural settings by the participants in making choices (Jeffrey & Berger, 1982; Litrownik, 1982; Calculator & Jorgensen, 1994). Repeated demonstrations and practice are likely to produce positive results, success, and confidence. Wehmeyer's (1993) model refers to the importance of self-confidence. "Confident people believe in their plans and feel good about following through" (Wehmeyer, 1993, p.156).

Prior to implementing the intervention, demonstrations and practice continued until the participants had an appropriate understanding of the process of choice-making (e.g., recognizing choices; developing goal statements; gathering relevant information; etc.) and possessed the skills needed to adequately perform the target behaviors (e.g., map use; library use; postal use; etc.).

Developing the Intervention

The literature was reviewed to reveal "component

elements" (Wehmeyer, 1996) of self-determination prior to developing an intervention package to assist adults with mental retardation in acquiring or improving their choice and decision-making skills, while increasing their self-determining behaviors. The intervention package was a synthesis of these elements revealed in the literature. The elements found to be relevant to increasing self-determining behaviors and improving choice and decision-making skills were first introduced in Chapter Two and discussed in detail in this present chapter (Intervention Training). The following intervention was based on a cognitive perspective that suggests that self-determination may be nurtured by helping individuals develop, practice, and discover schemas, and plan, monitor, and evaluate scripts (Sternberg, 1981).

Intervention

Elements (a) and (b)

As a result of the information gathered from the pilot study, elements (a), terms and concepts and (b), self-monitoring were omitted from this study (see Results of the Pilot Study).

Element (c): recognizing choices

Prior to the pilot study, the recognition of choices were to be identified in three different settings: work, residential, and leisure. During the pilot study, the

responses given by the participants to the request for recognition of choices often became redundant or inappropriate. For example, identifying choices of books to read for leisure were the same responses given for identifying choices of books to read in the home, while the response for recognizing choices of books to be read on the job often was, "I can't read on the job". During this study, participants were asked to only identify three opportunities for choices, that were meaningful to them, and found in the natural setting of the community.

The criterion for element (c) was five consecutive sessions where the participant identified three opportunities for making choices. The Abandonment Criterion (AC), the point at which the intervention is halted, for element (c) was five sessions where the participant was unable identify three opportunities for making choices.

Element (d): Goal statement

Participants developed goal statements that led to plans of action. The criterion of element (d) was five consecutive sessions where a goal statement had been developed. The AC was five sessions in which the participant was unable to produce a goal statement.

Element (e): Gathering relevant information

Participants demonstrated the ability to identify information that was relevant to making a choice. This

information addressed three areas: consequences of the choice; availability of other options; and, resources and skills needed to overcome and remove barriers.

Participants were asked to give three items of information per area. The criterion for element (e) was five consecutive sessions where the participant had identified nine items of information in three areas. The AC was five sessions, in which the participant was unable to identify nine items of information, in three areas.

Element (f): Negotiating and compromising strategies

Participants identified opportunities to remove or overcome barriers through negotiating and compromising strategies. The criterion for element (f) was five consecutive sessions where a participant identified three opportunities to negotiate or compromise. The AC was five sessions, in which the participant was unable to identify three opportunities to negotiate or compromise.

Element (g): Making choices

Participants made choices after taking into account the information collected (e.g., consequences, options resources and skills needed, barriers to be removed through negotiation and compromising strategies, etc). The criterion for element (g) was five consecutive sessions where a participant had made a choice. The AC was five sessions in which a participant had not made a

choice.

Element (h): Self evaluation

Participants re-visited, that is, went back through the process of choice-making and evaluated how successful they were in meeting the criterion for each element. The criterion for element (h) was one session where the participant was 100% accurate in his/her evaluation of whether or not he/she met the criterion for each element. The AC was three sessions in which the participant was not 100% accurate in his/her evaluation of whether or not he/she met the criterion for each element.

Element (i): External evaluation

References participated in the external evaluations. The references were solicited by the researcher to give information regarding specific choices previously made by the participants. This information included: consequences, options, resources and skills needed, and barriers needed to be removed or overcome through negotiation and compromising strategies. Element (i) had no criterion due to the participants not being involved.

Element (j): Self re-evaluation

Participants compared and contrasted the differences between the information they collected during the self-

evaluations (element h) and the information supplied by the references during the external evaluations (element i). The criterion for element (j) was one session where the participant, with 100% accuracy, gave the number of differences in information between the self-evaluation and the external evaluation. The AC was three sessions where the participant was unable to give, with 100% accuracy, the number of differences in information between the self evaluation and the external evaluation.

Element (k): Self-reinforcement

Due to the information gathered in the pilot study, self-reinforcements for this study were determined to be naturally occurring.

Element (l): Demonstrations and practice

The importance of demonstrations by the researcher and practice by the participants were previously noted (see Intervention Training). Refer to Table Four for the objectives of the elements.

Expected Outcomes

The expected outcomes of this study were that: (1) the participants would make sound and rational choices that were recognized by others as being appropriate; (2) the participants would make choices that were meaningful

Table 4

Objectives of the Elements

Element	Objectives
A	<u>Terms and concepts</u> Omitted due to the results of the pilot study
B	<u>Self-monitoring</u> Omitted due to the results of the pilot study
C	<u>Recognizing choices</u> To recognize three choices
D	<u>Goal statement</u> To develop a goal statement
E	<u>Gathering relevant information</u> To gather all relevant information including: <ul style="list-style-type: none"> (a) (3) consequences of the choice (b) (3) options (c) (3) skills and resources needed to overcome barriers
F	<u>Negotiating and compromising strategies</u> To identify (3) negotiating or compromising opportunities leading to a barrier being removed
G	<u>Making choices</u> To make a choice
H	<u>Self-evaluation</u> To revisit the choice-making process and self-evaluate
I	<u>External evaluation</u> References perform external evaluations.
J	<u>Self re-evaluation</u> <ul style="list-style-type: none"> (a) to examine the addition of, or changes in, information due to the external evaluation (b) to examine how any new information was used by the references

Table 4, Continued

Objectives of the Elements

Element	Objectives
	<p>(c) to examine how the participants' information processing was different from the references' information processing</p> <p>(d) to re-evaluate the participant's performance in decision-making by taking into account any new information and how it was used by others.</p>
K	<p><u>Self reinforcement</u> Omitted, found to be naturally occurring.</p>
L	<p><u>Demonstrations and practice</u> Intervention training and criterion for each component offers adequate demonstrations and practice.</p>

to their lives; (3) the component elements of the intervention package would become incorporated as learning strategies by the participants; (4) the skills associated with the component elements of self-determination would be acquired or improved (e.g., the recognition of a choice, developing a goal statement, gathering relevant information, removing or overcoming barriers through negotiating and compromising strategies, self-evaluation, self re-evaluation, etc.); (5) the individuals that participated in this study would assume more responsibilities in the choices and decisions that impact their lives (e.g., whether to attend museums, concerts, theaters, eat at new locations, use libraries and postal services, etc.) (6) more choices would become self-initiated; (7) choices would occur at different and unique settings (generalization); (8) maintenance of the acquired learning strategies would continue after completion of this study; and, (9) communication would improve between the participants and the references. The results of these expected outcomes are reported in Chapter Four.

Procedural Model

The following procedural model was designed to summarize and define the process of this study. The various tasks that were associated with this project have been grouped into the following six procedures:

(1) The first procedure for this study consisted of IRB approval (see Appendix G), identification and solicitation of participants, informed consent, and initial screenings.

(2) The second procedure consisted of the ecological assessment. This included collecting information on: (a) demographic information; (b) a pre-test choice assessment (Appendix D); (c) a pre-test Likert type scale of the perceived amounts of freedom of the participants; and, (d) the identification of the target behaviors.

(3) The third procedure addressed the collection of baseline data, specific training needs of participants, and reference training.

(4) The fourth procedure consisted of the implementation of the intervention package consisting of component elements known to be associated with self-determination and data collection.

(5) The fifth procedure consisted of an assessment at the termination of the study. This assessment included a post-test choice assessment (Appendix D), a post-test Likert type scale of the perceived amounts of freedom of the participants, and an evaluation of the project by the participants and references.

(6) The sixth procedure consisted of follow-up and the writing and dissemination of the results.

"We do not have to be told what self-determination means. We already know that it is just a ten dollar word for choice. That it is just another word for freedom, a word for a life filled with rising expectations, dignity, responsibility, and opportunity. That it is just another word for having the chance to live the American Dream" (Williams, 1989, p. 16).

CHAPTER IV

Results

In this chapter the results of the study will be reported. Analysis of the data was conducted through visual examination of the measures of the target behaviors during baseline and intervention phases. Graphs were used to chart the occurrence of the target behaviors (dependent variables) in an effort to assess which component elements of the intervention package (independent variable) were most and least effective in promoting self-determining behaviors. Pre and post-test assessments were used to examine the effects the intervention package had on choice and decision-making.

Visual Examination of the Results

Prior to the pilot study, it was thought that the simultaneous design was the best research method to address the research question concerning how an individual with mental retardation learns to be self-determined. One argument for the simultaneous design was that it visually depicted the combined effects of the component elements on the occurrence of the target behaviors. During the pilot study an upward trend of

increased target behaviors was observed giving evidence that the intervention package did indeed increase the occurrences of target behaviors. As presented in Chapter Three, it became increasingly difficult to determine in this upward trend which changes in the target behaviors were due to which component elements being introduced. The resulting difficulty in interpreting which elements caused the changes in the target behaviors weakened the study to the point that the simultaneous design was abandoned.

Due to the results of the pilot study, it was determined that a multitreatment design was best suited for answering the research question concerning how an individual with mental retardation learns to be self-determined. Inherent in this design is the visual depicting of how each separate element effects the occurrence of the target behaviors. During visual examinations of the graphs presented in this chapter there are indications of a downward trend or decrease in occurrences of the target behaviors after the introduction of the treatment package. This downward trend should not be interpreted as a negative trend. By ranking the introduction of the component elements by order of increased occurrence of target behaviors an upward trend can be established. For example, by rearranging the component elements in the following order: (1) element (g), making choices; (2) element (d),

developing a goal statement; (3) element (f), negotiating and compromising strategies; (4) element (c), recognizing choices; and, (5) element (e), gathering relevant information, an upward trend in the occurrence of target behaviors can be established. The multitreatment design used in this study provides an indication of which component elements have a greater impact on the occurrence of target behaviors than others. Interpretation of these results will be discussed further in Chapter Five.

Target behaviors and component elements

Aggregate

When component element (c), "recognizing choices", of the treatment package was introduced, the percent of completion of target behaviors being performed by all six participants was 33% (sd=15.653) (see Figure 1 and 1a). The reported percentage for element (c) (33%) was calculated by adding the number of target behaviors performed, for all sessions during element (c), for all six participants (n=69) divided by the total number of target behaviors possible, for all sessions during element (c), for all six participants (n=210).

At the introduction of element (d), developing "goal statements", the percent of completion of target behaviors being performed by all participants was 26% (sd=13.465). At the introduction of element (e),

Figure 1

Target Behaviors and Component Elements
Aggregate

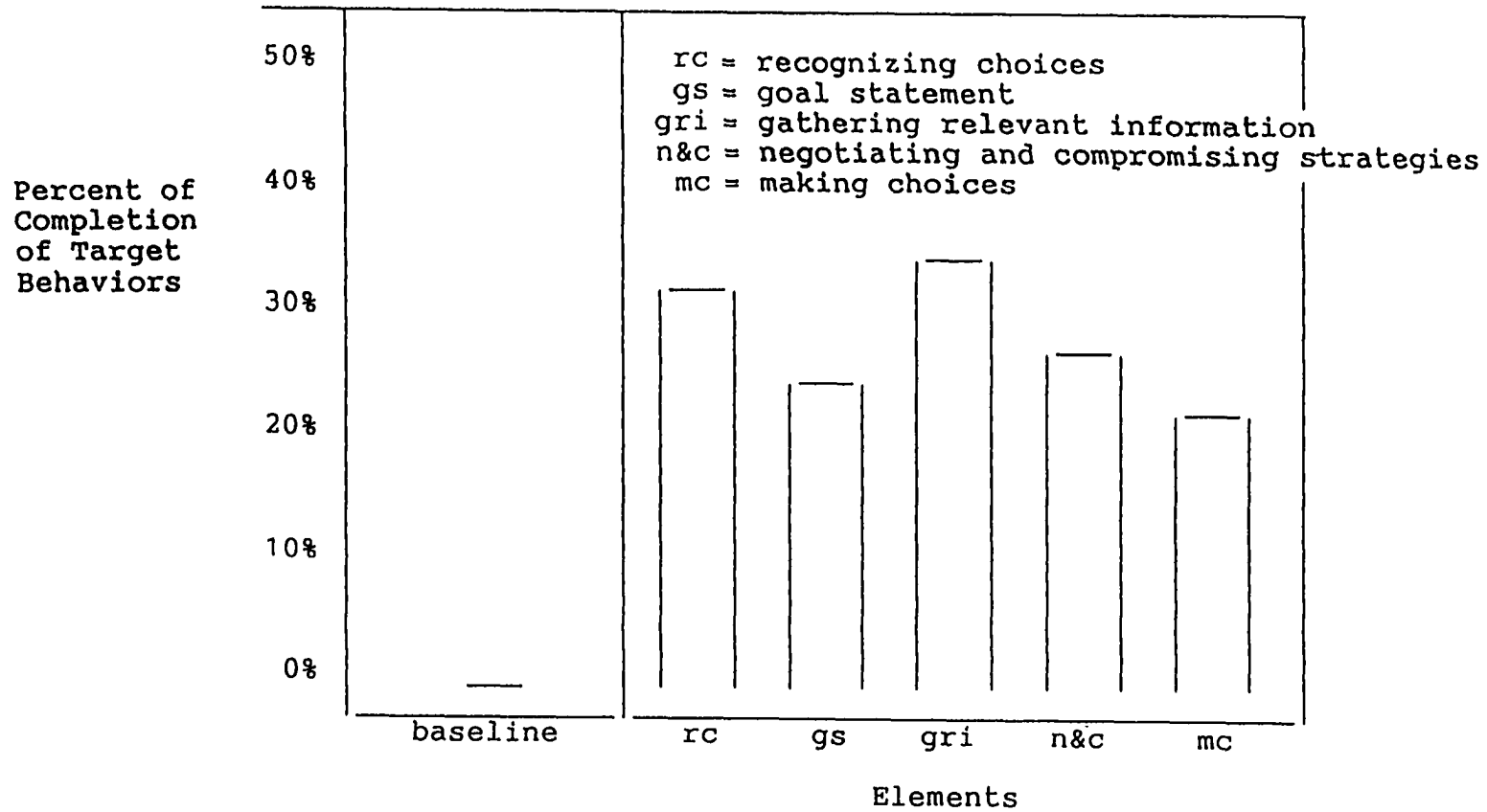


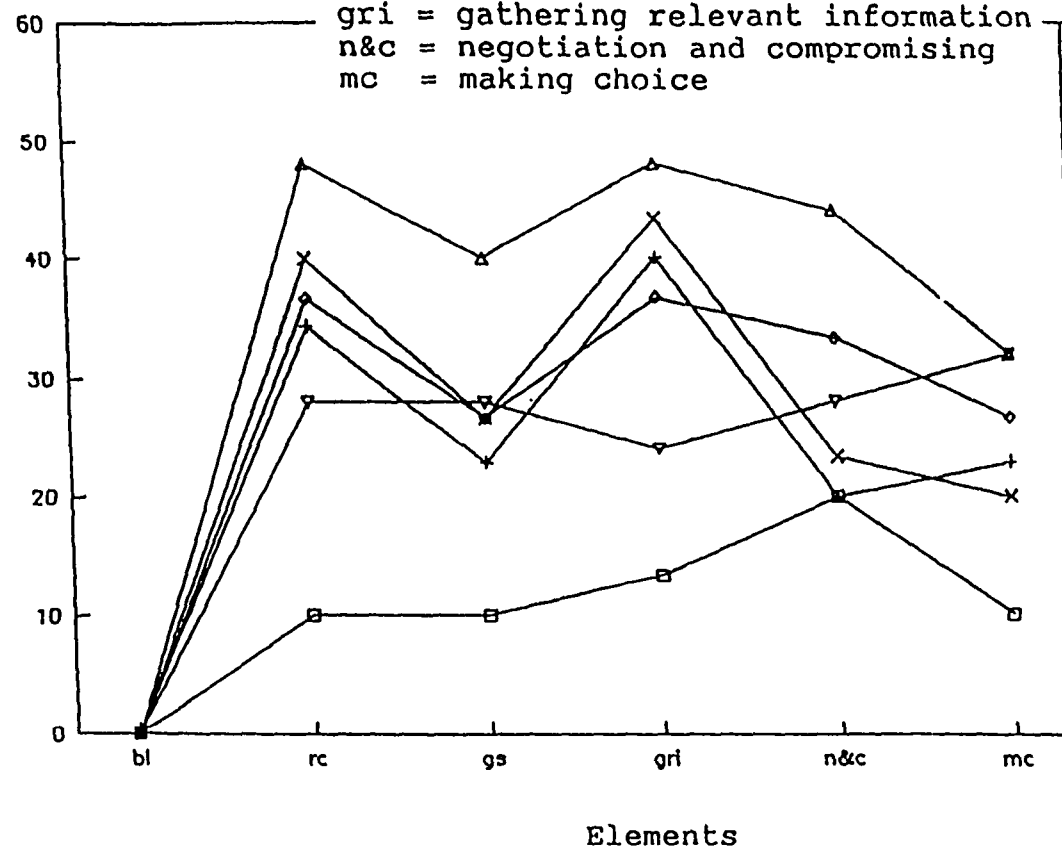
Figure 1a

Target Behaviors And Component Elements
Aggregate

Mattie □
Kevin ◇
Kelly +
Charles △
Renee ▽
Bill x

Percent of
Completion
of Target
Behaviors

bl = baseline
rc = recognizing choices
gs = goal statement
gri = gathering relevant information
n&c = negotiation and compromising
mc = making choice



"gathering relevant information", the percent of completion of target behaviors being performed was 35% (sd=16.615). When component (f), "negotiating and compromising strategies", was introduced, the percent of completion of target behaviors was 28% (sd=13.284). At the introduction of element (g), "making choices", the percent of completion of target behaviors being performed was 24% (sd=11.491).

Analysis of variance (ANOVA) was used to determine if statistical significance existed when comparing the differences in the occurrence of target behaviors (dependent variable) after the introduction of each component element (independent variable). Analysis indicated statistical significance only between element (e), "gathering relevant information" and element (g), "making choices", $F(4,145) = 3.17$, $p = 0.0157$ (MCP: Ryan).

Of the five component elements discussed, element (c), "recognition of choices" (33%) and element (e), "gathering relevant information" (35%) were the elements that were most associated with an increase in the occurrence of target behaviors. While element (g), "making choices" (24%), element (d), developing a "goal statement" (26%), and element (f), "negotiating and compromising strategies" (28%) were the elements that were associated with the least amount of increase in the occurrence of the target behaviors.

Individuals

Mattie.

The participant referred to as Mattie had an average increase of 10% in target behaviors at the introduction of element (c), "recognizing choices" (see Figure 2 and 2a); a 10% average increase in target behaviors at the introduction of element (d), "goal statement"; a 13% average increase in target behaviors at the introduction of element (e), "gathering relevant information"; a 20% average increase in target behaviors at the introduction of element (f), "negotiation and compromising strategies"; and, a 10% average increase in target behaviors at the introduction of element (g), "making choices". See Appendix H for a list of target behaviors for each participant.

Kelly.

The participant referred to as Kelly had an average increase of 34% in target behaviors at the introduction of element (c), "recognizing choices" (see Figure 3 and 3a); a 23% average increase in target behaviors at the introduction of element (d), "goal statement"; a 40% average increase in target behaviors at the introduction of element (e), "gathering relevant information"; a 20% average increase in target behaviors at the introduction of element (f), "negotiation and compromising strategies"; and, a 23% average increase in target

Figure 2

Target Behaviors and Component Elements
Individual: Mattie

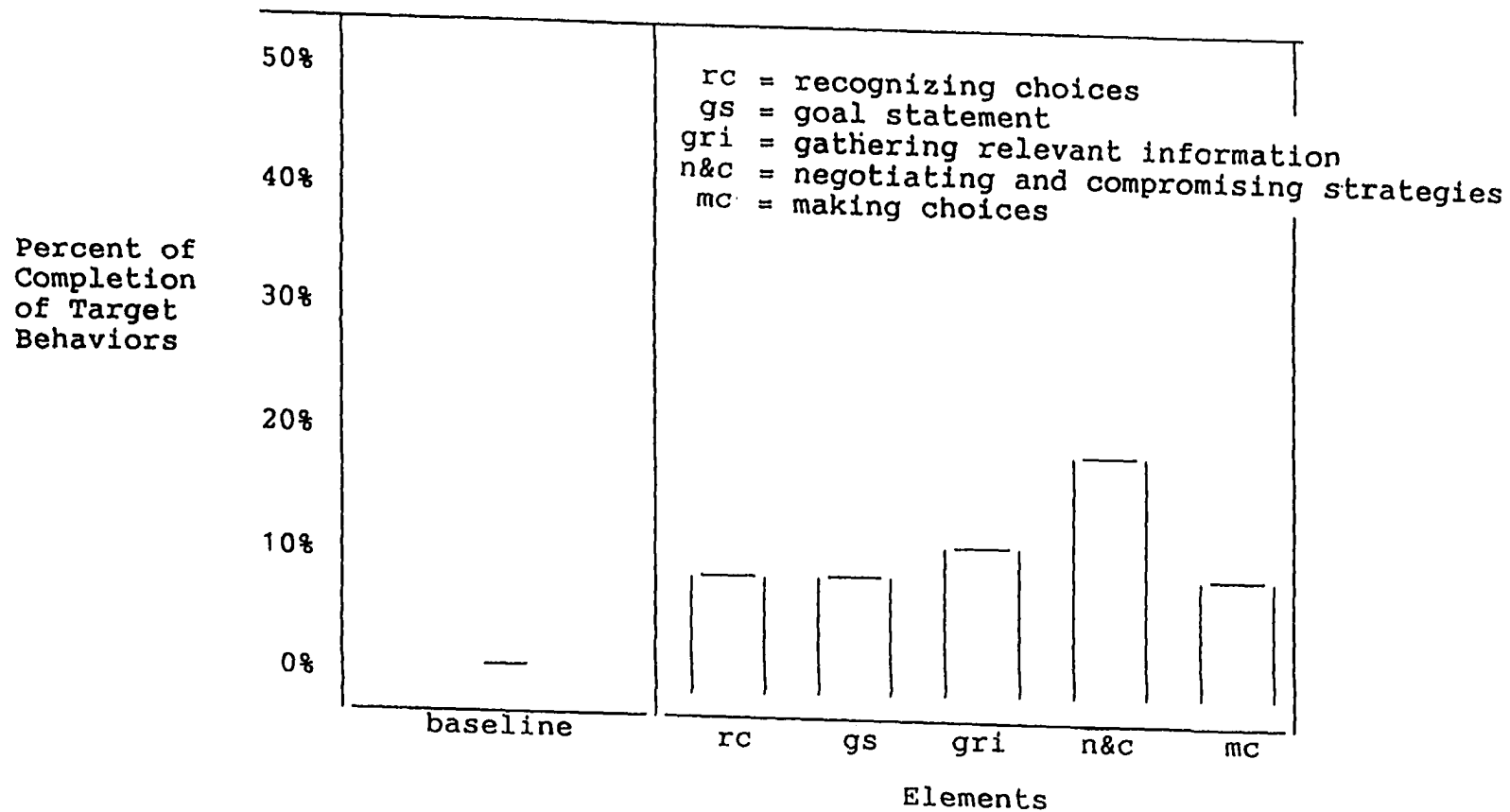


FIGURE 2A: Mattie

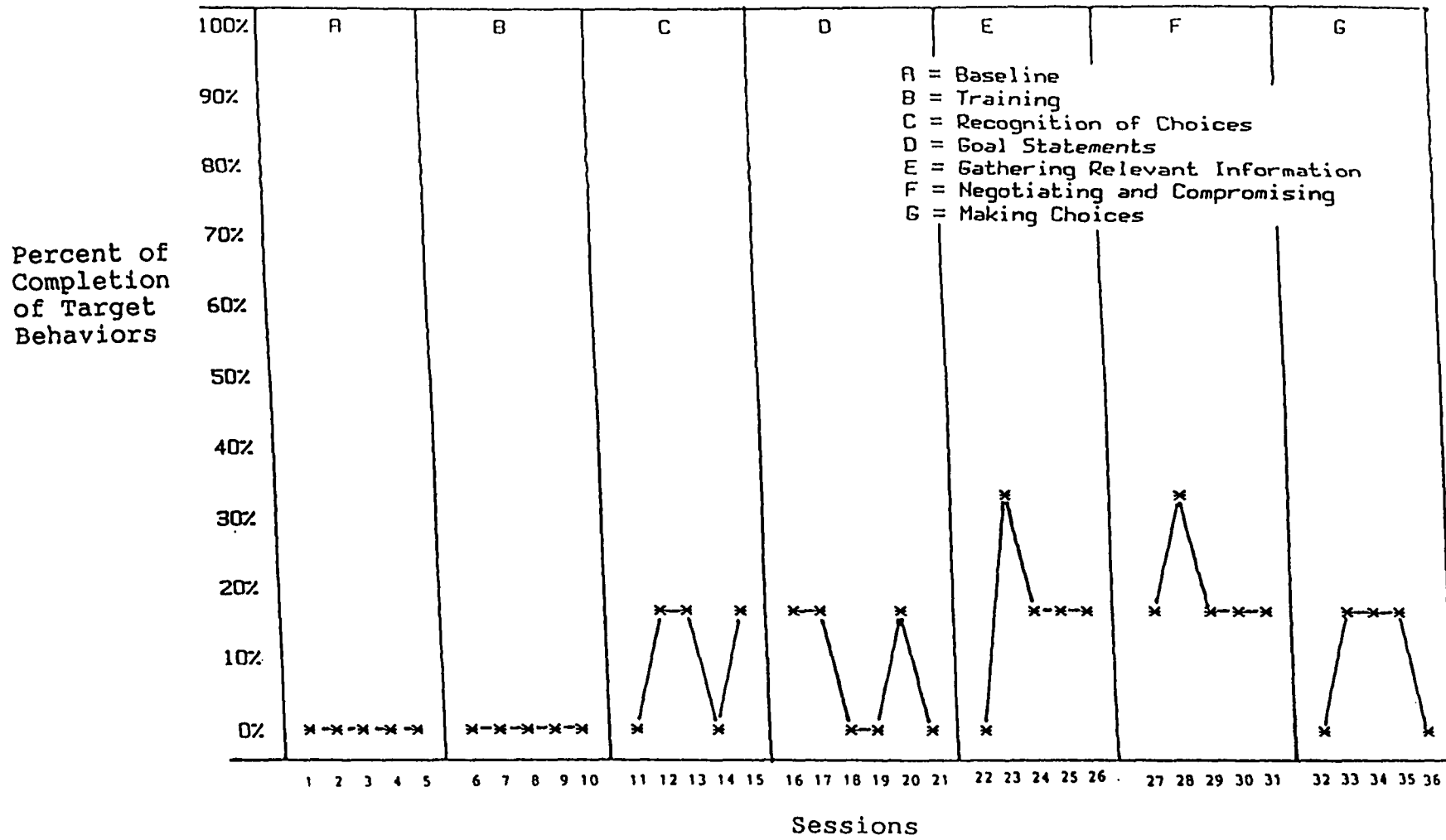


Figure 3

Target Behaviors and Component Elements
Individual: Kelly

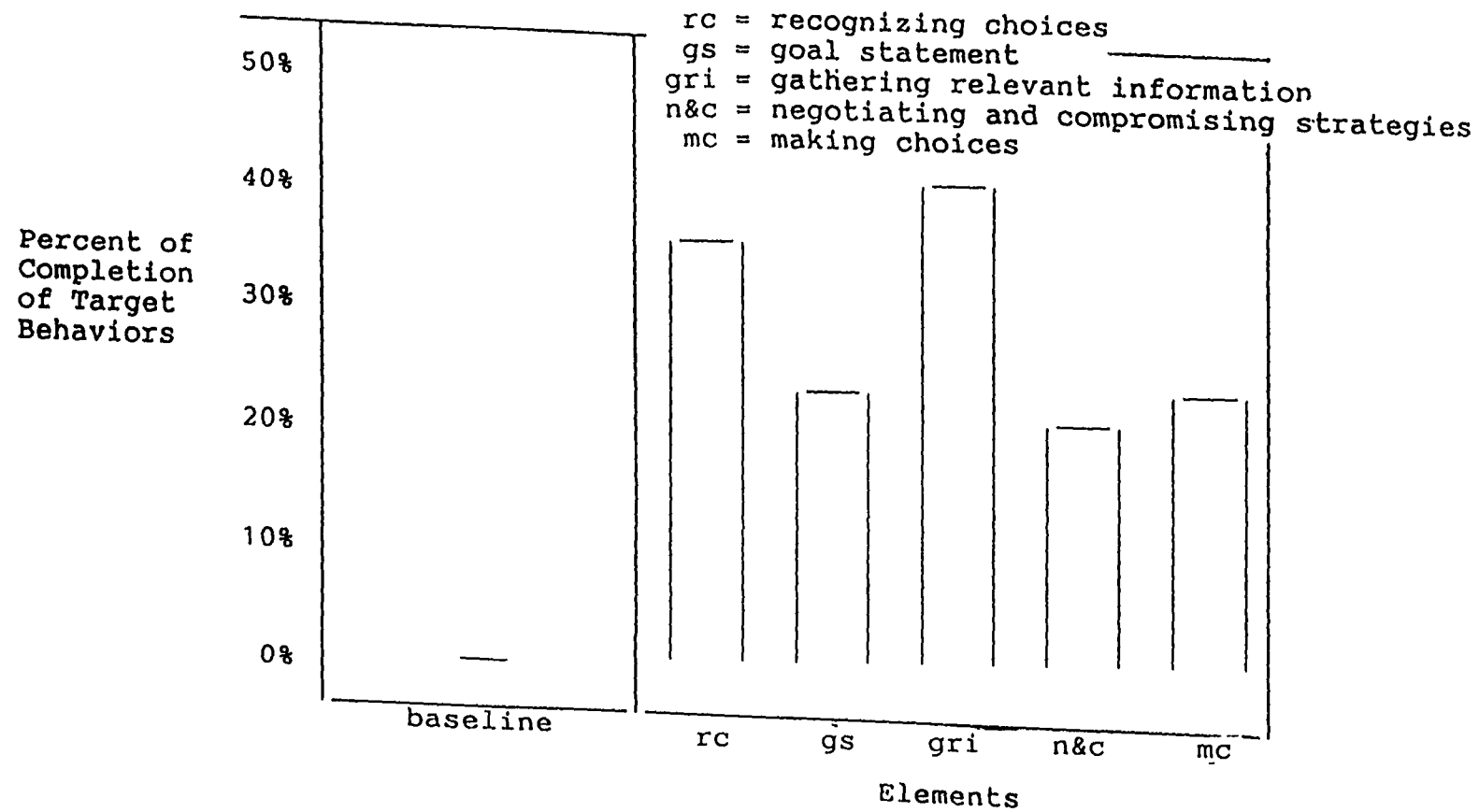
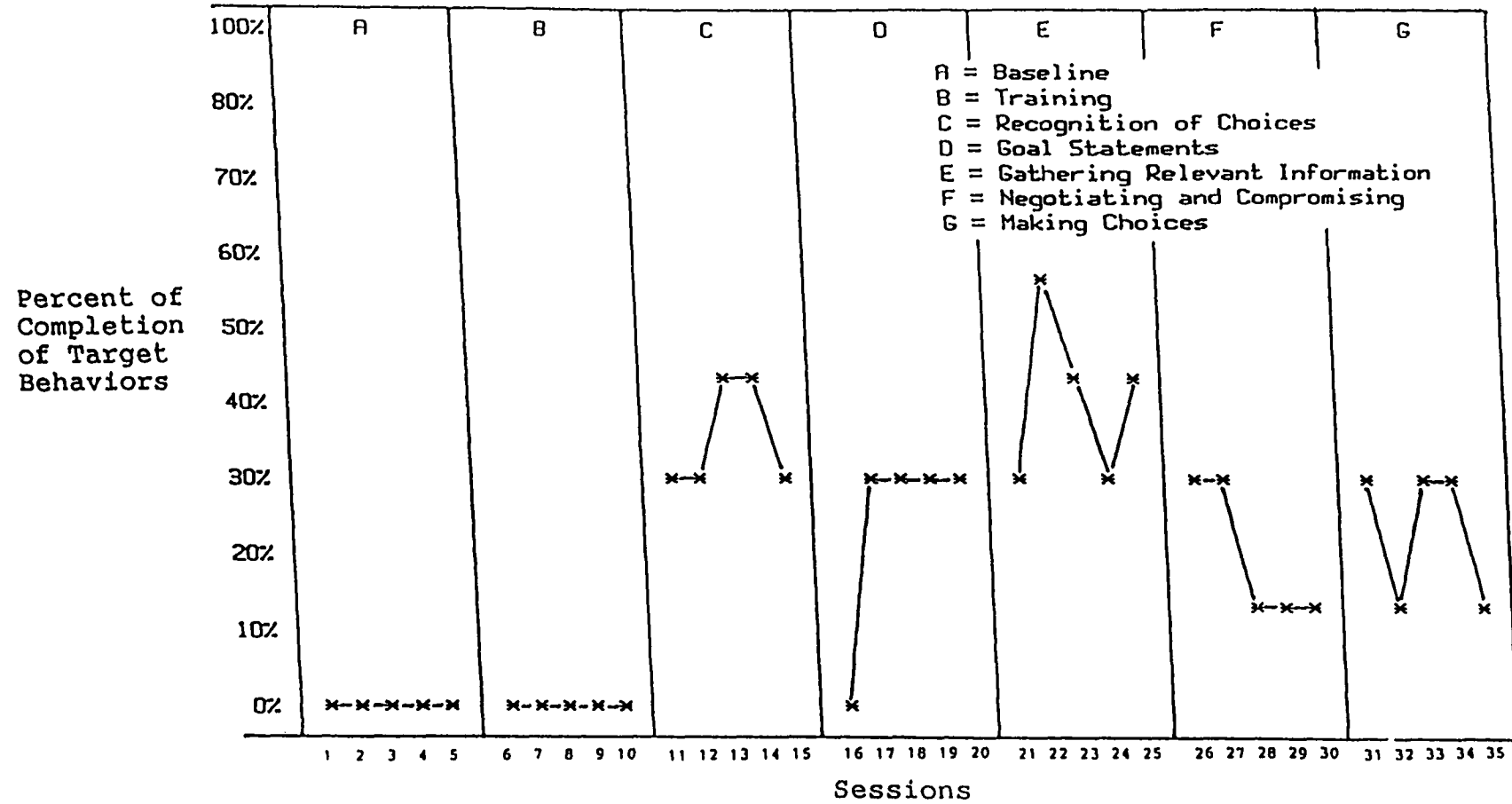


FIGURE 3A: Kelly



behaviors at the introduction of element (g), "making choices".

Kevin.

The participant referred to as Kevin had an average increase of 37% in target behaviors at the introduction of element (c), "recognizing choices" (see Figure 4 and 4a); a 27% average increase in target behaviors at the introduction of element (d), "goal statement"; a 37% average increase in target behaviors at the introduction of element (e), "gathering relevant information"; a 33% average increase in target behaviors at the introduction of element (f), "negotiation and compromising strategies"; and, a 27% average increase in target behaviors at the introduction of element (g), "making choices".

Charles.

The participant referred to as Charles had an average increase of 48% in target behaviors at the introduction of element (c), "recognizing choices" (see Figure 5 and 5a); a 40% average increase in target behaviors at the introduction of element (d), "goal statement"; a 48% average increase in target behaviors at the introduction of element (e), "gathering relevant information"; a 44% average increase in target behaviors at the introduction of element (f), "negotiation and

Figure 4

Target Behaviors and Component Elements
Individual: Kevin

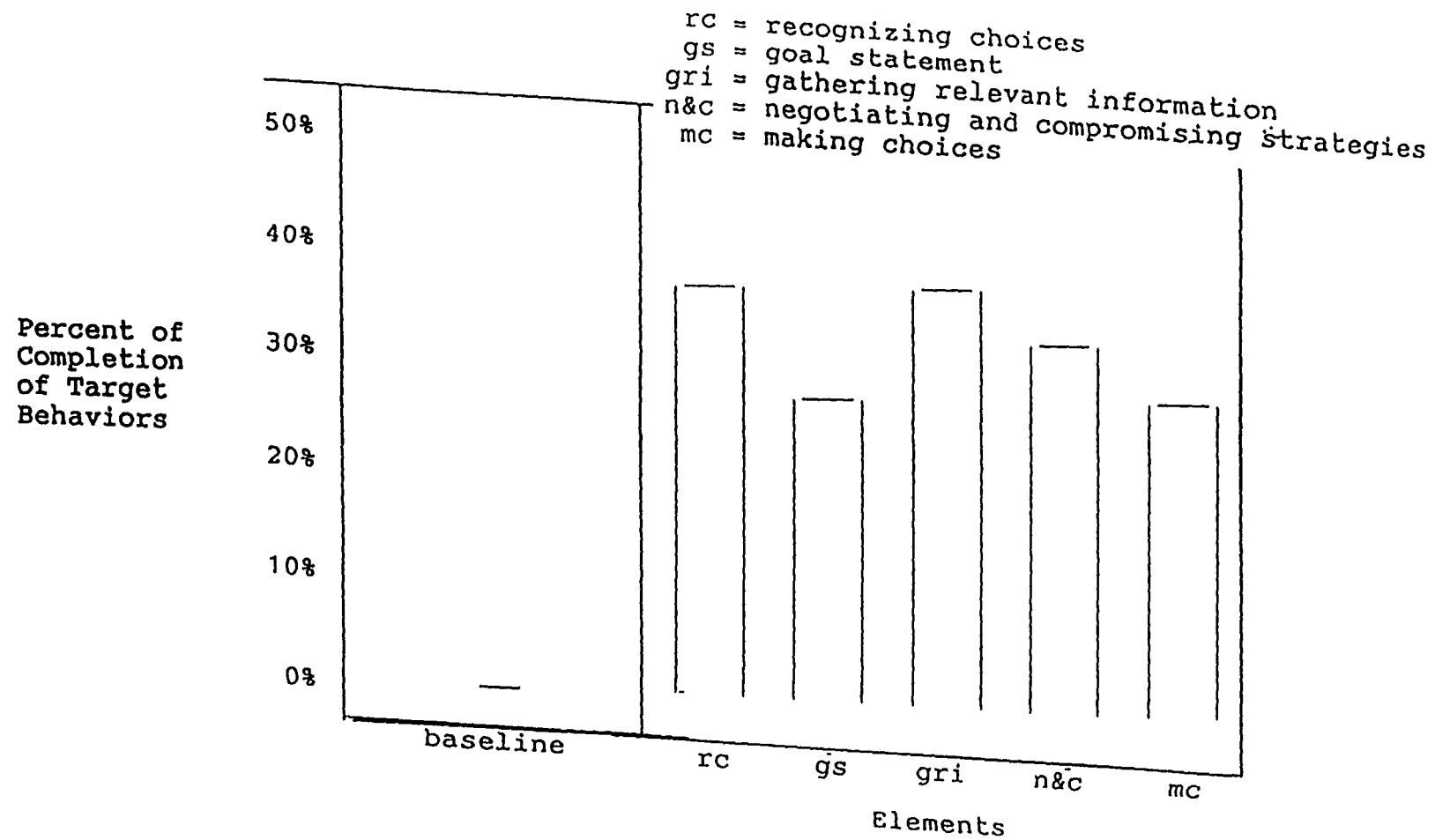


FIGURE 4A: Kevin

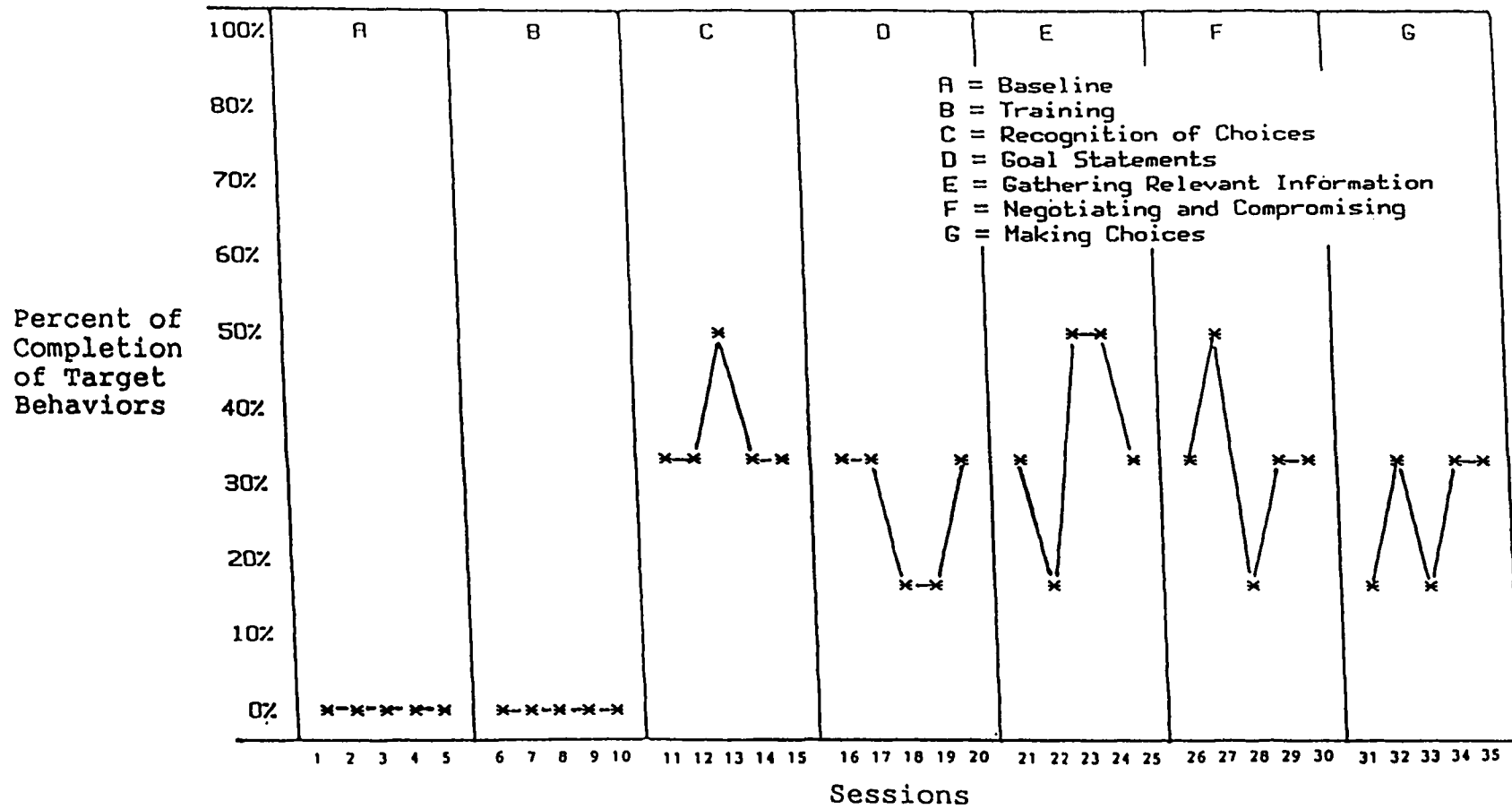


Figure 5

Target Behaviors and Component Elements
Individual: Charles

rc = recognizing choices
gs = goal statement
gri = gathering relevant information
n&c = negotiating and compromising strategies
mc = making choices

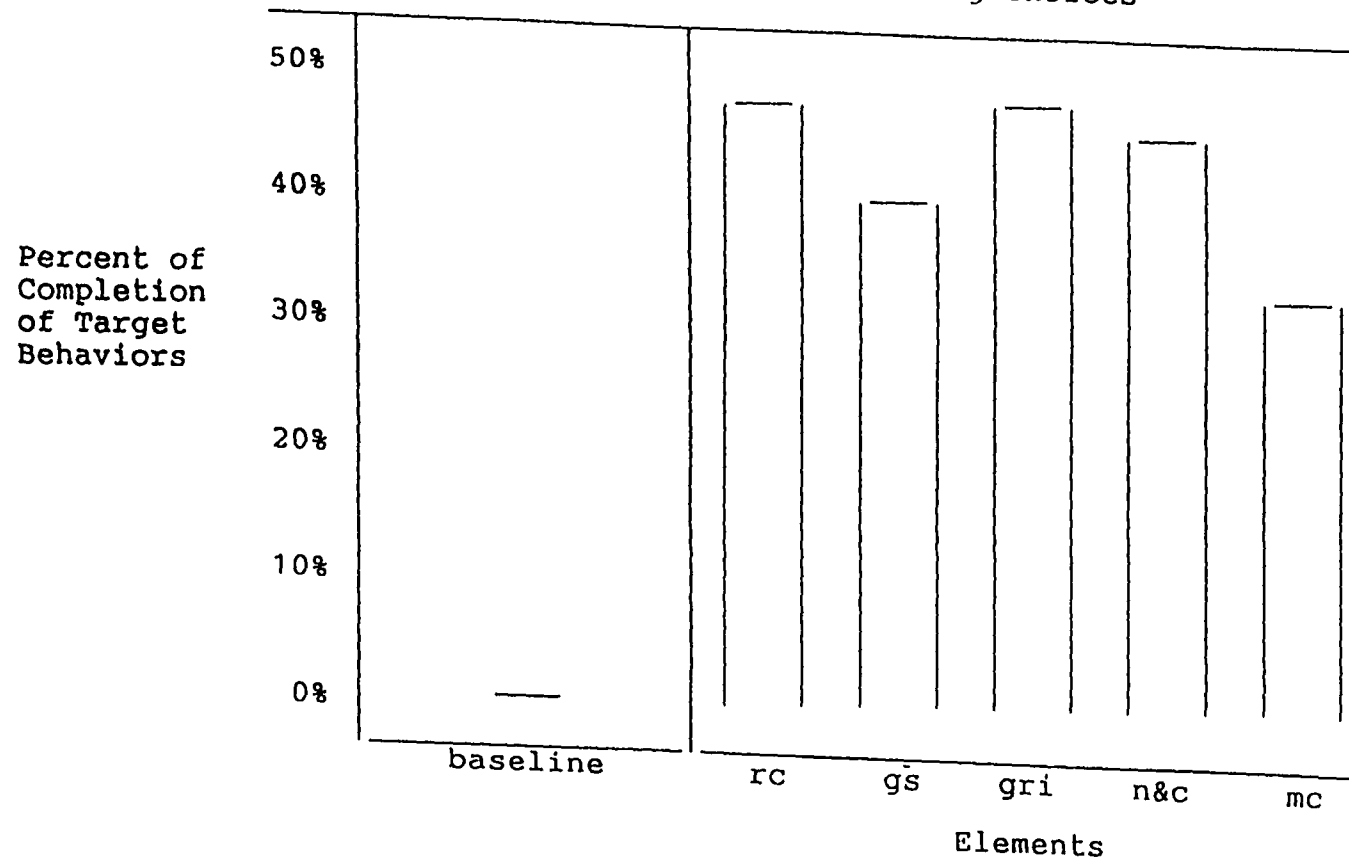
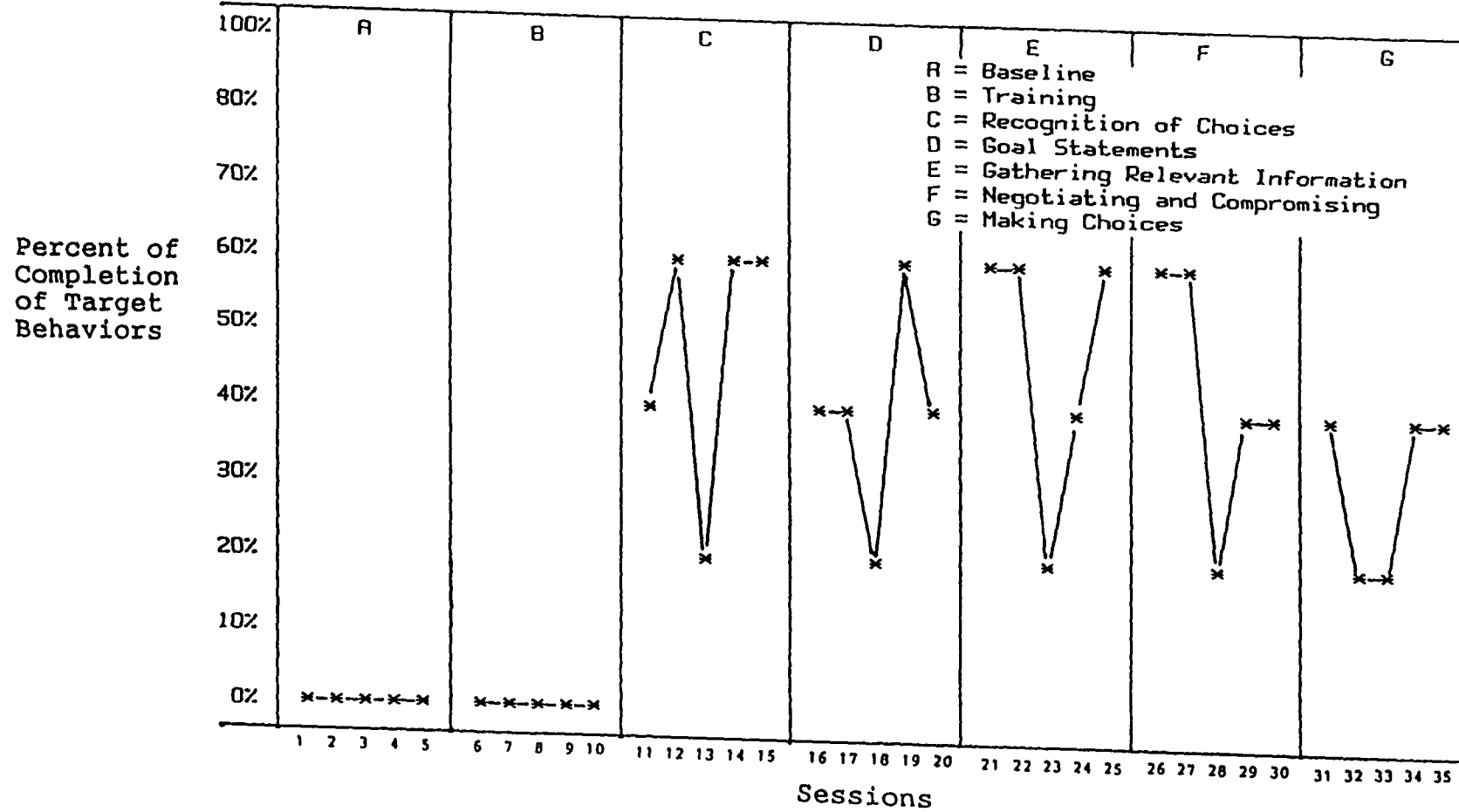


FIGURE 5A: Charles



compromising strategies"; and, a 32% average increase in target behaviors at the introduction of element (g), "making choices".

Bob.

The participant referred to as Bob had an average increase of 40% in target behaviors at the introduction of element (c), "recognizing choices" (see Figure 6 and 6a); a 27% average increase in target behaviors at the introduction of element (d), "goal statement"; a 43% average increase in target behaviors at the introduction of element (e), "gathering relevant information"; a 23% average increase in target behaviors at the introduction of element (f), "negotiation and compromising strategies"; and, a 20% average increase in target behaviors at the introduction of element (g), "making choices".

Renee.

The participant referred to as Renee had an average increase of 28% in target behaviors at the introduction of element (c), "recognizing choices" (see Figure 7 and 7a); a 28% average increase in target behaviors at the introduction of element (d), "goal statement"; a 24% average increase in target behaviors at the introduction of element (e), "gathering relevant information"; a 28% average increase in target behaviors at the introduction

Figure 6

Target Behaviors and Component Elements
Individual: Bob

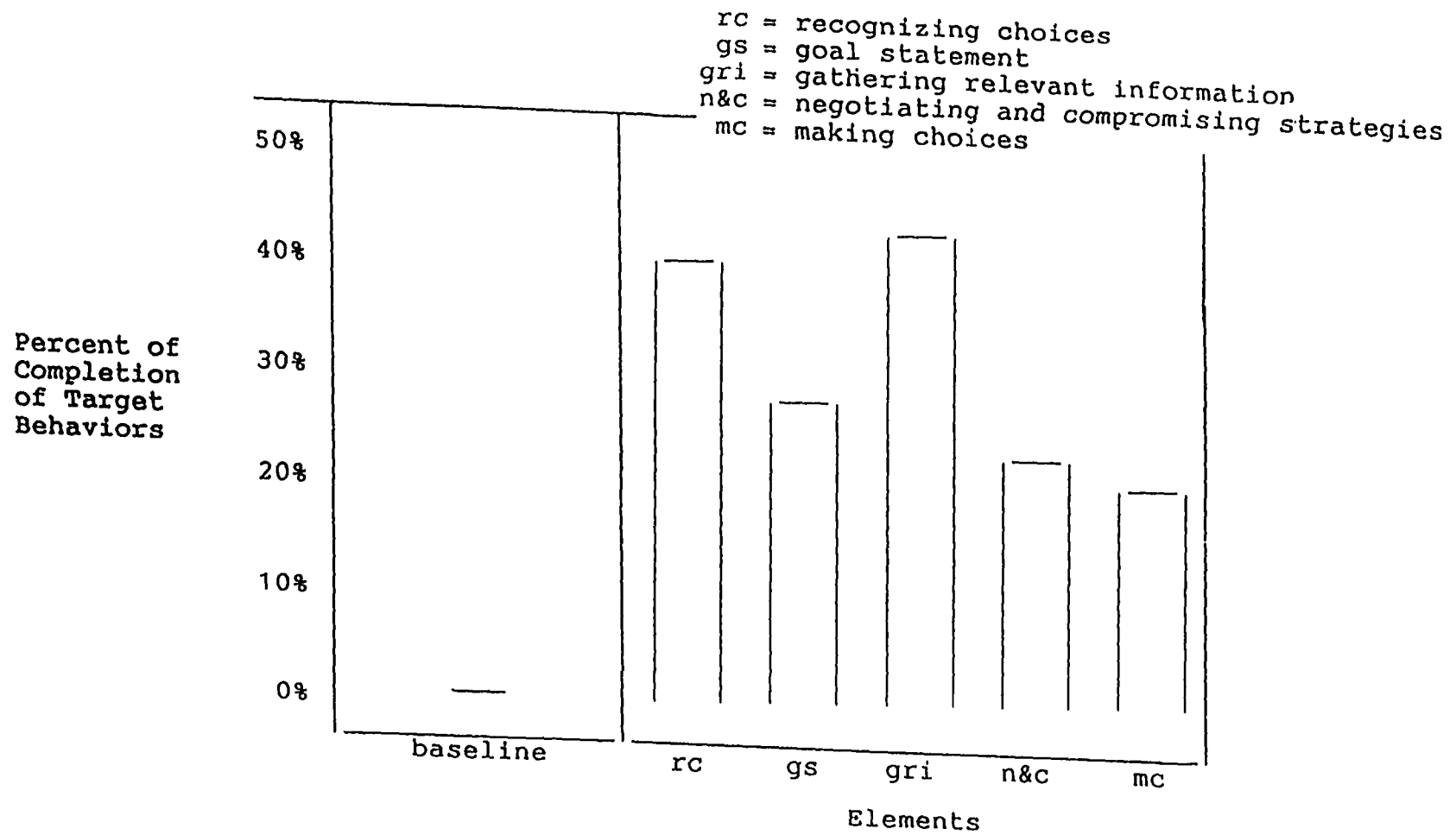


FIGURE 6A: Bob

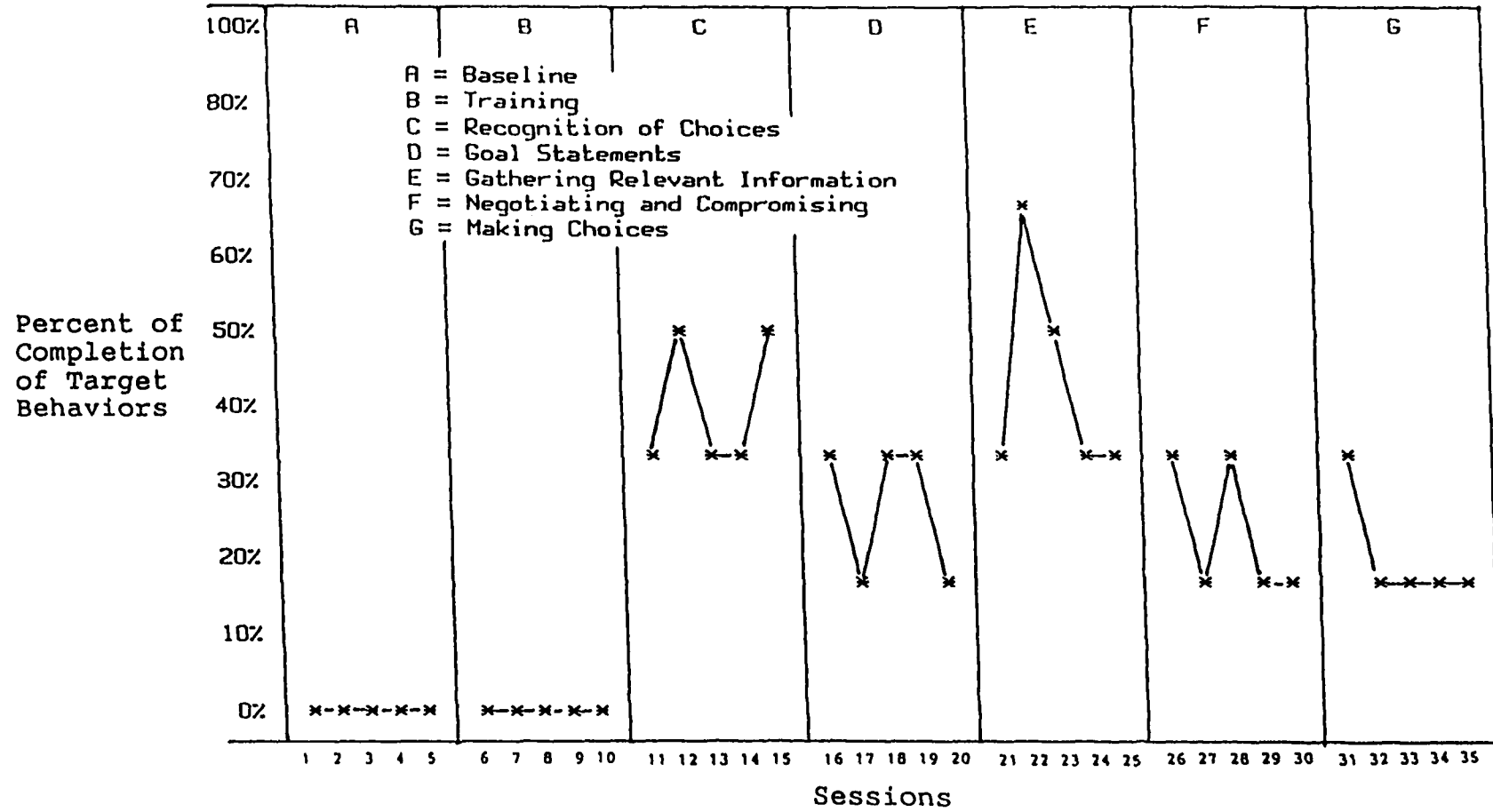


Figure 7

Target Behaviors and Component Elements
Individual: Renee

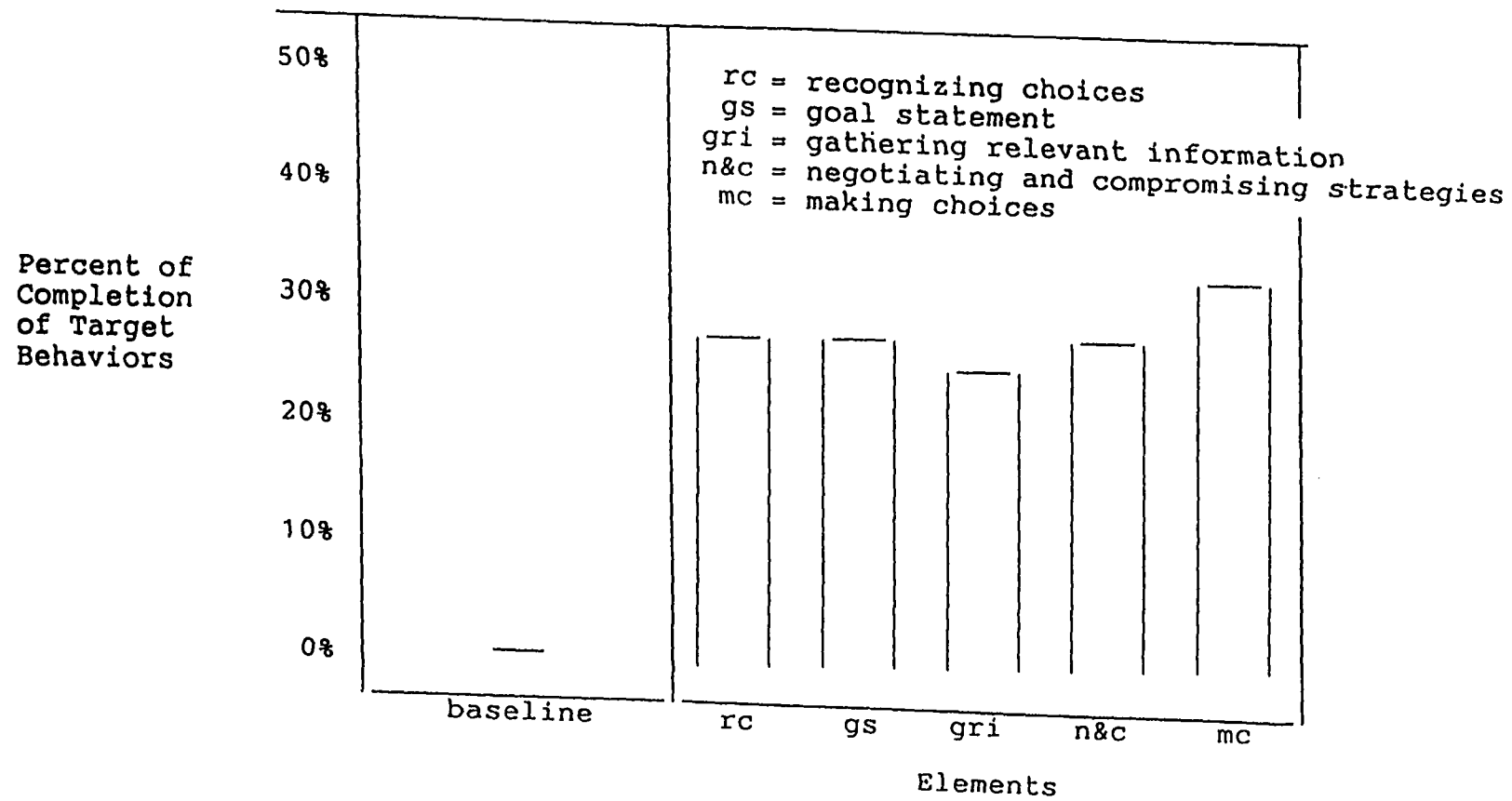
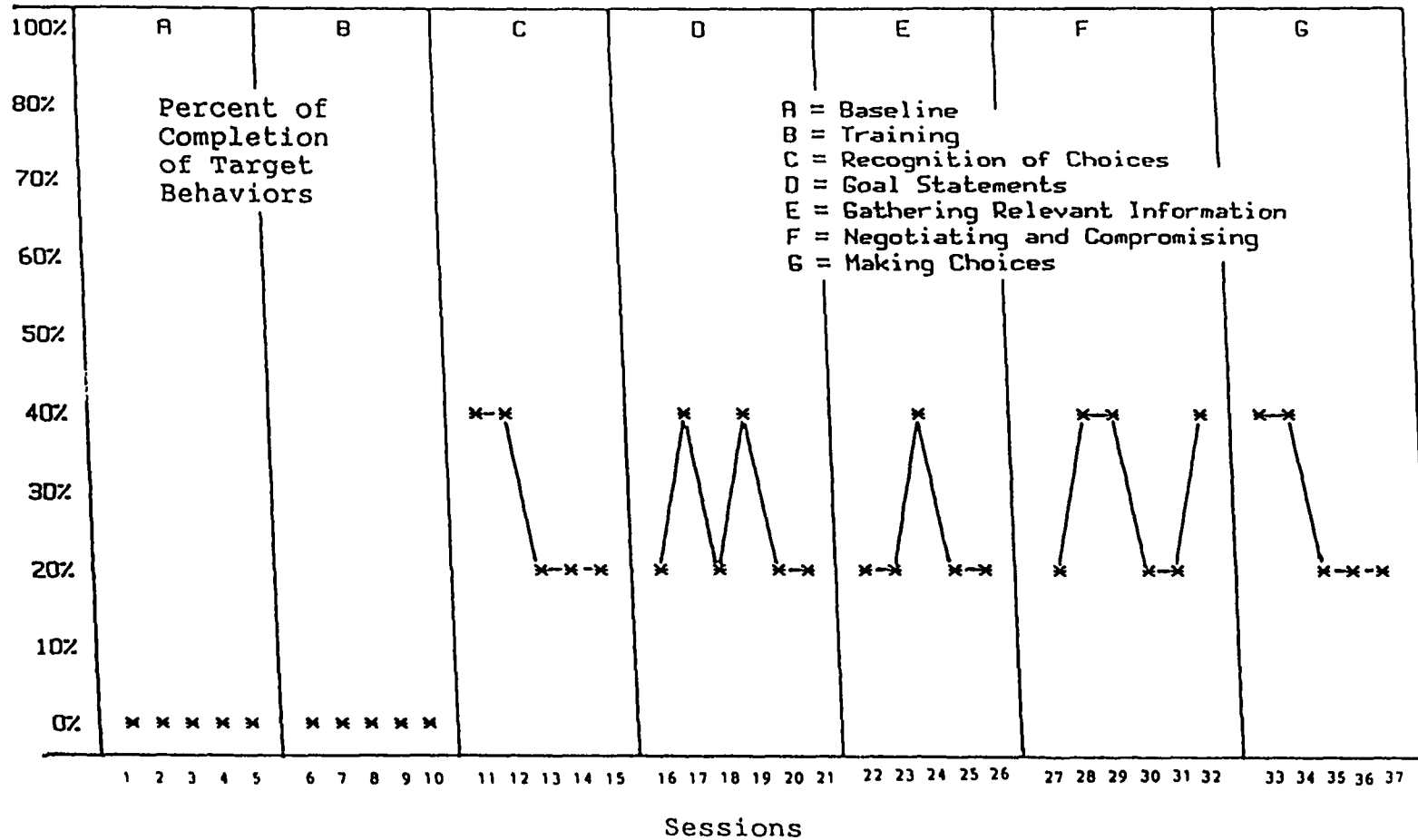


FIGURE 7A: Renee



of element (f), "negotiation and compromising strategies"; and, a 32% average increase in target behaviors at the introduction of element (g), "making choices".

Criteria and the component elements

All participants met the criteria for element (c), "recognizing choices" (the participants identified three choices per session for five consecutive sessions). The participants had no problems in identifying three choices of books found in the library, three choices of people to call on the phone, to whom to send three letters, three choices of things to draw, three different places to eat, etc.

Only one participant did not meet the criteria for element (d), developing a "goal statement". After six sessions the participant met the abandonment criteria of five sessions in which the participant was unable to produce a goal statement. The other five participants were able to develop one goal statement during five consecutive sessions.

None of the participants met the criteria for element (e), "gathering relevant information". "Gathering relevant information" was divided into three areas: "consequences" of the choice; "options" other than the choice; and, "resources and skills" needed to make the choice. For example, participants were asked during

a session to give three "consequences" for going to a new event, three "options" other than going to a new event, and three "resources and skills" needed to attend a new event. Element (e), "gathering relevant information", consisting of these three areas, was repeated for at least five sessions and involved at least five target behaviors per participant. None of the participants was able to offer three "consequences", three "options", or three "resources and skills" needed for any of the target behaviors at any one session. Out of a possible ninety responses per area (six participants x three responses per session x five sessions), participants offered 24 "consequences" (26.7%), 35 "options" (38.9%), and 46 "resources and skills" needed (51.1%).

Element (f), "negotiating and compromising strategies" consisted of three opportunities, per session, to identify strategies through negotiation and compromising to remove or overcome barriers. Only one participant met the criteria for element (f). The participant identified three opportunities, during each of the five sessions, to negotiate or compromise in an attempt to remove or overcome a barrier. The other five participants failed to meet the criteria and reached the abandonment criteria of five sessions in which they were unable to identify three opportunities to negotiate or compromise in an attempt to remove or overcome a barrier. As in each area of "gathering relevant information",

there were ninety possible opportunities to make an appropriate response for "negotiating or compromising" (six participants x three opportunities per session x five sessions). Out of a possible 90 opportunities to respond to "negotiating and compromising strategies", the participants offered 40 responses (44.4%).

All participants met the criteria for Element (g), "making choices". The participants had no problems in making choices regarding the target behaviors. For example, the participants had no difficulty in: choosing to continue to use the library; choosing to continue to attend new events; choosing to eat at new and different food establishments; etc.

External evaluation

During element (i), "external evaluation", references were asked to respond to the same three "consequences", three "options", three "resources and skills", and three "negotiating and compromising strategies" for each target behavior as did the participants. The references responded to 72 out of the 90 possible "consequences" (80%) compared to the participants 24 out of 90 responses (26.7%) (see Table 5). References responded to 72 out of the 90 possible "options" available (80%) compared to the participants 35 out of 90 possible responses (38.9%). References responded to 81 out of 90 possible "resources and skills"

Table 5

Component Element Responses

Element	Participants	References	t score
Consequences	24/90 = 26.7%	72/90 = 80%	9.049*
Options	35/90 = 38.9%	72/90 = 80%	5.076*
Resources/ Skills	46/90 = 51.1%	81/90 = 90%	5.299*
Negotiating/ Compromising Strategies	40/90 = 44.4%	89/90 = 98.9%	8.391*
Total	145/360 = 40.3%	314/360 = 87.2%	

independent t
* $P < 0.000$

needed (90%) compared to the participants 46 out of 90 possible responses (51.1%). References responded to 89 out of 90 possible "negotiation and compromising strategies" (98.89%) compared to the participants 40 out of 90 possible responses (44.4%). Analysis, using the independent t, comparing the reference's number of responses to that of the participant's number of responses showed statistical significance, for all four categories (see Table 5).

Choice assessment

Aggregate

During the assessment phase of this study, a "choice assessment" (see Appendix D) consisting of 42 items was given to each participant. Examples of items found on the "choice assessment" included: Do you choose what personal care items you use?; or, Did you choose your room decor or furnishing? At termination of this project a post-test "choice assessment" consisting of the same 42 items was administered. All participants showed an increase in choices made after the intervention package was administered. The average increase in choices made for all participants was 11.7% with the range from 7.3% to 19.6%.

Individuals

The differences between the pre- and post-test

"choice assessment" for each participant are reported below. As mentioned, all participants showed an increase in choices made (see Figure 8).

Charles.

The participant referred to as Charles had an 8% increase in choices made. This increase was reflected by an expansion of choices in "community use". At termination of this project, Charles had regularly attended the library, museums, and community activities.

Bob.

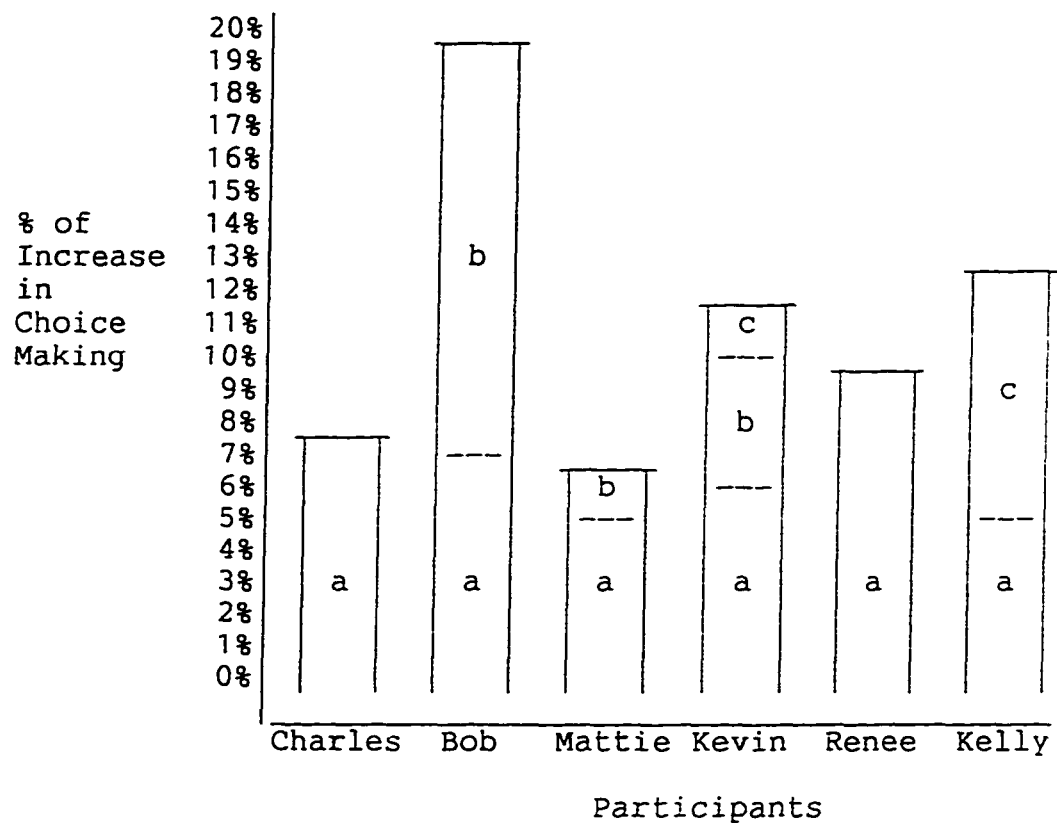
The participant referred to as Bob had a 19.6% increase in choices made. This increase was reflected by an expansion of choices in community use (attending museums, libraries, concerts, etc.) and choices in personal care items (e.g., toothpaste, soap, shampoo).

Mattie.

The participant referred to as Mattie had a 7.3% increase in choices made. This increase was reflected by an expansion of choices in community use (e.g., museums, libraries, etc.) and the opportunity to choose where to purchase personal care items.

Figure 8

Increase in Choices



a = community use
b = personal care items
c = daily routines

Kevin.

The participant referred to as Kevin had a 12.2% increase in choices made. This increase was reflected by an expansion of choices in community use (e.g., museums, libraries, etc.), personal care skills (choosing what clothing to wear and where to purchase personal items) and daily routine (when to shop for personal items).

Renee.

The participant referred to as Renee had a 9.7% increase in choices made. This increase was reflected by an expansion of choices in community use (e.g., attending museums, concerts, libraries, etc.).

Kelly.

The participant referred to as Kelly had a 13.1% increase in choices made. This increase was reflected by an expansion of choices in community use (e.g., attending museums, concerts, libraries, etc.) and daily routines (being able to choose what to eat, when to eat, and with whom to eat).

Adaptive skill score and choice assessment

An adaptive skill score was produced for each participant by assigning a rating system to the adaptive skill areas of the AAMR definition of mental retardation. The rating system consisted of: "0" for having no needs;

"1" for having intermittent needs; "2" for having limited needs; "3" for having extensive needs; and, "4" for having pervasive needs. Each of the ten adaptive skill areas (communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work) were rated for each participant by his/her reference. For example if a participant had intermittent needs in communication, limited needs in social skills, and extensive needs in functional academics, the adaptive skill communication would be assigned the rating of "1", social skills would be assigned the rating of "2", and functional academics would be assigned a "3". This example would give an adaptive skill score, for these three areas, of six. The adaptive skill score reflects both "how many" and what the "magnitude" of the skills needed. The adaptive skill scores might suggest that the participants with the highest scores (when totaling the ten adaptive skill areas) would be the participants with the most needs.

The pre-test "choice assessment" gave the number of choices a participant "always", "sometimes", and "never" makes (see Appendix D). This allowed for an association to be measured between the adaptive skill score (indicating the amount of needs a participant had) and the "choice assessment" (indicating the number of choices a participant made). Figure 9 is a plot of the data, using the adaptive skill score and the number of "never"

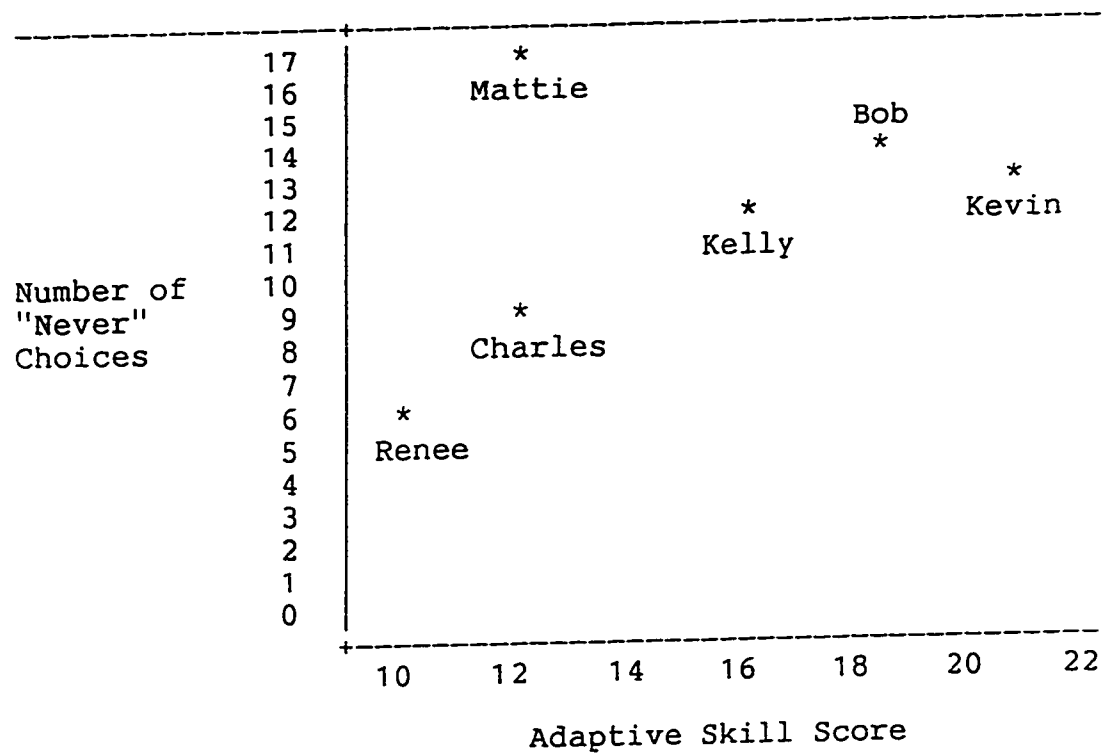
choices made by the participant (e.g., to the question, "do you choose which tooth paste to use?", the participant would respond "never"). The "never" items were measured (versus the "always" or "sometimes" items) because these were the areas that participants were never allowed to demonstrate or practice appropriate choice and decision-making. Conversely, the response "sometimes" offered the potential for "others" to recognize that the participants have the abilities to make appropriate choice and decision-making. Visual examination of Figure 9 shows a positive relationship between the amount of needs a participant had and the number of "never" choices he/she responded to. As we might expect, as the number and magnitude of needs increase the more times "never" was given as a response to on the "choice assessment".

Amount of freedom

During the assessment phase, a pre-test Likert type scale was given to all participants to assess the amount of freedom (see Appendix E) they felt they had to make important decisions that influence their everyday life. It was intended that a post-test would identify any changes in perceived amounts of freedom due to the introduction of the intervention package. The cognitive abilities of the participants to understand the concept of a Likert type scale was assessed (see "Information Gathered for Assessment Purposes" for procedures that

Figure 9

Plot of Adaptive Skill Scores and Never Choices



were used). None of the participants demonstrated a continuum of responses, suggesting that they were unable to understand the concept of a Likert type scale. For example, while administering the scale, one participant gave an example of a "one" (having the same influence to make important decisions that influence your life as a family or staff member) as being: "My brother is very nice"; the example given of a "three" (no influence to make important decisions) was: "Working in my room and at my desk"; and the example given of a "two" (having some influence to make important decisions) was not responded to. This lack of demonstration (of a continuum of responses) of an understanding of the concept of a Likert type scale suggested that the ratings of the perceived amounts of freedom were invalid for all six participants.

Generalization

Two examples of target behaviors being generalized were observed in this study. First, Charles who was fascinated with all aspects of weather, would twice a day at precisely the same time watch TV for the current weather report. While looking for "options" (element e) to get weather information, he examined the use of the daily newspaper for weather reports. During one examination of the newspaper, Charles discovered a local telephone number that could be called to get current weather information anytime day or night. The newspaper

has since been discarded and Charles has used the phone number for weather information at least once a day for the duration of this study.

Second, after learning a strategy that allowed Bob to send postcards to anyone he desired, Bob left home to visit family in another state. While gone from home, he sent postcards back home to his immediate family. Although a learning strategy had been put in place, what was of importance was that Bob, on his own initiative, demonstrated and exercised control over his environment, in a way that was meaningful to him, in an unique and different setting, and on his own terms.

Relinquishing more control by others and positive change in communication

This study offered anecdotal evidence of references relinquishing more of the control of the management of the participant's lifestyles to the participants. The following is an example that was observed during this study in which more control was relinquished to the participant, while a positive change in communication occurred.

During the assessment phase of this study, a reference began discussing with the researcher the possibility of Bob making choices regarding his personal items. The reference noted that she had never thought of letting Bob make those choices, the reference thought

that she was supposed to choose his personal items, and "that was the way it had always been". After some discussion, the reference agreed to a trial run. Bob was encouraged to give input as to where he wanted to go to buy personal items and was then allowed to choose personal items without the reference's input. The reference later recalled, "before, he used to look to me for approval for everything he did, now he just goes about doing what he wants". The reference reported that Bob used to be more shy about deciding what he wants to do, "now he is much more direct and tells me what he wants and needs".

Reliability

Interrater reliability was calculated for this study. Three doctoral students in special education, with experience working with individuals with mental retardation, were trained in the purpose and procedures of this study by the principal investigator. The doctoral students acted as second observers for reliability purposes. Reliability was measured on: the continuum of responses of the perceived amounts of freedom for three participants; the difference between the pre- and post-"choice assessment" for three participants; and, the number of target behaviors performed during one session for each participant. Interrater reliability on the three continua of responses

(9 opportunities for disagreement) was 100% in agreement between the principal investigator and the second observers. The difference between the three pre- and post-"choice assessments" (12 opportunities for disagreement) was also 100% in agreement, and the number of target behaviors performed during one session for each participant (20 opportunities for disagreement) was 95% in agreement (19 out of 20). The overall interrater reliability for this study was 98% (40 out of a possible 41 agreements). The pilot study should be credited with the reliability reported in this study. Because of the pilot study, which reported 89% reliability, revisions were made in the training of the second observers that better clarified the purpose and procedures of each of the elements and resulted in this high reliability.

Summary

The results of the effects of the intervention package were presented in this chapter. The introduction of the component elements of the intervention package increased the occurrence of the target behaviors for all participants. The average increase of target behaviors for all participants were as follows: "recognizing choices", 33% increase; developing a "goal statement", 26% increase; "gathering relevant information", 35% increase; "negotiating and compromising", 28% increase; and, "making choices", 24% increase.

Three of the elements: (c), "recognizing choices"; (d), developing a "goal statement"; and, (g), "making choices", presented little or no difficulty for the participants to meet the criteria (of the three elements noted only one participant did not meet the criterion for element d). Two elements: (e), "gathering relevant information"; and, (f), "negotiating and compromising strategies", presented much difficulty in meeting the criteria (of the two elements noted only one participant met the criterion for element f).

The external evaluations by the references showed a wide discrepancy between the number of responses regarding consequences, options, resources and skills needed, and negotiating and compromising strategies given by the participants (145/360, 40.3%) and the number of responses given by the references (314/360, 87.2%).

The "choice assessments" administered prior to the study (pre-test) compared to the "choice assessments" administered after the study (post-test) showed an average increase of 11.7% in choices being made by the participants, with a range of 7.3% to 19.6%.

The Likert type scale, designed to measure the amounts of freedom participants felt that they had to influence their everyday life, was invalidated because none of the participants were able to demonstrate a continuum of responses, suggesting that they were unable to understand the concept of the Likert type scale.

Examples of generalization found in this study, the relinquishing of more controls by others, and improvement in communication between participants and references were provided. Finally, interrater reliability was reported.

CHAPTER V

Discussions and Conclusions

Introduction

This Chapter provides an examination of the results from the analyses of the research questions. In addition, further discussions, limitations, and possible future research are explored.

Analyses of the Research Questions

1. What effect will this intervention package have on increasing self-determining skills and which component elements of the intervention package are most and least effective in increasing self-determining skills?

Increasing self-determining skills was important to this study because research has offered evidence that individuals with mental retardation who consistently engage in self-determining behaviors are indeed self-determined (Wehmeyer, Kelchner, & Richards, 1996).

Although all of the component elements of the intervention package increased the occurrence of the target behaviors, the elements that increased the target behaviors most were those elements associated with the

"discovery of options" available (e.g., "recognizing choices", 32.83% increase in target behaviors) and the "collection of information" regarding those options (e.g., "gathering relevant information", 34.22% increase in target behaviors). Component elements that were not associated with either the discovery of available options or the collection of information regarding those options increased the occurrence of target behaviors least, although gains were made. For example, developing a "goal statement" (to assist in staying focused, 25.71% increase in target behaviors), learning "negotiating and compromising strategies" (to remove barriers and "all or nothing" choices, 28.12% increase in target behaviors), and "making choices" (23.93% increase in target behaviors) were not associated with the discovery of options or the collection of information regarding those options and increased the occurrence of the target behaviors least. To offer further support for this argument, no target behaviors occurred during the pilot study prior to element (c), "recognition of choices". Neither element (a), "terms and concepts" nor element (b), "self monitoring", were associated with the discovery of options or collecting information regarding those options and neither increased the occurrence of target behaviors.

This study suggests that intervention packages designed to assist individuals with mental retardation

increase their self-determining skills should emphasize the discovery of options and the collection of information concerning those options. Further, other elements known to be associated with self-determination found in this treatment package (e.g., developing "goal statements", "negotiation and compromising strategies", and "making choices", etc.) should not be overlooked or underestimated in their contributions to assist individuals obtain self-determination.

2. How much difficulty will the participants of this study have in following the intervention design?

All participants were able to meet the criteria for element (c), "recognizing choices" and element (g), "making choices". Five out of the six participants were able to meet the criterion for element (d), developing a "goal statement". Only one participant met the criterion for element (f), "negotiating and compromising strategies", while none of the participants were able to meet the criterion for element (e), "gathering relevant information".

Although elements (e) and (f) were the most difficult to meet the criteria, these elements were also the most revealing. The data indicated that the participants in this study were able to identify "resources and skills" needed (51.1% of the time) more easily than identifying "negotiating and compromising

strategies" (44.4% of the time), identifying "options" available (38.9% of the time), or "consequences" of the choices (26.7% of the time). There was also reported a wide discrepancy when comparing the participants' responses to the number of references' responses. References were more able to identify "consequences" (80% of the time), "options" (80% of the time), "resources and skills" needed (90% of the time), and "negotiating and compromising strategies" (98.89% of the time).

Because of the wide discrepancy between the participants and the references, this study suggests that in designing an intervention package for individuals with mental retardation the emphasis on training should be placed on identifying "options" available and "consequences" of those options and less emphasis should be placed on identifying "negotiating and compromising strategies" and "resources and skills" needed.

3. What effect will the intervention package have on the choices being made by the participants that impact their daily life?

Acquiring or improving choice and decision-making was important to this study because choice and decision-making form the basis of self-determination (Deci, 1980). This project provided evidence that the participants assumed more control over the choices that impact their lives. There was an average increase of 11.7% on the

"choice assessment" by the participants at the conclusion of this study. These choices were reported to and observed by the researcher as being meaningful to the participants. Examples of choices that were reported as meaningful by the participants of this study included: (1) Bob, for the first time in his life, attended events by himself; (2) Kevin purchased clothing items on his own, without suggestions or guidance by his parents; and, (3) Kelly, by rearranging his work schedule, was able to choose who he wanted to eat with. The literature suggests that this increase in choices made by individuals with disabilities are associated with quality of life issues. The investigator observed participants: being more independent (moving about on campus more often); displaying more dignity by making choices and decisions (e.g., deciding when and where to meet with the researcher, deciding what to do on their days off, etc.); and, increase their self-worth by demonstrating more self-determining behaviors (e.g., using the library, attending new events, etc.). The participants made progress in their efforts to shed labels, traditional roles, and expectations that usually accompany individuals with mental retardation.

4. Will the intervention package generalize to different and unique settings?

There was no evidence observed by the researcher of

the component elements of the intervention package being generalized. The investigator did not observe or receive information about, for example, goal statements or negotiating and compromising strategies being used in different and unique settings. Although, two examples were reported in Chapter 4 of the target behaviors being generalized in different and unique settings.

This study provides evidence that the component elements of the intervention package did not generalize. Whereas, the intervention package, as a whole, will generalize to different and unique choice and decision-making opportunities. This study also suggests that self-determining behaviors will generalize to other different and unique self-determining behaviors.

5. If participants obtain, improve, and increase their self-determining skills, evident by their abilities to make appropriate choices and decisions, will "others" relinquish more control of the management of their lifestyles to the participants?

This study offered examples of references permitting increased self-management to the participants. This increase in self-management is also evident by the increase in choice and decision-making by the participants. This relinquishing of more control to the individuals was related to two possible causae: first, the participants of the study demonstrated sound and

rational choices that were recognized by "others" as being appropriate (e.g., choosing personal care items); and, second, "others" recognized that they were inadvertently placing barriers between the participants of this study and self-determination.

The participants that were observed to have the least amount of control relinquished to them, were those that were closely associated with references who intentionally placed barriers between the participants and self-determination. These barriers were established in an effort to be protective, limit risks, and avoid environments in which the participants, as one reference stated, "would be abused or taken advantage of". This is consistent with Ward's (1988) view that a major obstacle in the family is the lack of the "right to fail" (p.3). Failure can provide important opportunities for problem solving, decision-making, and responding creatively to difficult situations.

Further Discussions

Self-determining behaviors

The results of this study provided evidence that as the number and magnitude of needs an individual with mental retardation has, the fewer the number of choices they are permitted to make. In Chapter 4, a plot of the data was provided (see Figure 9) and attention was drawn to an outlier (Mattie). The outlier lived in an overly

protective environment which partially accounted for the participant's low number of choices (or high number of "never" choices). Mattie was rated low in her number and magnitude of needs. This low rating of needs was obtained because she possessed many self-determining behaviors (e.g., cleaning living and sleeping areas, washing and drying clothes, cooking and cleaning up after cooking, personal hygiene, etc.). Although Mattie possessed self-determining behaviors, she rarely self-initiated these behaviors. Mattie was observed on several occasions waiting for others to provide direction (e.g., time to go to bed, time to cook a meal, time to do chores, etc). Without self-initiation, the participant's self-determination must be questioned. Mattie served to indicate that self-determining behaviors are only one aspect of self-direction. Once self-determining behaviors have been instilled, focus on the other aspects of self-determination must take place (e.g., self-initiation, social influences, environment, attitude, etc.).

Social influences

This study provided evidence that social contexts play a critical role in self-determination. The following section contains discussions regarding these social influences.

Appraisals of self and others.

During this study Kevin began spending a considerable amount of time in the university library. He commented that this was the only place that "people ask me questions". Walking on campus he tended to stand out from the rest of the students, but, while in the library, he was seen as a person who could read, visited the library for a purpose, and knew his way around the environment. On occasion he was asked a question (the principal investigator observed him being asked where the copy shop was located). He presumably preferred time in the library partially because others perceived him as competent while being there.

The self is made up of reflected appraisals of others (Manis & Meltzer, 1978). What we think of ourselves is decisively influenced by what others think of us. Individuals with mental retardation are more likely to be influenced and accept roles assigned to them by others because their lives are more often directed and dictated by others (Sands & Wehmeyer, 1996). In the case of an individual with mental retardation who is perceived by others as lacking self-determination, he/she may be influenced by the perceptions of others and take on a role of being without self-determination. However, the introduction of self-determining behaviors to the individual, followed by increased opportunities to exhibit these self-determining behaviors, can alter

others' perceptions of this individual. Persons with mental retardation may be more likely than others to be influenced by outside appraisal. New perceptions formed by observing increased self-determining behaviors can directly influence an individual with mental retardation's own view of self. Such was the case in Kevin's situation. His perception that others viewed him as being competent while in the library facilitated him taking on the role of being competent.

Opportunities from others.

As discussed in Chapter Four, a reference allowed Bob, for the first time, to choose his personal care items. The reference was unaware that Bob had abilities to make appropriate choices and that not permitting opportunities for choice were placing a barrier to his self-determination.

Opportunities for individuals with mental retardation to demonstrate self-determination must be made available by those who are in control of the management of the individuals' lives. As Kennedy (1996) commented, assisting someone is always going to be limited by the helper's beliefs and expectations. If others do not allow opportunities for self-determination or place limits on individuals because of their beliefs that these individuals are incapable, self-determination may never increase.

Team-work and powersharing with others.

Kelly would not visit the library because he was afraid of using the computer to locate a call number and did not know who or how to ask for assistance. During the assessment, he commented, "I didn't want them to ask me to leave". After being introduced to several different librarians and on one occasion being allowed to go behind the reference desk to see a call number on a librarian's monitor, the participant became comfortable asking for assistance.

Because no one is totally self-determining or is totally without self-determination, including individuals with severe disabilities, team-work and powersharing with others is essential in developing self-determination. Through team-work and powersharing others can assist individuals with mental retardation to locate information or resources, subsequently decision-making is transferred to these individuals allowing for them to exert more control over the environment. Such was the case with Kelly. By assisting Kelly to feel comfortable asking for assistance (he felt he was part of the team), Kelly was able to use the acquired information to exert control over his environment.

Negotiating and compromising strategies.

Although, no observations or reports of participants

using negotiating or compromising strategies in other settings were documented, every opportunity for interaction could not have been observed. Therefore it is essential that we continue to teach strategies for negotiation and compromise with others in efforts to remove or overcome barriers. As Wehmeyer (1995) noted, choices for adults with mental retardation who do not possess negotiation strategies are too often "all or nothing".

External evaluations by others.

This study provided no evidence of changes in the choices made by the participants (element g) after input from the external evaluations (element i) of the references. It is nonetheless imperative that external evaluations by others be received for feedback, gaining advice, direction, back-up, and support for the decisions individuals with mental retardation make.

Limitations of the Study

Several limitations of the study should be noted. First, caution must be taken regarding any overall conclusions drawn from this study. The sample consisted of only six adults from the same region of the country and the information collected might not be representative of the national population. Before any conclusions presented from this study can be generalized further

replication of these results are needed.

Second, the study provides evidence that the target behaviors were not highly sophisticated or complex. None of the participants' choices were affected by the additional information supplied by the external evaluations. The references' input did not affect whether or not the participants wished to continue using the library, phone, attending new events, etc. With more sophisticated and complex choices (e.g., choosing whether or not to accept a different job offer), additional information supplied by the references might effect the participants' choice.

Third, it is essential to recognize that the increased attention paid to the participants by the researcher could have influenced their behavior during this study. The increased attention could contribute to the behavior changes. The researcher noted that participants performed target behaviors that were rewarded not only by the naturally occurring reinforcers (e.g., books, attending new events, etc.), but also by the anticipation of the researcher's presence in the future.

Last, it must be recognized that persons with mental retardation are often raised in environments dependent upon others. This dependency may preclude the individual's ability to learn self-determining skills. One of the participants in this study made the comment,

"I don't know what I would do if someone didn't tell me what to do -- I would go crazy". This dependency on others carried over into this project, to the point that, the participant asked permission from his reference to self-initiate his eating times.

Future Research

An area of research that would be beneficial to further study involves an indepth examination of social influences on self-determination. Isolating the social influences on self-determination, though difficult to investigate, promises to be very fruitful.

Another area of research needs to determine the association between self-determination and self-confidence or life satisfaction. In this regard, the relationship between self-determination and quality of life should be considered.

An additional area of interest might investigate the relationship between individuals with mental retardation and their participation in choices and decisions that affect their lives and varying levels of the importance of decisions to be made. For example, moving into a new residence involves more complex strategies of developing goal statements, gathering relevant information, evaluating consequences, and assessing judgements of others.

In addition, examining effective instructions that

assist individuals with mental retardation to understand the concepts of a Likert type scale would be of immense value. Last, an important area of interest would consider developing interventions to fade dependence on authority figures by assisting externally cued behaviors in becoming self-initiated behaviors.

Chapter Summary

In a study by Wehmeyer, Kelchner, and Richards (1996), the authors provided evidence that individuals who consistently engage in self-determined behaviors are indeed self-determined. The present study offered evidence that the intervention package presented improved self-determining skills. Although all the elements in the intervention package increased the occurrence of the target behaviors and none of the elements should be overlooked or underestimated, this study suggested that researchers should emphasize the elements associated with the discovery of options and the collection of information concerning those options. This research suggested that in designing an intervention package, the emphasis on training should be placed on identifying "options" available and "consequences" of those options" and less emphasis should be placed on identifying "resources and skills", "negotiating and compromising strategies", "recognizing choices", developing "goal statements" and "making choices".

In analyzing the data of this study, the researcher was reminded that aspects of self-determination other than self-determining behaviors can be powerful factors. For example, self-initiation, social influences, environment, attitude, and opportunity, all interact in this complex phenomena.

This research provided data indicating that due to the intervention package, the participants assumed more responsibilities in the choices that impact their daily lives. There was limited evidence reported that target behaviors were generalized in different and unique settings, along with indications of "others" relinquishing more control of the management of the participants' lifestyles to the participants. Examples of participants' behaviors that were self-initiated, meaningful, facilitated improved communication, and involved team-work and powersharing were evident.

This study presented data arguing that social influences are critical in the development of self-determination and the need to further examine this issue. The limitations of this study were discussed including: the need for further replication of these results; the need to be aware of the increased attention paid to the participants by the researcher; and, the dependency of individuals with mental retardation upon "others".

Four areas of possible future research were discussed: the need to examine the social influences on

self-determination; the need to examine the association between self-determination and quality of life issues; the need to examine instruction that would assist individuals with mental retardation understand the concepts of the Likert type scale; and, the need to examine the relative importance of the choices and decisions that affect the lives of individuals with mental retardation.

Concluding Remarks

In concluding this dissertation, the difference in the quality of life between individuals with and individuals without self-determination is emphasized. Those individuals, who are without self-determination, who are not demonstrating appropriate choice and decision-making skills, often find themselves in regimented and inflexible lifestyles, with little or no opportunity for personal growth. Those individuals are often described by others as being dependent and helpless, with little ability to make an impact in the decisions that effect their lives.

On the other hand, persons with self-determination, who are taking control of the management of their lifestyles, are re-defining their identity and their future. Their personal growth is allowing them to assume greater control and responsibilities in the decisions that effect their lives. They are perceived by others as

capable of independence, dignity, and self-worth, while being contributors to their community. Individuals demonstrating self-determination have moved beyond labels, traditional roles, and expectations that often accompany individuals with mental retardation.

This paper has presented an effective intervention package designed to assist adults with mental retardation in obtaining self-determination. The results of this study will play an important role in the revision and improvement of this and future intervention packages designed to assist individuals taking control of their lifestyles through self-determination. The intervention was designed so that individuals no longer have to wait until society becomes more accepting of diversity. Instead, the intervention allows individuals to become managers of their own lives, and they themselves can help change society into a more accepting community.

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Appendix A

Definitions of Self-Determination

Turnbull, Turnbull, Shank, and Leal (1995) define self-determination as the ability of individuals to live their lives the way they choose to live them, consistent with their own values, preferences, and abilities. The issue involves adults taking control of their lives and learning to make decisions for themselves. To increase self-determination, individuals must be taught to express preferences, be assertive and problem solve.

Wehmeyer and Kelchner (1994) defines self-determination as those attitudes and abilities necessary for individuals to become the causal agent in their lives, to assume greater control in decisions which impact them and to experience increased opportunities for choice and an enhance quality of life.

Schloss, Alper, and Jayne (1993) define self-determination as the ability of a person to consider options and make appropriate choices regarding residential life, work, and leisure time.

Wehmeyer (1993) defines self-determination as the inherent right of individuals with disabilities to assume control of and make choices which impact their lives. This action, taken by the individual, results in a life that is filled with expectations, dignity, responsibility and opportunity.

Wehmeyer (1993) also defines self-determination as

enabling individuals to make choices and decisions based upon their own values, beliefs, interests and abilities to assume greater control and responsibility in their lives.

Wehmeyer (1992) defines self-determination as the attitudes and abilities required for one to act as the primary causal agent in one's life and to make choices regarding one's actions free from undue external influence or interference. This "process" relates to: (a) autonomy (acting according to one's own priorities or principals); (b) self-actualization (the full development and use of one's unique talents and potentialities); and, (c) self-regulation (cognitive or self-controlled mediation of one's behavior).

Wehmeyer and Berkobien (1991) define self-determination as the opportunity and ability to make choices and decisions regarding one's quality of life.

Wetherby (1988) defines self-determination as the means of addressing the need for young people with disabilities to take charge of their own lives and to speak for themselves in an effort to overcome discrimination, segregation, and unequal opportunities based on disability.

Ward (1988) defines self-determination as the importance of people taking control, without undue external influence, over what affects their lives.

Turnbull and Turnbull (1985) define a self-

determined person, as one who strives toward autonomy or independence, thus choosing to live one's own life within one's inherent capacities and means, and in a way consistent with one's personal values and preferences.

Deci (1980) defines self-determination as the capacity to choose and to have those choices be the determinants of one's action.

Appendix B

Definitions of Mental Retardation

1959 AAMR definition of Mental Retardation:

Mental retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairments in adaptive behaviors (Heber, 1961).

1973 AAMR definition of Mental Retardation:

Mental retardation refers to significantly subaverage general intellectual functioning resulting in or associated with deficits in adaptive behavior, and manifested during the developmental period (Grossman, 1973).

1983 AAMR definition of Mental Retardation:

Mental retardation refers to significantly subaverage general intellectual functioning resulting in or associated with concurrent impairments in adaptive behavior and manifested during the developmental period (Grossman, 1983).

1992 AAMR definition of Mental Retardation:

Mental retardation refers to substantial limitations in present functioning. It is characterized by significantly subaverage intellectual functioning, existing concurrently with related limitations in two or more of the following applicable adaptive skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before the age of 18 (Luckasson, et al., 1992).

Appendix C

INFORMED CONSENT FORM for the study titled:

Taking Control Through Self-Determination:
The Management of One's Own Lifestyle
for Adults with Mental Retardation.

This study is being conducted under the auspices of the University of Oklahoma-Norman Campus. The following informed consent form is to be used by advocates and care-givers of individuals with mental retardation to give their consent to participate in this study.

The Principal Investigator and Person Responsible for this Project:

Scott L. Arnett, Special Education Program,
College of Education, University of Oklahoma.
(405) 329-8573

The purpose of this study is to examine the effectiveness of an intervention package, consisting of instructional techniques, designed to assist adults with mental retardation in obtaining self-determination. The achievement of self-determination in persons with mental retardation is based on their ability to display appropriate choice and decision-making skills. The procedures of this study are as follows: assessing prerequisite skills; recognizing choice and documenting goal statement(s); gathering relevant information; learning negotiating and compromising strategies; making a choice; self and external evaluations; self re-evaluation and self-reinforcement; and demonstration and practices. The expected duration of this project is six months.

This study is completely voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are entitled. You may discontinue participation at any time. All information and records that identify participants will be kept confidential and secure. By agreeing to participate and signing this form you do not waive any of your legal rights. If you have a problem, complaint, or concern about your rights, or questions in general, contact me at the above address/phone or Dr. David L. Lovett, at the same address above, (405) 325-1507.

I have read and understand this consent form and agree to participate in this study.

Advocate/Care-giver's signature

Date

Appendix C

PERMISSION TO PARTICIPATE in the study named:

Taking Control Through Self-Determination:
The Management of One's Own Lifestyle
for Adults with Mental Retardation.

This study is being done under the supervision of the University of Oklahoma. The following document is to be used by adults with mental retardation to give their permission to participate in this study.

The Person Responsible for this Study:

Scott L. Arnett, Special Education Program,
College of Education, University of Oklahoma.
(405) 329-8573

This study is intended to see how well adults with mental retardation can gain the skills needed to become in more control of their lives. The focus will be to achieve skills that are necessary for choice and decision making. The length of this study is six months.

You do not have to participate in this study unless you want to participate. You may quit at any time you want. You will not lose any benefits or privileges if you choose not to participate. No one will know that you participated unless you choose to tell them. By participating, you do not lose any rights.

If you have a question contact me at the above address/phone or Dr. David L. Lovett, at the same address above, (405) 325-1507.

I have read and understand this permission form and agree to participate in this study.

Participant's signature

Date

Appendix D

Choice Assessment

Questions are to be answered "always", "sometimes", and "never".

A. Personal Care Skills:

1. Do you choose what style of hair you wish to wear?
2. Do you choose when to get your hair cut?
3. Do you choose where to get your hair cut or styled?
4. Do you choose what type of shoes to wear?
5. Do you choose what clothing you wish to wear?
6. Do you choose what personal care items you use?
 - a. tooth paste?
 - b. soap?
 - c. shampoo?
7. Do you choose where to purchase personal care items?

B. Daily Routine:

1. Do you choose when to eat meals?
2. Do you choose what to eat?
3. Do you have a choice not to eat?
4. Do you choose with whom you eat?
5. Do you choose when to take a shower/bath?
6. Do you choose when to go to sleep?
7. Do you choose when you can leave your home?
8. Do you choose when to clean your room?
9. Do you choose when to shop for personal items?
10. Do you choose when you go to church?
11. Do you choose where to go to church?

C. Home Environment:

1. Did you choose your bedroom?
2. Did you choose your roommate?
3. Do you choose where to sit at the dinner table?
4. Did you choose your room decor or furnishing?

D. Recreation and Leisure:

1. Do you choose your leisure activities?
2. Do you choose when to have leisure activities?
3. Do you choose when to watch TV?
4. Do you choose what to watch on TV?
5. Do you choose which radio station to listen to?
6. Do you choose which events to attend?
7. Do you choose whom to spend your leisure time?

- E. Job Placement:
 - 1. Did you choose where you are working?
- F. Community Use:
 - 1. Do you choose to go to the following:
 - a. the library
 - b. community theaters
 - c. museums
- G. Personal Relationships:
 - 1. Do you choose your friends?
- H. Spending and Budgeting:
 - 1. Do you spend your own money?
 - 2. Do you buy what you want?
 - 3. Do you budget your money?
- I. Working Relationships:
 - 1. Do you choose with whom you wish to work (staff member, case worker, etc.)?

Appendix E
Degree of Freedom

(For References)

1. 2. 3. 4. 5.

1= same influence
as you

5= no
influence

What degree of freedom does _____ have to make
important decisions that influence his/her everyday life
as compared to you?

Appendix E

Degree of Freedom

(For Participant)

1. 2. 3.

1 = same influence
as you

3 = no
influence

What degree of freedom do you have to make important decisions that influence your everyday life as compared to your family or staff members?

In using a Likert type scale to measure the degree of freedom, for a rating of one (1), suggesting the same degree of freedom as a family or staff member, an example might be: an individual can go to a movie of his/her choice as often as he/she desires. A rating of two (2) might be: an individual can go to a movie with a consensus of others, once a week. A rating of three (3) might be: Others always choose time, place, and what movie.

1.

2.

3.

Appendix F

Notice placed in OCP newsletter

TAKING CONTROL OF THE MANAGEMENT
OF YOUR LIFE

- * A research project has been designed to assist adults with mental retardation obtain self-determination.
- * The project will focus on giving instruction on the process that individuals use to make appropriate choices and decisions.
- * Parents, staff members, and significant others will be encouraged to participate in this project.
- * The intervention will be led by a doctoral student in special education at the University of Oklahoma with extensive experience working with individuals with mental retardation.
- * The project is expected to last six months and begin during the summer of 1996.
- * The intervention is based on research literature in the field of self-determination. The intervention will entail developing pre-requisite skills, recognition of a choice, developing goal statements, strategies to gather relevant information, negotiating and compromising strategies, application of the choice, self-evaluation, external evaluations, self re-evaluation, self-reinforcement, and demonstrations and practice.
- * Expectations of this project are that participants will take more control of decisions that effect their lifestyles, re-defining their identities and their futures.
- * There will be no cost to participants or others.
- * For further information contact:

Scott Arnett
612 Leaning Elm Drive
Norman, OK 73071
(405) 329-8573



The University of Oklahoma

OFFICE OF RESEARCH ADMINISTRATION

June 21, 1996

Mr. Scott L. Arnett
Educational Psychology
University of Oklahoma

Dear Mr. Arnett:

The Institutional Review Board-Norman Campus, has reviewed the requested additional information you provided for your proposal, "Taking Control through Self-Determination: The Management of Personal Lifestyles by Adults with Mental Retardation." The Board found that this research would not constitute a risk to participants beyond those of normal, everyday life except in the area of privacy which is adequately protected by the confidentiality procedures. Therefore, the Board has approved the use of human subjects in this research.

This approval is for a period of twelve months from this date, provided that the research procedures are not changed significantly from those described in your "Application for Approval of the Use of Human Subjects" and attachments. Should you wish to deviate significantly from the described subject procedures, you must notify me and obtain prior approval from the Board for the changes.

At the end of the research, you must submit a short report describing your use of human subjects in the research and the results obtained. Should the research extend beyond 12 months, a progress report must be submitted with the request for re-approval, and a final report must be submitted at the end of the research.

Sincerely yours,

A handwritten signature in cursive script, reading "Karen M. Petry".

Karen M. Petry
Administrative Officer
Institutional Review Board-Norman Campus

KMP:sg
96-142

cc: Dr. E. Laurette Taylor, Chair, IRB
Dr. David L. Lovett, Educational Psychology

Appendix H

Target Behaviors

Kevin

- (1) new events
- (2) phone use
- (3) map use
- (4) library use
- (5) new food
- (6) postal use
- (7) drawings

Bob

- (1) map use
- (2) new events
- (3) new food
- (4) library use
- (5) phone use
- (6) postal use

Kelly

- (1) new events
- (2) phone use
- (3) map use
- (4) library use
- (5) new food
- (6) postal use
- (7) drawings

Mattie

- (1) new events
- (2) phone use
- (3) map use
- (4) library use
- (5) coupon use
- (6) drawings

Charles

- (1) new events
- (2) phone use
- (3) map use
- (4) library use
- (5) postal use

Renee

- (1) new events
- (2) phone use
- (3) map use
- (4) library use
- (5) Recipes