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AN INQUIRY INTO THE MATCH BETWEEN TASK AND LEARNER
IN A PROGRAM FOR FULLY EMPLOYED ADULTS

A Dissertation Presented

By

DAVID BRUCE GILLESPIE

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

September 1981

School of Education

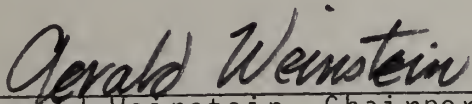
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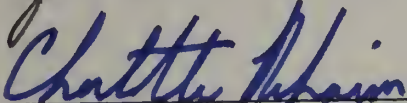
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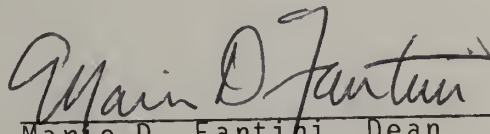
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ABSTRACT

An Inquiry into the Match Between Task and Learner
in a Program for Fully Employed Adults

September 1981

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Directed by: Professor Gerald Weinstein

Purpose

This study has two central purposes: first, to measure the effect that completion of a life experience portfolio had upon the subjects, and second, to discover differences among those for whom the task was effective and those for whom it was not. Current literature describes the merits of using portfolios as a means of assessing extra-institutional learning; little has been written on the portfolio as an educational intervention in itself. The subjects were 49 adults enrolled in an evening program of the University of Redlands in Redlands, California.

Procedures

Prior to completion of the portfolio, the subjects were administered two instruments. The first was the Levenson Scale of Locus of Control, which measures internality and two types of externality, chance and powerful others. In addition, the subjects were admin-

istered the Unforgettable Experience Recall Test, an instrument developed by Alscheler et.al at the University of Massachusetts. This instrument yields developmental measure of self knowledge, the stages of which are elemental, situational, patterned, and process.

Following completion of the portfolio, the subjects were re-administered the Levenson Scale, and an instrument developed by the author that measured perceived satisfaction with the task.

Results

Subjects showed a shift away from the external ($p < .05$) on the Levenson Scale as a result of completion of the portfolio.

In addition, there was a significant correlation ($p < .05$) between the level of subjects' pattern score and their perceived satisfaction with the task. This would indicate a developmental match between the subjects and the task of portfolio completion.

Conclusions

The placement of writing a portfolio at the beginning of a program for adults was found to be well-advised. Since subjects showed a shift away from an external locus of control, they were logically better prepared for the program to follow.

The match between task and learner on a developmental level represented an empirical demonstration of a logical assumption (that a task that is logically patterned would be of most benefit to a subject at the patterned level of self knowledge).

Further research was recommended in extending the notion of self knowledge to other fields of education.

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C H A P T E R I
PURPOSE AND STATEMENT OF THE PROBLEM

Purpose

The central purpose of this study is to explore the relationships between a specific educational task, the learners assigned to do it, and the outcomes of their completion of the task. The task in question is the completion of a life experience portfolio, in which students summarize the personal and professional achievements in their adult lives. The subjects are adults enrolled in the Bachelor of Arts in Public Service Management Program of the University of Redlands, located in Redlands, California. The outcomes are measures of the personal effect that completion of the portfolio had upon the subjects.

The study will revolve around two questions: 1. What was the personal effect of the task upon the learners? and 2. What is the difference between the students for whom the task was personally important and those for whom it was not?

The author originally became interested in these two questions while teaching in the program in question. Students consistently volunteered the information that the portfolio was personally a very rewarding task. An informal poll of other instructors revealed that the

perception that the task was important to the students was widespread. Most instructors questioned reported that a clear majority of their students felt that completing the portfolio was important to them personally.

This general feeling was summarized by one student who placed an unassigned preface in his portfolio:

The accumulation of facts in the preparation of the Life Experience Portfolio was a revealing experience. This type of research involved both a deep search of memory and a search of information to produce the life story of this individual.

To my amazement, some of the information uncovered had been long forgotten. The recall of this information gave me a whole new perspective into my lifestyle from birth to the present time.

To recall happenings uncovers changes in a person's life and changes in the span of time covered. It was a shock for me to evaluate the things I have accomplished, the failures, and the goals I hope to achieve. The research also questioned whether I had developed with the times, or, had stood still and let time pass me by.

The preparation of the Life Experience Portfolio has strengthened my determination to continue a forward motion.

This student's sentiments were consistently echoed by others in the author's experience. The interesting question then became how to measure this "importance" or "personal reward" of which students often spoke. This problem, of course, leads to the second central

question, why was the task important for some (indeed the apparent majority) and not for the others? Could the difference lie in the prior educational experience, the age, the sex of the individuals, or were they different in some other way? This study will be an attempt at answering those questions, within the context of the Bachelor of Arts in Public Service Management Program at the University of Redlands.

Importance of Study

The importance of this study falls into three major areas: a. need to learn more about teaching and learning among adults, up to now a much overlooked group in education, b. the need to understand the matching or mismatching of educational task with learners, particularly among adults, and c. the need to make better-informed curricular choices, especially for the program in question.

It is undeniably true that the bulk of the training of educators in this country centers on questions involving the teaching and learning of young people (MacKey, 1931; Knowles, 1978; Newton, 1974). Yet adults differ from their younger counterparts in some critical ways in learning needs and styles. Knowles (1978) has outlined four basic assumptions about what he calls "andragogy," or the study of the teaching of adults:

1. The self-concept of adults is one of being more independent than that of children. From this assertion flow assumptions about the appropriateness of a variety of teaching styles. Knowles makes the point that the more independent learner is one who must be included in setting educational goals. In addition, the independent (adult) learner will be more motivated by teaching strategies that are interactive than by the more traditional, passive styles.

2. Adults have accumulated a set of experiences that children simply do not have. An adult will judge any new information or skill in the context of this experience. An adult's experience, argues Knowles, must be an integral part of any learning activity for the very reason that "to an adult, his experience is who he is... andragogues convey their respect for people by making use of their experience as a resource for learning." (ibid, p. 46)

3. The clues to adults' readiness to learn are different from those for children. Knowles makes the point that children are assumed ready to learn certain things when they are biologically and academically ready to do so. Adults, in the other hand, develop needs to learn different sets of skills depending upon the developmental tasks they are approaching as workers, spouses, parents, leisure time users, and so on. Houle

(1961) underscores this point by mentioning virtually the same list of critical phases that are linked to adult readiness to learn.

4. Adults, argues Knowles, are problem-centered learners. That is, they will have a specific problem or goal in mind to which they want immediately to apply a new learning. Children, on the other hand, are subject-centered, or at least have been conditioned to be so. A subject-centered instructor assumes that a teacher will have in mind a specific body of knowledge which is important for the learner to cover, for his/her future benefit. Problem-centered learning, on the other hand, assumes immediate application of learning, with content being dictated by the needs of the problem or area of interest. Kidd (1973) and Houle (1961) both support this assertion, stating that a large percentage of adults are what they both call "goal learners." That is, they have a pre-determined objective for any learning endeavor, and will keep that in mind as the aim of their activity. Once they have attained their goal, they will then move on to a different goal and activity. Houle states that typical adults will spend 700 hours a year in what he calls "learning activities." (Houle, op.cit. p. 26)

If one accepts these assumptions (Knowles makes the point that much of what is argued could be applied

to the education of children as well) then it follows that understanding the relationship between learner and educational task becomes an important topic for anyone seriously interested in adult education. If those designing and implementing continuing education or other programs for adults make "pedagogical" as opposed to "andragogical" assumptions about their students, their programs are bound to fail in many respects. This is a problem not to be taken lightly; while it may seem easy to conceive of an education program designed to meet adult, rather than adolescent needs, the fact remains that more universities are organized to meet the needs of the adolescent learner, not the adult (Lindeman, 1926; Whitehead, 1929). They are subject, rather than problem-centered, with departmentalization, major, minor, breadth-and-depth requirements.

Most university teaching does not encourage the use of students' experience as an integral part of the learning process (Whitehead, 1929; Knowles, 1978). Readiness to learn, at most universities, is measured through standardized intelligence and achievement tests. Virtually nothing of a student's personal needs are taken into account (McClosky, 1970).

All of this points to the fact that many who have worked in the traditional university setting will necessarily have to re-orient their thinking about

teaching and learning to be successful teaching adults. This study, in exploring parts of the teaching/learning process among adult university students, should contribute to the understanding of an area that lies outside the experience of many, if not most university-level educators in this country (MacKay, 1931; Newton, 1974).

The second major area of importance of this study lies in the need to learn more about the matching (or mismatching) of educational task and learner. While all educators implicitly attempt to match their curricula to the learning level of their students, few explore the relationship between task and learner much beyond the cognitive level of the learner and the relative difficulty of the task (Hunt, 1971).

It was Kurt Lewin (1936) who first outlined the classic formula " $B=f(P,E)$," or behavior is a function of the person and environment. Most simply put, this formula states that all learning outcomes (behavior) can only be understood when both the learner (person) and the learning intervention (environment) are understood. In addition, the interaction (function) of the two must be understood. What is most important for educators about the B-P-E framework, as it is called by Hunt and Sullivan (1974) is that it demands that questions about educational practice be formulated in the following manner: "What treatment (E) is useful

for specific students (P) for given outcomes (B)?" While this question may sound simplistic at first, it should become apparent quite quickly that many investigators of educational practice leave out either the person or the desired behavior (McClosky, 1970). In the case of leaving out the person, investigators typically will treat educational interventions as stimuli which automatically are assumed to lead (or not to lead) to a given response, bypassing any real conception of the person or persons involved, and how they may differ (ibid). In the case of leaving out the behavior, many investigators have designed elaborate interventions (E) for specific students (P) without much thought given to specific outcomes, or the interaction between the person and the outcomes (Hunt and Sullivan, 1974).

As Hunt and Sullivan point out, the B-P-E framework can be applied in many ways to educational questions, staying consistent with many philosophical and psychological points of view. What is most important is that any investigator keep firmly in mind consistent concepts of person, environment, and behavior. A discussion of the B-P-E framework and its relationship to hypothesis formulation will be found in Chapter Two of this study; it is mentioned here in relationship to the importance of the problem only.

Taking a B-P-E approach to the problem of matching task and learner in a program for adults, one sees that the usual way of viewing teaching and learning at the college level is less than adequate (Whitehead, 1929; McClosky, 1970; Knowles, 1974). Describing the person's readiness to learn through the use of achievement tests may be appropriate for the typical 18-22 year-old college student, but these same assumptions will not be adequate for understanding adults' readiness to learn (McClosky, 1970; Merriam, 1978). As Knowles points out, fifty-year olds are much more unlike each other than are twenty-year olds (Knowles, op.cit. p.46). An adult's psychological readiness to learn is better understood through major life events such as marriage, career, parenting, than through academic achievement testing (Merriam, 1978).

Turning to concepts of behavior (learning outcomes), it is clear from a reading of Knowles and Kidd that the usual conception of behavior for the 18-22 year old college student is inadequate, or mismatched for adults. Learning outcomes are almost always measured in terms of theoretical grasp of a specified subject matter at the college level (Whitehead, 1929; Kidd, 1973). Indeed, discussions of the phrase "college-level learning" almost always include some measure of "conceptual skills" or "synthesizing of ideas" (Sharon,

1975). By contrast, application to the actual situation of the learner is critical for the adult (Knowles, 1974; Whitehead, 1929; Houle, 1971). "Problem-centered" (Knowles' term) or "goal-oriented" (Houle's term) learners, to be well-matched to a task, must have as the major learning outcome a direct application to a specific problem or area of interest.

When the learning environment is defined as amount of exposure to a given discipline or body of knowledge, adults' needs as learners are again not well met. Generally, for example, the term "Bachelor of Arts" or "Bachelor of Science" is defined as a certain number of hours of "seat time" or exposure to an array of academic disciplines (Brown, 1979). This concept of the environment, or teaching intervention, does not take into account the needs of adults to control much of the content area as well as the need to apply what is learned (McClosky, 1970).

When teaching strategies are limited to lectures and reading of assigned material, they may be matched to "subject centered" learning (to use Knowles' term). When an adult is "problem-centered" or "goal-oriented," however, other teaching strategies are demanded (Knowles, 1974; Houle, 1971). Basically, an understanding of environment must be measured not through activities such as seat time, but rather through outcomes such as

problem solution in adult education (MacKey, 1926; Kidd, 1973; Houle, 1971).

In summary, this study will strive to shed further light on how adults learn differently from typical college-age students, using the B-P-E framework to do so. This goal is to be understood in the context of college-level programs, rather than in the context of adult basic education or non-academmic areas such as arts and crafts.

The third area of importance of this study is programmatic. The task of completing the portfolio comes at the beginning of the program in which the subjects are enrolled. Should this task be mismatched with the majority of students the outcome would clearly be disastrous. They would either be discouraged from continuing on in the program or would be given a false set of expectations about the rigor of the work to come.

Conversely, should the task be well-matched with the majority of students, particularly to their affective developmental level, they will be better prepared for the program.* One of the goals of the portfolio task is to provide students with a career-oriented context within which to place the program, and thus ensure their

* See Hypothesis Two, below, for a formal assertion of this point.

motivation to work hard in it. If the portfolio does not achieve this goal, then the designers of the program would be well-advised to begin it with some other task. This study will attempt to prove or disprove the wisdom of placing such a task at the beginning of a program for adults.

The Specific Nature of the Problem

The subjects of this study are adults enrolled in an undergraduate program of the University of Redlands, located in Redlands, California. The overall purpose of this program was and is to provide access to a high-quality academic program to working adults, people who cannot attend on-campus programs because of family or job responsibilities. The vast majority of students enrolled in the program are employed in public or publically controlled agencies. These include city and county governmental agencies, law enforcement and firefighting, the telephone company, the Department of Water and Power, the state transportation agency, and several school districts. Their average age is 36, and 60 to 65 percent of them are men.

The program is thirty-five weeks in length, and can begin at any time of the year. Once a group of between 15 and 25 indicate their readiness to begin at a given geographic area, it is then the responsibility

of the University to provide the program at a location and on a time-line of their choice. There are two minimum requirements for entry. Students must have completed at least 40 semester units of college-level work and they must have carried at least a 2.0 average in all college courses attempted.

The thirty-five week core curriculum of the program itself covers thirty units of work, and is geared toward teaching the skills and conceptual frameworks necessary for successful middle management. The topics include personal and professional assessment, introduction to small group dynamics, systems analysis and decision-making, research methodology and statistics, topics in management and supervision, ethical and political issues, and a research project.

The program is meant to be the equivalent of the senior year of undergraduate study, and fulfills the residency and concentration requirements of the University. The portfolio, which takes students the first six weeks of the program to complete, is used to provide students with units required to graduate. The student entering the program with 65 units already completed, for example, would need 25 more from his/her portfolio in order to reach the required 120 units for graduation (65 prior work + 25 portfolio + 30 core curriculum). In this manner some 85% of the students

who qualify for entrance can complete their bachelors degree within the span of one academic year.

The portfolio task itself begins some two to four weeks prior to the start of formal class meetings. Students are requested at that time to begin collecting documentation of all training, both academic and non-academic, that they have had since graduation from high school. During the program itself, students are closely counseled on how to complete the best possible portfolio. They are required to include (in strictly defined sections) copies of transcripts of prior academic work, documentation of any advanced placement or equivalency tests taken, military experience including any specialized training, industrial or professional training completed, an autobiography, and a series of no fewer than five essays on experiences from which they have drawn significant learning. These essays take the form of a written course challenge; the student must describe the learning derived from any experience and match it with the goals of a course offering at the University in order to be awarded any credit.

The portfolio is then graded for general level of presentation by the student's instructor before being forwarded to the University's assessment center. There it is evaluated by specially trained staff members for course equivalencies in the formal training and test

areas. The life experience essays are evaluated by regular faculty members teaching in the areas of the courses challenged.

There are less cumbersome ways for universities to evaluate a student's prior experience for course equivalency (see Chapter Two for a discussion of this point). As described to students (University of Redlands, 1978) the portfolio has two major objectives: first to provide a vehicle for evaluation of prior learning, and second to help students place the program into the context of their careers and lives and thereby increase their motivation to learn the most possible from it. Should this second goal not be met, then the designers of the program would be well-advised to evaluate the prior experience of students in some other manner.

Hypotheses

This study contains three major hypotheses. The first has to do with the direct effect completion of the portfolio has upon students and their motivation to succeed in the program, the second with the degree of match between the task and the learners, and the third with the interaction between the first two hypotheses.

Hypothesis One: "The subjects will show a significant shift from external to internal locus of

of control after completing the portfolio."

Locus of control, described in detail in Chapter Two, is a measure of the extent one sees him/herself in control of his/her own fate. The testing of Hypothesis One will be an attempt at measuring the personal effect reported anecdotally by students as having resulted from completion of the task.

Hypothesis Two: "There will be a significantly better match, as measured by the results of a questionnaire, between the task of developing a life experience portfolio and subjects who have a strongly patterned profile of self-knowledge than subjects who have a weakly patterned or situational profile."

The second hypothesis will be an attempt to distinguish between those students for whom the task was personally important and those for whom it was not. The two measures used, level of self-knowledge, and a directly-administered questionnaire, will be discussed in detail in Chapters Two and Three respectively. Hypothesis Two will also be compared with the results of a series of minor hypotheses, having to do with students' demographics and prior academic work. These lesser hypotheses are described in Chapter Three, "Methods," as well as in Chapter Four, "Results."

Hypothesis Three: "There will be a significant correlation between the degree of match with the task and the subjects' shift of locus control toward the internal."

The testing of the third hypothesis will be an attempt to demonstrate the link between the objective gain (shift in locus of control) and the perceived gain (results of the questionnaire) of completing the task. A positive result with Hypothesis Three would indicate that students' perceptions parallel the actual changes caused by the intervention.

Limitations of the Study

The study will be limited by three major factors: the demographics of the subjects, the lack of longitudinal data, and the lack of a control group.

Demographically, the participants in the Bachelor of Arts in Public Service Management Program are predominantly male and caucasian. While every effort will be made to minimize the imbalance in the demographic characteristics of the subjects, the overall pattern of participants in the program will limit the researcher's ability to generalize the results.

Immediately after the subjects complete the portfolio, they continue on through a program that is designed to increase their managerial (and therefore

interpersonal) skills. This participation effectively rules out the possibility of measuring the long-term effects of the portfolio upon them, since both that initial task and the rest of the program are designed to have very similar affective importance to the students. The results, therefore, will necessarily measure only the changes in the subjects that occur immediately after the intervention. The rate at which any changes deteriorate over time cannot be measured, since they will be confounded by the results of the rest of the program.

All students who enroll in the Bachelor of Arts in Public Service Management Program complete the portfolio at the outset. There are no exceptions, even for those students who have completed more than enough academic work prior to entering the program. Since students are counseled into the program through direct contact and with the approval (in most cases) of their employers, they have unusual characteristics and motivations for joining the program. These factors rule out the possibility of identifying a usable control group, either with the University of Redlands, or at any other institution. Any results will necessarily be discussed in this light.

Had it been possible from a programmatic point of view, a control group could have been made up of

participants in the program itself. This would have been accomplished through choosing a random selection of students who had already enrolled and giving them the portfolio portion of the program at the end, rather than the beginning. The identical pre and post tests could have been administered to this control group as the ones administered to the experimental group.

This design would have strengthened the study in two respects. First, it would have distinguished the effect of completing the portfolio from that of returning to school. While the present design measures the effect of beginning the BAPSM program it does not measure that effect vis a vis the effect of beginning a program with no portfolio.

A second strengthening of the study would come in comparing the relative merits of placing the portfolio at the end, rather than the beginning of the program. It is possible that the portfolio would have a different effect upon participants were it placed differently in the program's sequence.

This shift of placement of the portfolio is impossible because the complete evaluation process is a lengthy one. Students would have to wait well past the end of their course work to learn of the outcome of the assessment process, should the portfolio be placed anywhere but the beginning of the program.

Definition of Terms

Throughout this study a number of terms are used in ways that do not necessarily have universal meaning. Below are definitions of terms as they are used here.

Adult/adult learner: a person who has matured psychologically to a stage of independence and experience that sets him/her apart from children or adolescents. Chronological age is not an exact measure of adulthood in this context.

Affective: pertaining to emotions or feelings. The terms affective education and affective development, used in this study, refer, respectively, to educational strategies which account for a student's emotional stage of being and emotional maturity, and emotional level of development (see "development," below).

Development: the progression of growth through recognizable stages. In this study, development will be understood to be hierarchical, irreversible, sequential, and general over a wide range of responses. See a discussion of this point in Chapter Two, "Review of the Literature."

Developmental task: an educational strategy designed to enhance the development of the student. The life experience portfolio in this study is to be viewed as a developmental task.

Experiential learning: learning that has taken place outside the traditional academic environment. Examples would include industrial training, major life experiences (marriage, child-rearing, death of a loved one) learning from job responsibilities, and learning from hobbies or leisure time activities. In the context of this study, experiential does not refer to learning that occurs in work-study programs, co-operative education programs, or in course-structured simulations or role-plays.

Life experience portfolio: an organized presentation of academic training, formal non-academic training, and informal learning experiences of a student. The Life Experience Portfolio mentioned in this study consists of eight sections, is generally 100-150 pages in length, and takes six weeks for students to complete.

Self-knowledge: understanding of one's own behaviors and motivations. As described in Chapter Two, this concept is used in this study as a developmental term (see "development," above). The four stages of self-knowledge described in Chapter Two are elemental, situational, patterned, and process.

Organization of Thesis

In addition to Chapter One, "Purpose and Statement of the Problem," this study will contain four other chapters.

Chapter Two, "Review of the Literature," will describe literature; first literature on the assessment of prior learning, then the literature of matching task and learner. The third section of Chapter Two will describe the literature of affective education and self-knowledge. This will be followed by a discussion of locus in control and how it relates to the goals of this study.

Chapter Three, "Methods," will be organized by hypothesis and describe in detail how each hypothesis will be tested.

Chapter Four, "Results," will also be organized by hypothesis, and will formally present the findings of the testing of both the major and minor hypotheses.

Chapter Five, "Discussion," will discuss the implications of the findings of the study for the planners of the program, for adult educators in general, and for those who would conduct further research in this field.

C H A P T E R I I

REVIEW OF THE LITERATURE

Chapter Two is divided into four major sections. The first is a review of literature on assessment of experiential learning. Articles that are both descriptive and evaluative are discussed. The second section is a review of the literature on matching models. A framework for understanding the structure of the hypotheses of this study is described. The third section reviews the field of self knowledge. An argument for the inclusion of the concept of self knowledge in a discussion of the portfolio is contained in this section. The final section of Chapter Two describes the literature of locus of control. An argument for its inclusion in this study is made as well.

Assessment of Non-Collegiate Learning

As of the end of 1978, some 200 colleges and universities in the United States were awarding students credit for learning achieved outside the academic community (Avakian and Lipsett, 1979). This kind of learning is to be distinguished from work-study programs or co-operative education programs, where students receive credit for what are essentially internships. The subject under discussion is, rather, learning

derived by students prior to attending a given academic program.

Meyer (1975) was one of the first to complete a comprehensive review of the methods employed by colleges to assess experiential learning. He found that among those methods used were placement or achievement tests, faculty interviews, a syllabus-project approach where students complete a formal presentation on a given subject, and the portfolio, a formal presentation of a wide range of prior experiences. In all cases, Meyer found that the overriding concern was the problem of making the distinction between learning and experience. Everyone has experiences; what each individual gains from them is problematical.

This latter point is discussed in detail by Sharon (1975) who argues that two people may have nearly identical experiences (holding the same job, for example) and learn very different things from them. In addition, the problem of just what constitutes college-level learning is brought into sharp focus in the process of assessing prior learning.

Galson and Olikien (1976) discuss the problem of college-level learning in the context of uniform faculty standards. They make the point that through the exercise of assessing non-academic learning done by students, faculty members are forced (often for the first time,

they argue) to decide upon uniform guidelines for course content and conceptual level.

Virtually all of the evaluation studies done on assessment of experiential learning have been focused on the validity of the methods used. Rigor and academic standards are the overriding issues.

In a more extensive study Neely (1980) examined the portfolio process and compared students' knowledge in the referenced areas with that of students in traditional programs. He found that the portfolio students' level of understanding was higher (but not statistically significant) than that of the traditional students.

Watsky (1978) studied the effect of students' completion of life-experience based programs by examining their success rate at gaining admission to graduate school. He found that within his sample (in the New York state area) there was a high degree of acceptance of programs that included life experience components. The most important factor, Watsky found, was cumulative grade point average. Graduate school admissions officers seemed to place little or no importance on whether or not an applicant had achieved undergraduate credit from work done outside an academic setting.

In a related article, Avakian and Lipsett (1979) argue that the granting of credit for experiential

learning has several effects on colleges: it increases student attendance, it increases revenues, and, similar to Galson and Olikien, state that the process raises questions of standards and conceptual level that cut through departmental boundaries. This last outcome, they argue, is a very positive one in that it forces faculty members to examine some very fundamental issues together. The authors also point out that credit for prior learning has several positive outcomes for students, chiefly a savings of time and money.

Lupton (1979) compared the portfolio method of assessing prior learning with the "syllabus method," one that he had developed. He argues that the syllabus method has several advantages over the portfolio. These advantages are administrative and political in nature. Administratively, he argues, the syllabus is easier to manage, in that there is a tutorial relationship between student and faculty, rather than a committee relationship in portfolio methods. In addition, he makes the point that the syllabus method is generally cheaper to run. Politically, Lupton argues, the portfolio is unlike other academic endeavors and is thus mistrusted by traditional faculty members, as opposed to the syllabus method, which is quite similar to traditional term papers. Lupton focuses on the differences between the two methods as they relate to administration and

acceptance by the more traditional members of the academic community. The effect of completing the task upon the learner is outside the scope of his argument.

The literature reviewed here focuses on the issues of rigor and validity of the process of granting credit for experiential learning. Various techniques for doing so are described and compared. The paramount concern of all these authors is defending the techniques as valid and practical as means toward the end of being able to award academic credits. What this body of literature does not include is an examination of the process as an educational intervention in and of itself. At the University of Redlands, students are told that the portfolio has two purposes: first, to serve as a vehicle for awarding credit, and second to help them place the program they are taking in the larger context of their lives and careers (University of Redlands, 1978). It is this second purpose that will be the focus of this study, a focus that has not been addressed in the literature to date.

The Question of Matching

This section of Chapter Two is divided into two parts: first an examination of literature which is theoretical in nature, and second of literature which empirically explores the match between task and learner.

Theoretical Literature

Central to the methodological approach of this study is the "B-P-E" framework described by Hunt and Sullivan (1974) and outlined in Chapter One of this study. Virtually any question about educational practice could be posed within this framework, depending upon which of the variables, person, behavior, or environment, remained the subject of investigation.

Hunt and Sullivan stress that in using the B-P-E framework, one must keep a consistent concept of the variables. That is, behavior, person, environment, and the interaction among the latter two must be logically related to one another.

In terms of this study, the person is viewed developmentally rather than by trait (ibid, p. 54). Behavior is to be understood in affective, process terms rather than cognitive, content terms. Hunt and Sullivan describe process outcomes as longer-term and similar to the developmental view of the person (ibid, p. 81).

The environment in this study is to be viewed as teacher-structured, student-centered, and problem-posing. Hunt and Sullivan make the point (ibid, p. 106) that teacher, student, and observer may all have different points of view on the environment. For this reason, the present study will include both objective tests of

locus of control and subjective test of expressed satisfaction with the task.

Person-environment interaction in this study is to be viewed as a matched combination. The area of inquiry is to examine the optimal combination of person (viewed developmentally) and environment (viewed as problem-posing).

The question of creating a person-environment match is explored in detail by Hunt (1971). He makes the point that should the environment be either sub-optimal or super-optimal, then progressive development is restricted (ibid, p.21). That is, if the task is logically less complex or more complex than the developmental level of the student, learning or growth will not take place to the degree that it will when they are logically matched. The logical matching of the task of completing the portfolio and a specific developmental level of self knowledge will be discussed in a later section of this chapter.

Differences among adults and their relation to educational intervention are described by Merriam (1978). In an overview of the literature on psychology and development in mid-life, Merriam found five points of agreement among a wide array of theoreticians and researchers. These are: a. that there is a growing awareness of time and mortality in mid-life, b. that mid-life is a period of growing introspection, c.

that it is potentially the most powerful time of life, in terms of earning power and ability to influence others, d. that there seem to be developmental tasks unique to this period, and e. there tends to be a male-female role reversal in mid-life.

The implications for educators, according to Merriam, are that programs (and specific educational interventions) must be matched to the concerns flowing from the psychological issues of middle age. She asserts that programs, to be most effective, can focus on career enhancement or change, family issues, especially those dealing with teen-aged children or aging parents, and on mid-life physical change.

Merriam's overview is illuminating to this study in that it gives a psychological context for the task of portfolio writing. It is clearly a task matched with learners on the career enhancement-career change level.

A more cognitive view of matching task and learner is found in Case's article, "Gearing the Demands of Instruction to the Developmental Capacities of the Learner," (1975). Case sees the need to take into account what he calls the "information processing capacity" of the learner along with the demands of the task. One must then look at the hierarchical span (in developmental terms) of the task and match it with the logical and natural responses of the learner. That is,

the task must logically fit with the kinds of mental processes the learner has at his/her command. In addition, the task must not require the interaction of processes that the learner may be able to use individually but not in tandem.

In terms of this study, Case's points provide useful insight into the cognitive requirements of the task; many of the subjects had not been required to write extensively prior to beginning the portfolio. The task of writing clearly and persuasively, however, was not compounded with the problem of composing tightly-argued essays on new information. Rather, they were asked to write well on their personal histories.

Empirical Studies

In an empirical study, Grutelueschen (1979) studies the effects of two strategies of teaching selected mathematical concepts to two groups of students. One group had extensive background knowledge in the area, while the other group did not. Grutelueschen found that a strategy of concrete-to-abstract teaching matched the group with little background, while a strategy of abstract teaching only was better matched to the more knowledgeable students. Grutelueschen's work is most relevant to the present study in that it takes into account all three aspects of Lewin's B-P-E formulation.

In so doing Grutelueschen was able to shed light on the match or mismatch of teaching strategies and specific groups of students.

In a separate study, Keating and Bobbit (1978) compared memory-scanning speed among groups of children divided according to age and I.Q. They found a higher correlation between ability to perform the task and I.Q. levels than age. This study, while it does not explore learning or growth per se, does address the question of matching a cognitive task with a cognitive aspect of the subject. The scope of this study was quite limited, in that it examined only two variables (age and I.Q.) in determining ability to perform a given task.

An empirical study which takes a more developmental view is that of Emmerich and Ackerman (1978). The authors measured the styles of recalling picture sequences of first graders, fifth graders, and college freshman. They found that first and fifth graders' ability to recall pictures was a function of retrieval conditions (that is, whether they could use a free system to remember them, or were constrained to one category of picture at a time). College freshman, on the other hand, were affected more by what the authors call encoding; how the subjects sorted the pictures was more important than whether or not they were constrained

in their retrieval system.

This study is useful in that it begins to identify the kinds of "naturally occurring strategies" discussed by Case above. Strategies of attacking a problem or educational task are, in fact, a function of the learner's developmental level.

In another empirical study, Faust and Arbuthnot (1978) sorted college students into two groups, those who had reached the highest level of moral development logically achievable given their cognitive development (labelled "achievers" by the authors) and those who had not achieved their highest possible level of moral development ("non-achievers"). Both groups were then given a course in moral development. As hypothesized by the authors, the "non-achievers" showed significantly more gain than did the "achievers." This study raises many interesting points about the interrelationship between cognitive growth and other measures of development (such as Kohlberg's moral development stages). Essentially, Faust and Arbuthnot argue that cognitive development is a necessary, but not sufficient, condition for other types of development, within logical bounds. They make the point that programs aimed at "achievers" are a waste of time. The job of a program designer is to identify those students who are "non-achievers" and gear a program for them to close the gap between their

developmental level (in this case moral development) and the level possible, as defined by their cognitive level.

Faust and Arbuthnot's study has interesting implications for the present study in that it states that subjects who are at their highest possible level of self-knowledge, for example, may not experience much gain from the task of completing a portfolio, while those subjects whose cognitive level is high enough to logically allow for more development would gain more from the task. It is possible, for example, that the students who will gain the most from the portfolio task will be those with relatively strong academic backgrounds but with relatively lower self-knowledge levels.

Turiel (1966) tested the validity of Kohlberg's (1966) assertion that development results from a specific amount of disparity between task and learner. Turiel studies a group of seventh-grade boys who were enrolled in a moral development program. His findings were that those who were exposed to moral dilemmas one stage above their own stage of moral development exhibited the greatest gain. Those who were exposed to problems below, at, or two levels above their own, showed no gain or significantly less gain.

Turiel's study is useful to this study in that it presents a model of exploring the match between learner and environment, given developmental outcomes and

developmental conceptions of the person. The developmental nature of outcomes and conceptions of the person in this study are described in the next section of Chapter Two.

Self-Knowledge

Within the general field of humanistic education, Alschuler et. al.'s (1977) concept of self knowledge is the specific concern of this study. Self knowledge is, at least on a logical level, linked to the task of completing a portfolio. The task is a personal one, in which the subjects are asked to describe in very explicit terms not only important experiences, but also how they grew from those experiences. If the task is well-matched to the learner's level of understanding of his/her own behaviors, then he/she should report having grown from the experience of completing the task. This is essentially the assertion of Hypothesis Two of this study.

The term "self-knowledge" as used in this study refers to a person's level of understanding of his/her own behavior, feelings, and thoughts, as measured through the subject's description or analysis of an important personal event.

This concept, developed by Alschuler et. al. is understood to be developmental in nature. That is, its

stages are hierarchical, irreversible, sequential, and general over a wide range of responses. These criteria for a developmental point of view are outlined by Kohlberg and Mayer (1974). A set of stages of growth is hierarchical and sequential when the stages are logically and invariably in the same order (it would not be logical, for example, for someone to reach Piaget's stage of formal operations without first passing through the stage of concrete operations).

Developmental stages are irreversible in that they cannot be "unlearned" or forgotten. They represent, logically, a more adequate way to describe the environment for the subject, so he/she would not, logically, fail to use the more adequate, and therefore higher, level of development whenever the need arose.

Developmental stages are generalizable over a wide range of responses; they are manifested not in a single instance of behavior or insight (which may or may not demonstrate a true understanding) but rather through a pattern of application that can be demonstrated in a wide variety of situations.

The theory of self knowledge developed by Alschuler et. al. was developed empirically; the stages of self knowledge grew out of test results, rather than the reverse order. Four stages emerged from their work: elemental, situational, patterned, and process. Each

of these stages is briefly defined below.

At an elemental stage, a person will describe a personal event in terms of exterior actions and events. Statements are more observations of activity than anything else. "I went to the store to buy ice cream" would be an elemental statement.

At the situational level a person will describe an event in its entirety, not simply a series of disconnected events. There is a sense of a cohesive whole. In addition, the subject will describe his/her own feelings and thoughts and ascribe feelings and thoughts to others. Cause and effect begin to be described at the situational level. "My mother got angry and scolded me, and I felt sorry for myself," would be a situational statement.

At the patterned stage a person will understand an event in terms of how it fits (or does not fit) with other events and responses to similar situations. There is an awareness of continuity and consistency in how one deals with similar situations. Feelings and thoughts are seen as both cause and effect of actions of the speaker and others. Cause and effect are generalized over a wide range of situations at the patterned level. "Recently I've noticed that whenever I tell myself I can get through a problem, I'm better able to handle it, no matter if it's a problem with

other people, school work or even my own attitude," would be an example of a patterned statement. At the process level, subjects describe changes in patterns, or general psychological growth. The self is seen as the cause and effect of change. An example of a process statement would be "When I allowed myself to experience my own feelings for the first time, I began to have a much greater depth of appreciation for where I had been and what a long way I had come in my own development."

The development of a life experience portfolio is, to use Hunt's term, logically optimal for one at the patterned stage of self knowledge. The task requires students not only to describe an experience in concrete (elemental) terms, but also to describe their growth from it. The assumption that an experience is not intrinsically growth producing is explained explicitly to students. It is their own making sense of the (described) experience in terms of their overall personal and professional lives that is the goal of the task.

Students receive little or no credit should they describe an experience and a single learning outcome. Rather, they are required to show the generalized application of new learning to other settings, "How have you used what you learned from your experience in other ways?" is a critical question asked of students

writing portfolios.

Beyond the generalization of learning is the view taken in the portfolio that it is the student who is the cause of the learning. That is, the focus of the exercise is not on the quality of the objective experience itself, but rather on the quality of the student's conceptualization of his/her gain from it.

The anecdotal evidence of the effect of the task also points toward pattern stage conceptions. Students consistently speak of the task in terms of how it gave them a more general, broader view of their lives, and especially of the interconnections among seemingly disparate events and motivations.

The focus of this study, therefore will be on testing the validity of the assumed match between the task and the pattern stage of self knowledge.

Locus of Control

The concept of locus of control was first thoroughly developed by Julian B. Rotter (1966), who described it as a person's perception of the locus of the cause of reinforcement following behavior:

The effect of a reinforcement following some behavior on the part of a human subject, in other words, is not a simple stamping-in process but depends upon whether or not the person perceives a casual relationship between his own behavior and the reward. (ibid, p.1)

A person who perceives that the consequences (reinforcement) of a behavior are dependent upon his/her own behavior is said to have a belief in internal control. On the other hand, a person who attributes the consequences to chance, other people, or the complexity of the world is said to have a belief in external control.

Rotter's ground-breaking work is particularly important to this study because he strongly makes the link between belief in internal control and ability to learn. This link has been empirically established by a number of investigators, among them Nowicki (1973), Auguren (1974), and Hooper (1978).

The concept of locus of control is not necessarily linked to chronological age. Ryckman and Malikiosi (1975) found a general movement from external to internal locus of control as adults grew older, but did not conclude that the aging process itself was causal. Lao (1973), on the other hand, found that recent experiences such as marriage, death of a loved one, had more affect on locus of control than age. In a later article, Lao (1974) argues that the concept of locus of control is developmental in nature, and although there are hierarchical stages one presumably goes through in achieving an internal locus of control, age is not a direct factor.

Rotter's notion of internality versus externality has been expanded by Levenson (1972). She makes the point that there is, at least on a conceptual level, a large difference between the person who perceives locus of control to be chance and the one who perceives it to be other people. Those who believe that other people control consequences of events would be demonstrating a higher potential for change, as opposed to those who believed fate or luck was most important.

In a later study, Levenson and Mahler (1975) demonstrated that the distinction between chance and powerful others was a useful one in exploring the differences among men's and women's scores on a scale of Machiavellianism.

Hooper (1978), in studying a group of returning adults who took continuing education counseling, used the scale developed by Levenson (1972). She found that the distinction between chance and powerful others was useful in distinguishing between those who demonstrated personal growth in college and those who did not.

There are two major ways in which locus of control is relevant to this study. First, the relative internality-externality of a subject has been shown empirically to be linked with motivation and ability to learn. This link makes the concept particularly useful in light of the stated second purpose of the task of

completion of a portfolio (i.e., that it helps the student be better prepared and motivated for the program which follows). Hypothesis One of this study, involving the shift from external to internal, is based on the assumption that the more internal a person becomes, the more prepared he/she is for the academic program as a whole.

The second way in which locus of control is relevant to this study lies within the content of the task itself. Completion of the portfolio demands that the subjects make explicit links between their own accomplishments (behaviors) and academic recognition. In making the strongest possible case for academic credit, students are acting as the advocates for the worth of their own behavior. Should they succeed in making a strong case, it follows that they are making a strong case for the internal locus of control as well. That is, they were the ones who achieved the learning being documented.

Summary

Chapter Two "Review of the Literature," has focused first on the question of assessment of prior learning ("experiential learning," in this context). It was found that the current literature in the field is concerned with measuring the rigor and validity of the various methods of assigning credit to experiential

learning. Any evaluations of the methods were necessarily focused on gaining greater acceptance in the academic community at large. The focus of this study, in contrast, is on the effect of the activity itself on the subjects' readiness to learn. The portfolio is being viewed as an educational intervention in itself.

The second section of Chapter Two was a review of matching models in education. The need to match learner and environment on a logical level was discussed. The importance of considering the person, the environment and the learning outcomes was discussed as well.

The third section reviewed self knowledge. The developmental concept of self knowledge was found to be most relevant to this study in that the intervention (completion of the portfolio) is essentially an exercise in explicitly describing the self. The fact that subjects are required to describe not only important experiences but how they grew from those experiences is particularly germane. The logical connection between the task and a patterned level of self knowledge was explored.

The final section of Chapter Two reviewed the concept of locus of control, and particularly the extension of the concept by Levenson (1974). It was found that the concept was very useful to the ends of this study in that it has been empirically linked with motivation to learn. In addition, locus of control has

a logical link with the task of completing the portfolio itself, in that both are concerned with the explicit connection between one's own behavior and consequences (rewards) of that behavior.

C H A P T E R I I I

METHODS AND PROCEDURES

Overview

Chapter Three is divided into five sections. The first describes the research design that will be used to test the hypotheses. The second section will describe the subjects, the third the instruments to be used. The fourth section will describe the procedures undertaken in the study. The last section of Chapter Three will describe the data analyses to be used.

Design

The three major hypotheses will be tested through a single group study with pre and post tests. All subjects will be tested prior to beginning the portfolio and again following its completion.

As discussed in Chapter One, the inclusion of a control group was rendered impossible by the unique features of the experimental group. All had been counseled into the program, most with the support of their employers. In addition, all were required to complete the portfolio at the beginning of the program; it was not possible to create a control group out of those already enrolled in the program.

A pre and post test design is appropriate because the major hypotheses focus on changes within the subjects caused by the task (completion of the portfolio). In addition, an investigation will be made of how those students for whom the task was important and those for whom it was not differed.

The data will be gathered using two instruments in the pre test (Levenson Scale, and Unforgettable Experience Recall) and two instruments in the post test (a re-administration of the Levenson Scale and the Portfolio Learning Outcomes Questionnaire).

The three hypotheses are as follows:

In terms of a B-P-E framework, Hypothesis One is an investigation of the outcomes (B) for all students completing the task (E).

B	P	E
X=significance of shift in locus of control	all subjects	completion of the portfolio

The design for testing Hypothesis One will be a single group study using a pre and post test of the Levenson Locus of Control Instrument.

Hypothesis One: "The subjects will show a significant shift from external to internal locus of control after completing the portfolio."

In terms of a B-P-E framework, Hypothesis Two will be an investigation of the correlation between types of learner (P) and levels of outcomes (B) of the task (E). Hypothesis Two can be diagrammed as follows:

B	P	E
degree of importance of the task	level of self knowledge of subjects	completion of the portfolio

Essentially, this investigation is an attempt to distinguish among various types of students. Hypothesis Two states that the task of completing the portfolio will be more important to those who are at a patterned stage of self knowledge than to those at other stages (definitions of the stages are found in Chapter Two).

The research design for the testing Hypothesis Two will be a single group study using the Unforgettable Experience Recall test (described below) as a pre-assessment of the subjects' level of self knowledge.

Hypothesis Two: "There will be a significantly better match, as measured by the results of a questionnaire, between the task of developing a life experience portfolio and subjects who have a strongly patterned profile of self-knowledge than subjects who have a weakly patterned or situational profile."

In terms of a B-P-E framework, Hypothesis Three will be testing the correlation between two outcomes (B) for the same persons (all subjects of the study) having experienced the same environmental intervention (completion of the portfolio). Hypothesis Three can be diagrammed as follows:

B	P	E
PLOQ score, Levenson shift	all subjects	completion of the portfolio

Essentially, Hypothesis Three states that the greater the objective gain from the task (shift toward internal), the greater will be the subjective satisfaction with the task (PLOQ score).

Hypothesis Three: "There will be a significant correlation between the degree of match with the task and the subjects' shift of locus of control toward the internal."

Subjects

The subjects were all fully-employed adults participating in the BAPSM program of the University of Redlands. The author chose five classes of students who were beginning the portfolio process as the experimental group. These five groups were selected for

their variety; they represented a cross-section of types of employment in the public sector (law enforcement, fire fighting, military, public agency, controlled industry) and a better than average (for the program) split between men and women. The final group of subjects was very nearly evenly split between males and females (29 males and 21 females).

All subjects were academically qualified for the program, having completed a minimum of 40 semester hours of undergraduate work, and had carried at least a 2.0 grade point average.

Instrumentation

The Levenson Scale was chosen over the Rotter Scale for reasons outlined in Chapter Two; the Rotter Scale distinguishes between internality and externality only. The Levenson Scale, on the other hand, distinguishes between chance and powerful others as two external loci of control. It is an instrument consisting of 24 items, yield three scores; I (internal), P (powerful others), and C (chance).

The instrument developed by Aslchuler et. al. (1977) to measure levels of self knowledge, the "Unforgettable Experience Recall Test," asks subjects to describe an important event in their lives in detail, and then to describe the importance to them, both at

the time of the event and for the present. The instrument yields five measures, one score reflecting each of the four stages, and one composite score. The four stage scores are weighted in a way that places more importance on statements that are patterned and process than those that are elemental and situational. The reason for this is that the mere recounting of an event necessitates many descriptive statements that will be elemental.

The post test for Hypothesis Two will be a questionnaire developed by the author. It will consist of a series of Likert-type scales aimed at measuring a subject's perception of the importance of the task on both a personal and academic level. It will yield a single score. The development and validation of this instrument will be described in the "Procedures" section of this chapter.

Procedures

The first procedural step in implementing this study was to develop and validate the Portfolio Learning Outcomes Questionnaire. The author first developed the 20 item instrument by choosing personal, academic and professional areas that students had anecdotally reported as having been linked to completion of the portfolio. The instrument was a series of statements where the subjects could express strong agreement, agreement, no

opinion, disagreement, or strong disagreement. Before field testing, the author submitted drafts of the instrument to six members of the faculty of the Bachelor of Arts in Public Service Management Program for their suggestions. These faculty members all had a background in research and statistics and had taught students who had completed the portfolio. Their criticisms included minor wording changes of several of the items.

The author then attached a memorandum explaining the purpose of the field-test to students to the draft of the instrument and sent it to the instructors of six classes. (See Appendix A) The six classes selected for the field test were in week six or seven of the program, meaning that the draft of the PLOQ was administered within one or two weeks of the subjects' having completed the portfolio.

Seventy-two field-test instruments were returned to the author for analysis. This number represents all students who were present in the six classes at the time of the administration.

The twenty items were written as ten matched pairs. Each statement was matched with one that expressed the reverse sentiment of its partner. The purpose of this matching was to make possible a split-half reliability of the instrument. For example, item seven, "I enjoyed doing the portfolio," was matched with "Doing the

portfolio was boring," item seventeen.

An analysis of the results of the field-test revealed that there was a significant level of correlation between items of nine of the ten matched pairs. Items seven and seventeen, the example cited above, were the only exception. It was therefore concluded that, with the exception of items seven and seventeen, the PLOQ was measuring the responses to the questions reliably.

The author decided to leave the two items in question in the final version of the PLOQ since they shed some interesting light on subjects' perceptions of the task, but to keep them out of the scoring of the instrument.

In addition, fewer than five percent of the responses fell into the "no opinion" category. Since so few did, it was decided to drop the middle category from the scale in the final draft of the instrument.

The second procedural step was to collect the pre test data. The author personally administered the pre test in each of the five experimental classes, at the first class meeting of each group. This consisted of first numbering pairs of the two pre tests. Each subject received one copy of the Levenson Scale (see Appendix B) and the Unforgettable Experience Recall Test (Appendix C). The same number was printed on each test of the pair that each participant received.

After explaining the purpose of his visit to the class, the author first asked the subjects to write their subject number on their student materials so that they would be able to place it on their post tests when the time came to do so.

The subjects were then asked to complete the Levenson Scale. The order in which the two pre tests were administered is significant. The Levenson Scale takes approximately five minutes to complete, while the Unforgettable Experience Recall Test takes twenty to forty minutes to complete. Since the Unforgettable Experience Recall Test is very often an important personal experience in itself, it could have skewed the results of the Levenson Scale had it been administered first.

After all the subjects had completed the Levenson Scale; the author administered the Unforgettable Experience Recall Test. This consists of first asking the subjects to relax and, through the aid of a guided fantasy, re-experience an important personal event. (See Appendix D for an example of the directions). These directions were given identically in all five classes. The subjects then completed the questionnaire, a process that often required a half an hour.

The collection procedure for the post test data was to forward a packet of the two post test instruments

to the instructors of the five classes with a cover letter of instructions followed with a phone call to verify that they had no questions. The post-test was administered in week seven of the program in each of the classes, one week after the due date of the portfolio.

The author forwarded the completed Unforgettable Experience Recall Tests to a group of three graduate students at the University of Massachusetts who were working under the direction of Gerald Weinstein. These three had been trained to score the instrument as part of their graduate programs.

Once the Unforgettable Experience Recall Tests had been scored, they were forwarded along with all the other raw data to the data analysis service center maintained by the author's employer. After three meetings with the author to ensure proper key-punching and statistical procedures, the director of the center had her staff perform the appropriate analysis of the data through the Statistical Package for the Social Sciences.

Data Analysis

The analysis of the data for Hypothesis One will be an examination of the net gain on each of the three scores, I, P, and C, will be evaluated for significance through the use of a one-tailed T test. The use of a one-tailed T test is justified since it is hypothesized

that the subjects will demonstrate an increase in "I" scores and a decrease in "P" and "C" scores.

To test Hypothesis Two the single score on the Portfolio Learning Outcomes Questionnaire (PLOQ) will be correlated to each of the five scores gained from the Unforgettable Experience Recall Test. Those with a strongly patterned profile will, if the hypothesis is correct, show a higher score on the Portfolio Learning Outcomes Questionnaire than those with a situational or weakly patterned profile.

In addition, the score on the post test will be correlated to certain demographic information that may have a bearing on the subjects' perception of the importance of the task. These will be three pieces of information correlated to the score on the PLOQ: sex, number of units transferred into the program, and number of life experience essays written.

A correlation between the sex of a subject and his/her score on the PLOQ will be examined because the task, being an essentially personal one, may have a varying effect upon males and females. In addition, relatively little research has been conducted to date with the Unforgettable Experience Recall Test. The possibility that males and females may score differently will be explored. A correlation between the PLOQ score

and number of units will be explored. A correlation between the PLOQ score and number of units transferred into the program will be important for two reasons. First, the task may be better or more poorly matched to subjects depending upon the extent of their formal education. Students enter the program having completed anywhere from 40 to 100 semester units of college work. The task, while not particularly difficult from a strictly academic point of view, does demand a large amount of writing and organizing. Those unused to academic work would find it difficult. Secondly, the number of units has a relationship to the importance of the task in that the students who enter with 90 or more units will not be using their portfolio for gaining course equivalency credits. For them, the stakes are not as high as for students who enter with 50 or 60 units. These latter students have a large investment in the portfolio; the amount of time, effort and money they will have to expend to earn their bachelor's degree can be significantly reduced through the writing of a good profile. It is possible, therefore, that a student with 40 to 60 units will necessarily become more involved in the task because of the possible extrinsic rewards.

Lastly, the PLOQ score will be correlated to the number of life experience essays written. These are

essays in which students describe experiences, either personal or professional, from which they have gained significant learning. These essays become a formal petition to the University of Redlands for course equivalency. Every student is required to write five of these essays, regardless of need (that is, even if a student enters the program with more than enough units to graduate, he/she must still write a complete portfolio). Some students, however, write as many as ten essays, depending upon how many units they wish to petition for to the University. It is possible that writing more life experience essays will have an effect on the importance of the task, and for this reason will be correlated to the PLOQ score.

In all cases, the test of level of significance of correlation will be Pearson r . When appropriate, correlations will be displayed on scatter plots as well.

Data analysis for Hypothesis Three will consist of performing Pearson r analysis of the correlation between the single score on the PLOQ with the degree of shift on each of the three scores yielded by the Levenson scale (I,P,C). Scatter plots will be used to display data where appropriate.

C H A P T E R I V

RESULTS

Chapter Four, divided into three major parts, is a description of the results of this study. Each part will be centered on the results relevant to one of the three hypotheses. A shorter fourth part will be a description of other findings, mostly having to do with the demographics of the sample.

Hypothesis One

Hypothesis One states that "the subjects will show a significant shift from external to internal locus of control after completing the portfolio."

A total of 82 persons were administered the pre-test during their first class meeting. Of these, a total of 49 completed all other portions of the post-test. The 33 missing were made up of 12 absentees, 16 who had dropped from the program or were academically disqualified, and five who improperly completed the instruments or failed to place their subject numbers on the questionnaires. The sample was comprised of 28 men and 21 women.

As described in Chapter Three, the Levenson Scale yields three scores, "I" for internal, "P" for powerful others, and "C" for chance. A lower score on "I"

indicates stronger internality, while higher scores on "P" and "C" indicate weaker externality.

Hypothesis One states that after completing the portfolio the subjects' "I" score will decrease significantly and their "P" and "C" scores will increase significantly. Two of these three scores did shift significantly, and all three shifted in the direction hypothesized. The results are summarized below. The scores are shown using both the sum and the average of each of the three scores.

Table 1

Shift in "I" Scores, Summed

	N	Mean Sum	SD	T-value	DF	Probability
Pre-Test	49	19.5306	3.874			
Post-Test	49	19.0204	3.413	1.29	48	0.203

Table 2

Shift in "I" Scores, Averaged

	N	Mean Avg.	SD	T-value	DF	Probability
Pre-Test	49	2.4413	0.452			
Post-Test	49	2.4005	0.484	0.82	48	0.418

Tables One and Two show that the subjects exhibited a shift towards internality, but not enough to be significant at the .05 level. Using only the shift

in "I" scores, the Null hypothesis may not be rejected.

The results summarized in Table Three and Four show subjects' "P" scores increasing significantly at the .05 level, indicating a decline in externality.

Table 3

Shift in "P" Scores, Summed

	N	Mean Sum	SD	T- Value	DF	Probability
Pre-Test	49	29.4694	5.017			
Post-Test	49	31.0612	5.625	2.37	48	0.022

Table 4

Shift in "P" Scores, Averaged

	N	Mean Avg.	SD	T- Value	DF	Probability
Pre-Test	49	3.6921	0.619			
Post-Test	49	3.8918	0.696	2.43	48	0.019

Using the increase in "P" scores only, the Null hypothesis may be rejected.

Table 5

Shift in "C" Scores, Summed

	N	Mean Sum	SD	T- Value	DF	Probability
Pre-Test	49	34.0816	5.107			
Post-Test	49	35.4694	5.806	2.36	48	0.022

Table 6

Shift in "C" Scores, Averaged

	N	Mean Avg.	SD	T- Value	DF	Probability
Pre-Test	49	4.3061	0.680			
Post-Test	49	4.4563	0.719	1.99	48	0.052

The results summarized in Tables Five and Six show subjects' "C" scores increasing significantly at the .05 level, indicating a decline in externality, as hypothesized. Using the increase of "C" scores only, the Null hypothesis may be rejected.

Hypothesis Two

Hypothesis Two states that "there will be a significantly better match, as measured by the results of a questionnaire, between the task of developing a life experience portfolio and subjects who have a strongly patterned profile of self knowledge than subjects who have a weakly patterned or situational profile."

Hypothesis Two was tested by performing a Pearson r test of correlation between each of the four scores yielded by the Unforgettable Experience Recall Test and the total score of the PLOQ.

The results showed no significant correlation between the total PLOQ score and subjects' scores on elemental, situational, process, or total scores on the

Unforgettable Experience Recall Test. There was, however, a significant correlation between the subjects' pattern score and their total score on the PLOQ. These results are summarized in Table Seven.

The correlations between the elemental and situational scores and the PLOQ were very low. The negative slope of these two weak correlations indicates that if they were measuring any phenomenon at all, it was something different from that being measured by the other three scores.

Table 7

Correlations between PLOQ Score and Five UER Scores (N=49)					
	Elem.	Sit.	Patt.	Pro.	Total
Correlation	-0.063	-0.108	0.265	0.188	0.221
Significance	0.331	0.229	0.033	0.099	0.063

Using only the patterned score correlation with the PLOQ score, the Null Hypothesis may be rejected. This correlation shows that as a subject's expressed satisfaction with the task increased, he/she was more likely to show a stronger patterned score. Chapter Five will contain a further discussion of this result. A scatter diagram will be analyzed in an effort to shed light on the sensitivity of the Unforgettable Experience Recall Test and of the PLOQ.

Hypothesis Three

Hypothesis Three states that "there will be a significant correlation between the degree of match with the task and subjects' shift in locus of control toward the internal."

Hypothesis Three was tested by performing a Pearson r to measure the correlation between the total PLOQ score and the amount of change on each of the Levenson scores for each subject.

No significant correlation was found between the PLOQ score and any of the three shift scores. The results of testing Hypothesis Three are summarized in Table Eight.

Table 8

Correlation between PLOQ Total Score and
Shift Scores of "I" "P" and "C" (N=40)

	Mean "I" Shift	Mean "P" Shift	Mean "C" Shift
Correlation	0.1765	0.0369	-0.0118
Significance	0.113	0.401	0.468

The fact that the slope of the "C" shift is negative while the slopes of both "I" and "P" are positive is further indication of the insignificance of these results. Had Hypothesis Three been proven, the "I" shift would

have been a correlation in a negative direction while the slopes of "P" and "C" shifts would have been positive.

The Null Hypothesis may not be rejected for Hypothesis Three.

Other Tests of Significance

The author performed a series of other tests with the data to determine if other factors may have been involved in the degree of match between task and learner. These included academic differences and differences between male and female subjects' responses.

Differences between male and female subjects were measured on a range of areas: total score on the PL0Q, amount of change in each of the three scores on the Levenson Scale, and total scores on each of the four scales of the Unforgettable Experience Recall Test. Each of these areas is summarized below. Since these data show comparisons of means of two populations with no prior hypothesis, a two-tailed F test was performed.

Table 9

Comparison of Men's and Women's Scores on the PL0Q

	N	Mean Score	SD	F- Value	Probability
Males	28	34.64	7.59		
Females	21	31.28	7.81	1.06	0.876

While women showed a slightly higher degree of match (lower scores indicate greater satisfaction) the difference cannot be termed statistically significant. The Null Hypothesis may not be rejected.

Table 10

Comparison between Men's and Women's Shift on
"I" "P" and "C" Scores on Levenson Scale

	N	Mean Score	SD	F- Value	Probability
<u>Change in "I"</u>					
Males	28	1.0375	2.67		
Females	21	-0.1905	2.80	1.10	0.805
<u>Changes in "P"</u>					
Males	28	-0.6429	5.07		
Females	21	-2.8571	3.92	1.67	0.239
<u>Changes in "C"</u>					
Males	28	-1.250	4.24		
Females	21	-1.571	4.02	1.12	0.810

None of the differences between men's and women's responses to the Levenson Scale shown above is statistically significant. The Null Hypothesis may not be rejected.

Table 11

Comparison Between Men's and Women's Scores on
the Unforgettable Experience Recall Test

	N	Mean Score	SD	F- Value	Probability
<u>Elemental</u>					
Males	28	50.821	19.64		
Females	21	46.142	19.84	1.02	0.946
<u>Situational</u>					
Males	28	41.892	15.89		
Females	21	44.857	13.83	1.32	0.527
<u>Patterned</u>					
Males	28	5.678	7.96		
Females	21	7.619	8.54	1.15	0.723
<u>Process</u>					
Males	28	1.321	3.60		
Females	21	1.142	4.23	1.38	0.427
<u>Total</u>					
Males	28	7.071	1.51		
Females	21	7.095	2.18	2.09	0.075

While the total score shows women scoring slightly higher than men, none of the male-female differences in Table Eleven is statistically significant.

The author distinguished among subjects using two academic criteria: number of semester units transferred into the program, and the number of life experiences written in the portfolio. The question was whether or not students would show a different response to the

task depending upon how much prior academic work they had done or dependent upon how long the task itself was for them.

Of the 49 subjects, 31 completed five life experience essays while 17 completed six through nine. One person completed ten.

Comparing the two larger groups showed no statistically significant differences. Table Twelve below summarizes these tests.

Table 12

Selected Comparisons between Responses Made by
Subjects Completing 5 Life Experiences and
Those Completing 6-9 Experiences

Comparison	N	Mean	SD	DF	T-Value	Probability
<u>Total PLOQ Score</u>						
5 Learning Exp.	31	33.935	7.014			
6-9 Learning Exp.	17	32.411	9.110	46	0.647	0.521
<u>Shift in "I" Score</u>						
5 Learning Exp.	31	0.419	3.212			
6-9 Learning Exp.	17	0.529	1.806	46	-0.130	0.897
<u>Shift in "P" Score</u>						
5 Learning Exp.	31	-1.677	5.095			
6-9 Learning Exp.	17	-1.588	4.169	46	-0.062	0.951

The Null Hypothesis may not be rejected on any tests shown in Table 12.

In addition, one-way analyses of variance were performed using the number of units transferred into the program and a series of variables: total PL0Q score, changes in each of the "I" "P" and "C" scores on the Levenson Scale. No significant differences were found. That is, subjects' perceptions of the importance of the task was not found to be dependent upon the number of units they transferred into the program. In addition, the amount of shift from external to internal they showed on the Levenson Scale was not dependent upon the number of units completed prior to entering the program.

Since these last results will not be analyzed further in Chapter Five, they are not summarized on a table here.

Summary

The results of testing Hypothesis One revealed that subjects became less external after completing the portfolio. Both measures of externality, Powerful Others, and Chance, showed a statistically significant increase. The subjects did not show a significant increase in internality. As a result of these outcomes, Hypothesis One was accepted, and the Null Hypothesis was rejected.

Hypothesis Two, a study of the match between task

and learner, showed a significant correlation between level of satisfaction with the task and the hypothesized self knowledge profile. The more strongly patterned a subject's self knowledge profile was, the more he/she expressed satisfaction with the task. There was not a significant correlation between satisfaction with the task and the other scores on the Unforgettable Experience Recall Test. That is, satisfaction was not found to be significantly correlated with elemental, situational, process, or total self knowledge profile measures.

Using the pattern score on the Unforgettable Experience Recall Test as the hypothesized measure, Hypothesis Two was accepted. The Null Hypothesis was rejected.

Hypothesis Three, a test of the interrelationship between the results of testing Hypothesis One and Hypothesis Two, showed no significant result. It was not found that there was a relationship between objective gain from the task (shift in locus of control) and the subjective reporting of the importance of the task. Hypothesis Three was not accepted, and the Null Hypothesis was not rejected.

The author also tested a series of minor hypotheses which concerned the perceived importance of the task and its relationship with prior academic work and the length of the task itself. No significant results were

found. There were no significant relationships found between men's and women's results on the Unforgettable Experience Recall test, or on the results of the PLOQ.

C H A P T E R V

CONCLUSIONS AND RECOMMENDATIONS

Chapter Five, "Conclusions and Recommendations," is divided into four sections. The first three are discussions of the results of each of the three hypotheses. The fourth section is a discussion of other findings, only tangentially related to the hypotheses. Each section contains discussions of the results as they pertain to that hypothesis, conclusions, and recommendations implied for curricular decision-making as well as for further research.

Hypothesis One

Hypothesis One: "The subjects will show a significant shift from external to internal locus of control after completing the portfolio."

As summarized in Chapter Four, two of the three scores on the Levenson Scale shifted to a degree that was significant at the .05 level of confidence. Subjects' scores showed a significant shift in "P" and "C". This means that they perceived both powerful other people and chance as having less of an influence upon the events in their lives after completing the portfolio than they had prior to completing that task.

While the mean "I" score did shift showing a more internality on the part of the subjects, it was not to an extent that was statistically significant. While only two of the three scales changed significantly, it can be concluded that the profile of scores changed significantly as a result of the completion of the portfolio.

This result, of course, must be placed in the context of a study with no control group. While it is safe to conclude that the subjects derived a benefit from the completion of the portfolio, it remains to be proven that they derived more benefit from this program than from others that they may have taken instead. It is conceptually possible that any adult returning to school would experience some degree of shift in his/her perception of locus of control, since such a step represents an important life event. The fact that completing a life experience portfolio is inner-directed and essentially a personal task makes the above argument weaker, however. Most programs are outer-directed and have as their content information that is external to the learner. This difference makes the completion of the portfolio psychologically distinct from the usual educational task. Given that the subjects reported a high degree of satisfaction with the task through the PLOQ, the argument that the portfolio task resulted in more of a shift away from an external locus of control

is the stronger.

This outcome has important programmatic implications. As discussed in Chapter Two, students whose profiles are more internal than others will be more motivated to learn and will retain what they have learned longer than those with less internal profiles. This statistical result lends credence to the anecdotal comments by students to the effect that they have a much better grasp of why they joined the program after completing the portfolio.

There are two major recommendations implied by the results of the testing of Hypothesis One:

1. The Bachelor of Arts in Public Service Management Program should continue to have the portfolio as its first activity. Students are clearly benefiting from the inclusion of this task at the outset of the program. This recommendation is supported not only by the results of Hypothesis One, but also by the results of the PLOQ, which showed an extremely high degree of satisfaction with the task on the part of the students involved.

2. More generally, adult students returning to an academic program should be involved in some systematic way with the explicit connection between their life/career needs and the academic program in which they are participating. As postulated in Chapter One, adults have learning needs that are distinct from those of

adolescents. Among those differing needs was that of immediately applying new learning to a real-life situation. As argued by Knowles, adults are not learning to prepare for some future goal, but rather to meet a specific and present need. A program for adults should begin by making as explicit as possible the connection between the learning objectives of the course or program, and the students' personal aim. The portfolio is an example of just such an activity.

The results of Hypothesis One imply recommendations for further research as well as programmatic recommendations.

First, further research should be conducted to replicate the findings of Hypothesis One in other types of programs for adults. Do adults participating in non-degree programs, arts and crafts programs, and liberal arts programs show the same kind of shift from external to internal? Conceptually, at least, the motivations for participating in such programs are different from those of adults returning to a career-oriented program such as the BAPSM program in this study.

A second area of further research implied by the results of Hypothesis One is in the differences among various demographic groups. Do males and females, whites and minorities, older and younger, rural and urban adults demonstrate differences in their responses to a return to school? Answers to such questions would

hold important implications for designers of curricula for these various groups.

A third kind of question relating to adults and their motivation to learn involves their basic internal-external profile. Rather than studying the shift from external to internal, future researchers could study the match between the level of internality or externality of a given student and the appropriateness of a given activity for that student. Again, such a study would hold important insights for anyone designing criteria for the subjects of such a study.

Hypothesis Two

Hypothesis Two: "There will be a significantly better match, as measured by the results of a questionnaire, between the task of developing a life experience portfolio and subjects who have a strongly patterned profile of self knowledge than subjects who have a weakly patterned or situational profile."

The results of testing Hypothesis Two were, in general, less clear than those of Hypothesis One. Only one of the correlations in testing the hypothesis was significant at the .05 level of confidence. This one, however, was precisely the one that had been hypothesized to be significant; that is, the subjects' pattern score was the one that was significantly correlated to the

results of the PLOQ.

The conclusion that may be drawn from this outcome is that, in terms of this task, students' pattern score was the only score on the Unforgettable Experience Recall Test that was significant to the task. As students' pattern score rose, so did their expressed satisfaction with the task.

What is the educational value of such information? The answer to this question can be broken into at least three parts.

First, the results of testing Hypothesis Two constitute an empirical demonstration that a specific task (completion of a life experience portfolio) is matched with a specific developmental level (patterned self knowledge). This is important because a planner of curricula must trust eventually that a task which is conceptually linked to a developmental level is also linked empirically. This study contains an example of a task that is matched both conceptually and empirically. If levels of self knowledge are to be used as a conceptual and theoretical base for developing curricula and specific lesson plans, then more studies such as this must be undertaken to demonstrate that activities that are conceptually stage-specific (or stage-matched) are also empirically stage specific.

A second way in which the results of Hypothesis Two

are important lies in the fact that developers of this specific curriculum, the BAPSM program, can now place other activities within the same framework. If the development of the portfolio was stage-specific so may other tasks in the program be. Such areas of the curriculum as the unit on political issues and ethics are conceptually linked to a strongly patterned level of self knowledge. It may now be possible to use that theoretical framework in developing or re-developing those parts of the curriculum for more effective sequencing or impact.

A third area of importance of this result is more specific. An instructor of the opening portion of the program can draw some inferences about the level of the class from their reactions to the task of portfolio completion. Should, for example, a large percentage of students express dissatisfaction with the portfolio, an instructor could conclude that the class members would be mismatched with some other important parts of the curriculum. He or she could then make necessary adjustments. (This may not be as easy as it seems at first blush. A class could be mismatched above or below the task, and the implications for each of these possibilities vary widely.)

The results of Hypothesis Two suggest a number of areas for further research. First, and most obvious,

would be to conduct similar studies exploring the match between levels of self knowledge and a variety of tasks, both affective and cognitive in nature. This would deepen the understanding of the theory of self knowledge and in particular begin to define the limits of its usefulness in predicting success or failure of educational interventions.

Secondly, the results, as described below, suggest that further refinement of the Unforgettable Experience Recall Test may be needed. To understand this recommendation, one must first examine a scatter diagram of the result of the correlation between the subjects' pattern scores and the PLOQ scores. (p.79)

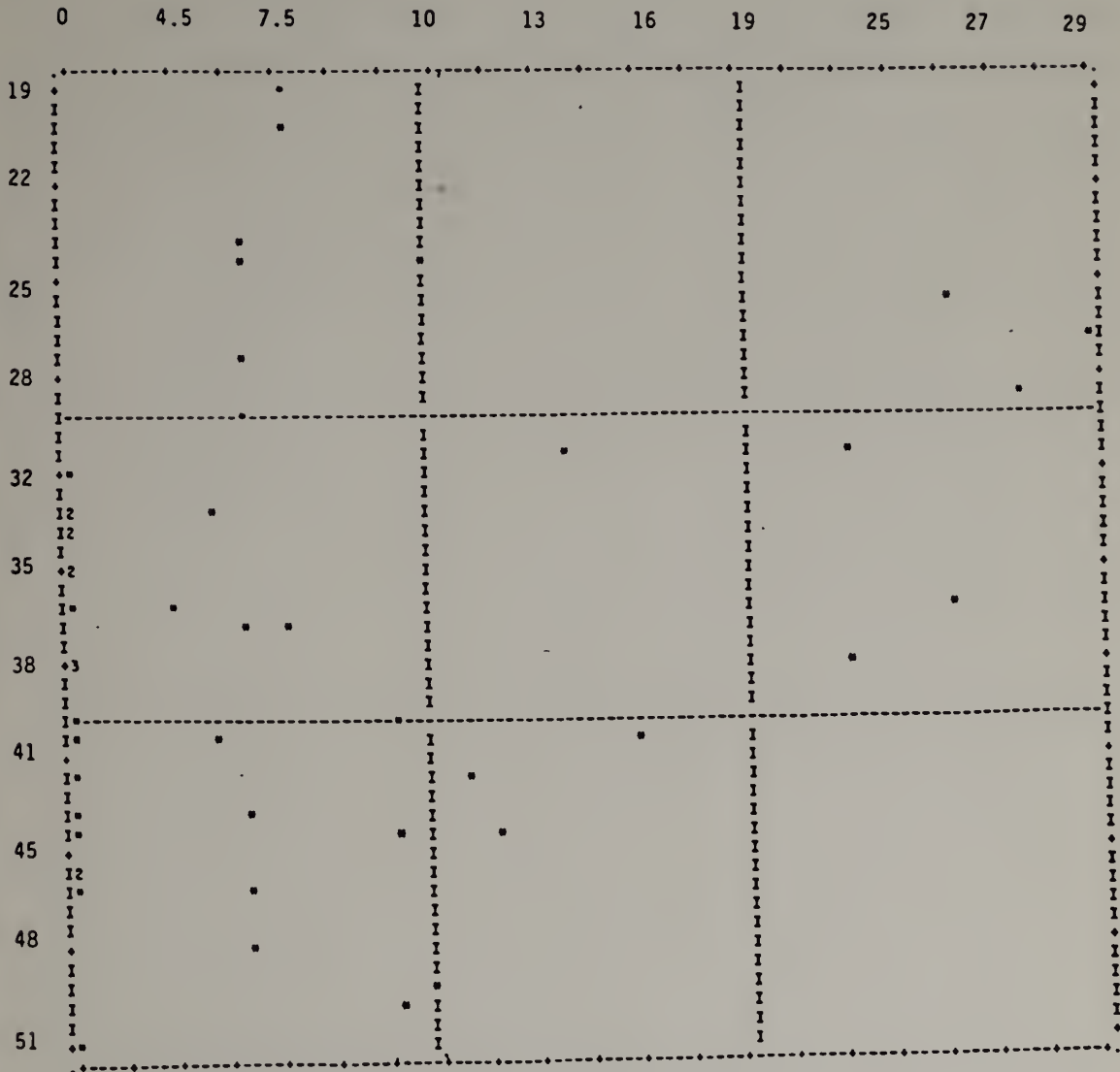
A review of this scatter diagram reveals three phenomena regarding Hypothesis Two and the Unforgettable Experience Recall Test. First, the largest group within the sample scored zero on the weighted pattern score. Indeed, 20 of the 49 subjects scored zero. The PLOQ scores for those scoring zero ranged from 19 to 39, indicating a relatively lower degree of satisfaction with the task than the others in the sample.

A second distinct group in the sample was that of subjects who scored three, four, or five on the weighted pattern; there were 13 of these, and there seemed to be no clustering of their scores on the PLOQ.

A third group was composed of subjects who scored

Table 13

Correlation between Total PLOQ Score (down)
and UER Pattern Score (across)



more than eight on the weighted pattern section of the Unforgettable Experience Recall Test. There was a strong correlation between their pattern score and their score on the PLOQ.

Statistically, there was a correlation between a subject's PLOQ score and his/her weighted pattern score. From this point of view, it is possible to make the assertions outlined above regarding importance of the results of testing Hypothesis Two. Several questions remain unanswered, however.

First, there is no way of knowing how the well-matched sub-group (the higher patterned scorers) differed from the other two sub-groups. That they differed in some way is evident; the existence of the middle group (the 3, 4, 5 scorers) indicates that something besides the score on the Unforgettable Experience Recall test was influencing the scores along both axes.

The more important question, however, remains the sensitivity of the instrument. For purposes of this study, the result would have been much sharper had the instrument had the capability of differentiating among the 20 subjects who scored zero. There does not seem to be a continuity from stage score to stage score. That is, one could not simply extend the pattern score back into the situational score. There was simply no correlation between perception of the importance of

the task and any part of the range of situational scores.

Besides the area of further refining the Unforgettable Experience Recall Test, the results of Hypothesis Two imply a need for further research into another area. This may be summed up in a question such as "what is the correlation between levels of self knowledge and other important indicators of readiness to learn, such as I.Q., need for achievement, or moral development?" An entire series of studies could be designed around these topics, all of concern to those interested in self knowledge and its relationship to learning.

Hypothesis Three

"There will be a significant correlation between the degree of match with the task and subjects' shift of perception of locus of control towards the internal."

The testing of Hypothesis Three yielded no significant results. That is, there was no important relationship between a subject's score on the PLOQ and the degree to which he/she showed a shift on the Levenson Scale.

The results of Hypothesis One indicated that indeed there was a significant shift toward the internal (or, more precisely, a significant shift away from the external) among the subjects. Conceptually, at least, it would follow that subjects' perception of the worth

of the task (as expressed on the PLOQ) would be linked with this "payoff." The results do not bear this out.

There are two possible explanations for the lack of correlation. First, it may be that the PLOQ does not truly measure subjects' perception of the importance of the task. While this is conceptually possible, it is not probable. The instrument has such strong face validity and showed such strong split-half reliability that it would be difficult to support this as a probable explanation.

The second possible explanation is that subjects do not feel or are not aware of their own growth in terms of internality. They may simply not connect what may seem to them to be a vague sense of well-being or control with other events in their lives with the task. A shift in perceived locus of control may not be seen as a shift by the subject; he/she may simply believe that his/her perceptions have always been that way. It is altogether possible that subjects of this study would be surprised to learn that their scores on the Levenson Scale changed at all over the course of seven weeks.

A recommendation for further research that stems from the results of Hypothesis Three is to study further the relationship between educational interventions and internal-external shifts. Perhaps subjects with differing pre-existing internal-external profiles react differently

(or show a greater capacity for shift) than do others. This would imply studies designed similarly to the testing of Hypothesis Two in this study to explore further the internal-external profile of learners and the relationship of those profiles to specific educational tasks.

Other Results

Besides the testing of the three major hypotheses, this study included a variety of tests for correlation between other factors and scores on the PLOQ and Leyenson Scale as well as the Unforgettable Experience Recall Test.

The results of correlating sex, number of units completed before entering the program, and number of life experience essays written were correlated with all three measures. There was no correlation with any.

These results underscore particularly the validity of the results of Hypothesis One. That is, a significant shift in internal-external profile was seen in men and women, and in subjects regardless of their academic preparation or the length of the task for them. This logically supports the major programmatic recommendation as well, that the portfolio should remain as the opening activity of the BAPSM program.

The fact the women scored slightly higher (but not statistically significantly higher) on the Unforgettable

Experience Recall Test is interesting in that it indicates a tendency popularly held that women are more psychologically advanced than men. This result could be studied in more detail to either verify or disprove that assertion.

Summary

The major conclusions of this study were that, first, the completion of the life experience portfolio led to a shift in subjects' locus of control away from external. The fact that this study had no control group was discussed as a problem in the author's ability to generalize the results, but it was concluded that the results were valid for the subjects of the study.

It was also concluded that there was a significant correlation between subjects' pattern self knowledge profile and their perception of the importance of the task. A problem with the instrumentation of this part of the study was discussed, and recommendations made on ways to correct it.

Lastly, it was concluded that there was no correlation between the shift in locus of control and reported importance of the task. Two possible explanations of this result were discussed.

The major recommendation stemming from this study included one to continue the use of the portfolio as

the opening activity of the BAPSM program. This major recommendation came as a result of both the shift away from external locus of control among the subjects, and the high degree of satisfaction with the task expressed through the PLOQ.

A second major recommendation of the study was to include some kind of systematic linking of course objectives with student's life and career concerns when the students are adults. This recommendation came as a result of the outcomes of testing Hypothesis One.

A third set of recommendations centered on the expansion of the notion of self knowledge. Several avenues of investigation were suggested that would shed further light on this developmental theory of human psychology which, as shown by this study, has relevance for practitioners of adult education.

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of liberal and career studies

MEMORANDUM

FROM: David B. Gillespie,
Coordinator of Curriculum
and Instruction

TO: Members of Bachelor of Arts
in Public Service Management
Classes

SUBJECT: Attached Questionnaire

As part of the work I am currently doing toward completing my doctoral dissertation, I have constructed a questionnaire regarding your reactions to the portfolio. Basically, my research revolves around measuring the educational value of the portfolio to those who have completed it. I expect the results of my research to be of benefit to the administrative staff and ultimately to students enrolled in the program.

Attached is the first draft of a questionnaire that I will be using as part of my research. I would appreciate very much your taking a few minutes to fill it out as honestly as you can. Placing your name on the questionnaire is optional; I may wish to contact a few of you later on in order to more fully understand your responses. This would help me to better revise the questionnaire before formally collecting my data.

If you have any questions regarding the use of the questionnaire or my research, please feel free to contact me at the off-campus office in Irvine.

Thank you for your kind cooperation.

NAME (optional) _____

PORTFOLIO LEARNING OUTCOMES QUESTIONNAIRE

Please respond to the statements below by circling the number which best describes your feelings about each statement. The numbers represent the following responses:

- 1 = STRONGLY AGREE
- 2 = AGREE
- 3 = NO OPINION
- 4 = DISAGREE
- 5 = STRONGLY DISAGREE

Your frank and honest answers will be greatly appreciated. Thank you.

	STRONGLY AGREE	AGREE	NO OPINION	DISAGREE	STRONGLY DISAGREE
1. Overall, I found the task of completing the portfolio personally rewarding.	(1)	2	3	4	5
2. I think the portfolio was too much work.	1	2	3	(4)	5
3. Now that I have completed the portfolio, I have a better appreciation for my accomplishments.	(1)	2	3	4	5
4. Doing the portfolio hasn't helped me understand my family any better.	1	2	3	4	(5)
5. Doing the portfolio prepared me to do a better job in my college work.	1	(2)	3	4	5
6. I didn't learn anything new about myself through doing the portfolio.	1	2	3	(4)	5
7. I enjoyed doing the portfolio.	1	2	3	(4)	5
8. Overall, doing the portfolio was unimportant to me.	1	2	3	4	(5)
9. Now that I have done the portfolio, I am less sure of myself.	1	2	3	(4)	5
10. Doing the portfolio has made me more ambitious to advance my career.	1	(2)	3	4	5

	STRONGLY AGREE	AGREE	NO OPINION	DISAGREE	STRONGLY DISAGREE
11. Since doing the portfolio, I see my life as a series of disconnected events that have no relationship to each other.	1	2	3	(4)	5
12. I gained some important insights about myself through doing the portfolio.	(1)	2	3	4	5
13. I think doing the portfolio was too easy.	1	2	3	(4)	5
14. Doing the portfolio has turned me off to doing college-level work.	1	2	3	4	(5)
15. Since doing the portfolio, I feel more self-assured.	1	(2)	3	4	5
16. Looking over the portfolio, I was disappointed by how little I have accomplished.	1	(2)	3	4	5
17. Doing the portfolio was boring.	1	2	3	(4)	5
18. Completing the portfolio has helped me understand my family better.	1	(2)	3	4	5
19. Doing the portfolio has made me discouraged about advancing my career.	1	2	3	(4)	5
20. Since doing the portfolio, I have been able to see some patterns in my life that I wasn't aware of before.	1	(2)	3	4	5

Please indicate the appropriate responses below:

A. Sex: Male Female

B. Number of life experiences written: 5 6-9 10 or more

C. Number of transferable units earned prior to entering the program:

less than 55 56-75 76 or more don't know

Please choose from one of the following responses for each of the statements below:

- 1 = always true
- 2 = mostly true
- 3 = slightly more true than false
- 4 = slightly more false than true
- 5 = mostly false
- 6 = always false

- | | | | | | | | | |
|-----|---|---|---|---|---|---|---|------|
| 1. | Whether or not I get to be a leader depends mostly on my ability. | 1 | 2 | 3 | 4 | 5 | 6 | (5) |
| 2. | To a great extent my life is controlled by accidental happenings. | 1 | 2 | 3 | 4 | 5 | 6 | (6) |
| 3. | I feel like what happens in my life is mostly determined by powerful people. | 1 | 2 | 3 | 4 | 5 | 6 | (7) |
| 4. | Whether or not I get into a car accident depends mostly on how good a driver I am. | 1 | 2 | 3 | 4 | 5 | 6 | (8) |
| 5. | When I make plans, I am almost certain to make them work. | 1 | 2 | 3 | 4 | 5 | 6 | (9) |
| 6. | Often there is no chance of protecting my personal interest from bad luck happenings. | 1 | 2 | 3 | 4 | 5 | 6 | (10) |
| 7. | When I get what I want, it's usually because I'm lucky. | 1 | 2 | 3 | 4 | 5 | 6 | (11) |
| 8. | How many friends I have depends on how nice a person I am. | 1 | 2 | 3 | 4 | 5 | 6 | (12) |
| 9. | Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power. | 1 | 2 | 3 | 4 | 5 | 6 | (13) |
| 10. | I have often found that what is going to happen will happen. | 1 | 2 | 3 | 4 | 5 | 6 | (14) |

- 1 = always true
- 2 = mostly true
- 3 = slightly more true than false
- 4 = slightly more false than true
- 5 = mostly false
- 6 = always false

- | | | | | | | | |
|--|---|---|---|---|---|---|------|
| 11. My life is chiefly controlled by powerful others. | 1 | 2 | 3 | 4 | 5 | 6 | (15) |
| 12. Whether or not I get into a car accident is mostly a matter of luck. | 1 | 2 | 3 | 4 | 5 | 6 | (16) |
| 13. People like myself have very little chance of protecting personal interests when they conflict with those of strong pressure groups. | 1 | 2 | 3 | 4 | 5 | 6 | (17) |
| 14. It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune. | 1 | 2 | 3 | 4 | 5 | 6 | (18) |
| 15. Getting what I want requires pleasing those above me. | 1 | 2 | 3 | 4 | 5 | 6 | (19) |
| 16. Whether or not I get to be a leader depends upon whether I'm lucky enough to be in the right place at the right time. | 1 | 2 | 3 | 4 | 5 | 6 | (20) |
| 17. If important people were to decide they didn't like me, I probably wouldn't make many friends. | 1 | 2 | 3 | 4 | 5 | 6 | (21) |
| 18. I can pretty much determine what will happen in my life. | 1 | 2 | 3 | 4 | 5 | 6 | (22) |
| 19. I am usually able to protect my personal interest. | 1 | 2 | 3 | 4 | 5 | 6 | (23) |
| 20. Whether or not I get into a car accident depends mostly on the other driver. | 1 | 2 | 3 | 4 | 5 | 6 | (24) |
| 21. When I get what I want, it's usually because I worked hard for it. | 1 | 2 | 3 | 4 | 5 | 6 | (25) |

- 1 = always true
- 2 = mostly true
- 3 = slightly more true than false
- 4 = slightly more false than true
- 5 = mostly false
- 6 = always false

- | | | | | | | | | |
|-----|--|---|---|---|---|---|---|------|
| 22. | In order to have my plans work,
I make sure that they fit in with
the desires of people who have
power over me. | 1 | 2 | 3 | 4 | 5 | 6 | (26) |
| 23. | My life is determined by my own
actions. | 1 | 2 | 3 | 4 | 5 | 6 | (27) |
| 24. | It's chiefly a matter of luck
whether or not I have few friends
or many friends. | 1 | 2 | 3 | 4 | 5 | 6 | (28) |

SUBJECT NUMBER

(1-4)

UNFORGETTABLE EXPERIENCE RECALL

- A. Describe as fully as you can, and in as much detail the experience you remembered. (Please include what led up to this experience, what your thoughts and feelings were and what the results of this experience were.)

B. How was the experience important or special to you then?

C. How is the experience important or special to you now?

D. From the experience you just remembered, please describe some things you know about yourself now.

E. How could knowing this about yourself be useful to you? Specifically, how can it help you get what you want or avoid what you don't want?

F. Do you have any comments about what it was like answering these questions?

FOR RESEARCH USE ONLY

EL	SI	PA	TR	TO
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
(5-7)	(8-10)	(11-13)	(14-16)	(17-19)

UNFORGETTABLE EXPERIENCE RECALL

The following instructions are to be read aloud to an individual or in a group setting. The numbers in brackets following some of the sentences and phrases indicate the number of seconds the reader should wait before reading the next sentence. The written answer sheets should be handed out before the instructions are given.

INSTRUCTIONS

We are involved in a project which is trying to find out how different people know about themselves. There are two parts to this exercise. First, I will have you close your eyes and help you remember an important experience in your life. Then, I'll ask you to open your eyes and answer some questions. The questions you have in front of you are the only ones we want you to answer.

Read it over, so you'll know what they are, and so you understand them. Your answers will be kept in strict confidence and no one except the project staff will see your responses with your name on it. Are there any questions before we begin?

For the first part of this exercise it is best if you get in a comfortable and relaxed position in your seat. You might want to sit or lie on the floor.

Go ahead and get as comfortable and relaxed as you can. Okay? Close your eyes and let your whole body relax, from your head to your toes (5). Take a couple of deep breaths, breathing out any tension (8). Now breathe normally (5). Notice your thoughts for a minute (6). And now let them go (2).

Now, I want you to follow my voice and begin to picture yourself and the things that happened in your life. I am going to ask you to think back and remember your life and your experiences. I'll ask you to remember what you did and remember the things that happened to you. We'll start with yesterday and we'll go back as far as you can recall (2). First, can you remember anything important about yourself yesterday (12), last week (10), last month (10), last year (10), three years ago (10), when you were in high school (10), when you were in junior high school (10), when you were in elementary school, when you were a young child (10).

I want you to find an experience or an event in your life that stands out in your mind, an experience that is somehow important to you. It might be something you will always remember, something you won't ever forget (10). There might be several of these experiences that you can think of, but pick one that you could think about now (20).

Now, I want you to remember that experience as much as you can. First, picture the place where you were. What did it look like, and who was there (10). Can you picture what you looked like (5). Now, see if you can remember exactly what happened. What did you do and say. What did other people do and say? (10) See if you can remember any of your thoughts, or what you were saying to yourself (10). What were you feeling then (10). What do you imagine other people were feeling and thinking (10). Can you remember what led up to this experience? (10) And what happened as a result of this experience (10).

Go ahead and finish the scene /event in your mind. Take your time (3) and when you are ready, at your own pace, come back to this room and open your eyes.

The next part is the written section. Take as much time as you need to answer all of the questions. If you need more space you may write on the backs of the pages.

