MOTIVATIONAL ORIENTATION AND CREATIVITY

by

PAUL HAWRYLUK

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The purpose of this study was to examine the effects of offering an extrinsic reward to individuals who were involved in creative writing. Two essential components of creative writing that were investigated were the quality of creative writing, as assessed by two raters who were working in the domain of writing, and motivational orientation which was assessed mainly by a locus of control test. A class of creative writing students served as subjects. Complete data was obtained for 17 of them and partial data for three more.

The motivational orientation of the class which served as subjects of the study was profiled according to the locus of control test (I/E Scale) and a Likert Scale that was created for this study. The results indicated that the class profile was no different than a random group of subjects.

The study explored the relationship between the creative quality of writing students produced and intrinsic or extrinsic motivation. Inter-rater reliability on the samples of student writing could not be established between the ratings of the two evaluators, so this question could not be answered. Exploratory methods were used to explore the data for discernible patterns, but none were found.

The study attempted to investigate the differential effects of offering a reward for writing on the subjects according to motivational orientation. The use of exploratory methods failed to provide any evidence for any differential effects.

The conclusion of the study was that creativity was a difficult area to research, particularly using a quantitative approach. It was suggested that

the study of creativity and motivation be focused on established authors whose creative quality had been already established by their publication record. Then, by qualitative techniques such as interviews, the motivational styles of some of these established writers could be explored in the search for patterns that could provide information on the relationship between motivation and creativity.

MOTIVATIONAL ORIENTATION AND CREATIVITY

INTRODUCTION

A basic issue in the study of creativity is to define what it is that is being explored. Writers and researchers in the field have viewed creativity in terms of a process, a product, a set of biological or personality characterisitics within the person, or an atmosphere or climate which could draw forth or enhance innovation. Historically, the issue of whether creativity was a natural or supernatural process still has its effects on how creativity is viewed today (Rothenberg & Hausman, 1976).

The significance of these definitions for research is that they tend to lead the direction into which researchers look for information on creativity. When the definition is based on the biological or personality characteristics of the person, then creativity tends to be explored along the lines of biological metaphors or personality characteristics of creative individuals. If the essence of creativity is defined in the area of the creative climate, then research into creativity tends to focus on the environmental conditions that enhance creativity, such as Simonton's (1984) research into the early nurturance characteristics of eminent individuals.

The definition of creativity also has an effect on the way in which creativity is evaluated. If creativity is considered to be the result of a creative process, then the process will be the focus of evaluation, often with a creative product being irrelevant to the evaluation. An example of this is the use of creativity tests to judge creative potential. On the other hand, if the basis of creativity is thought to be the product which an individual can

create, then the evaluation of the product becomes extremely significant to the evaluation of creativity.

Although creativity and motivation have not been linked to one another until fairly recently, various writers in the field of creativity have noted that a characterictic creative individuals tended to exhibit was the motivation to complete a task (Clark, 1983). Perkins (1984) as well as other researchers in the field of creativity (Amabile, 1983; Kruglanski & Associates, 1971; Moran & Liou, 1982) have explored intrinsic motivation for task performance in relation to the quality of a product individuals could create.

Purpose of the Study

The purpose of this study was to examine the differential effects of the offer of extrinsic rewards on the creative quality of writing on individuals with different motivational styles.

Research Questions

This study attempted to answer four questions:

1. What is the profile of the creative writing class in terms of motivational orientation?
2. Is there a relationship between the creative quality of writing the students produce and motivational orientation?
3. What will be the effects of offering students an extrinsic reward for doing a piece of writing, and is the effect different for the intrinsically motivated students than for the extrinsically motivated ones?
4. If there is a difference between motivational groups, what is the nature of the difference?

Significance of the Study

Although prior research has provided evidence that the offer of a reward for a creative task is detrimental to the quality of a creative product, the effects of the offer of a reward on different types of motivational styles has not been explored. This study was designed to explore the effects of the offer of reward on intrinsically and extrinsically oriented students who were involved in creative writing. This could be useful information for teachers of creative writing because it could be helpful for them in planning their motivational strategies.

Definitions

Creativity

As noted earlier, creativity can be defined from a number of points of view. The difficulty with many of the definitions is that, once they are established, they are extremely difficult to use as criteria to judge creativity. For example, if creativity were to be evaluated in terms of a creative process, the next issue becomes what to call a creative process.

Therefore, for the purposes of this paper, creativity is defined in terms of the product (Perkins, 1984) created by individuals who are attempting to be creative. The quality of the product is evaluated by two raters who are considered to be knowledgeable and actively engaged in the field of creativity being evaluated.

Since this study focused on creative writing, the creative product was evaluated according to the following critera:

1. The writer is dealing with ideas in an innovative way (Arieti, 1976; Thompson, 1982).

2. The writing has an aesthetic quality to it (Arieti, 1976; Thompson, 1982).

3. The writing demonstrates wit, humor, or insight (Arieti, 1976).

4. The writer uses words in an effective way. (This item was included as one of the criteria because the use of words can be viewed as a characteristic separate from innovation in general or the aesthetic quality of the writing. If it were left to be included with the other two, then the other two qualities could mask the use of language.)

Intrinsic Motivation

For the purposes of this study, the motivational orientation of the subjects was defined in terms of locus of control as determined by Rotter (1966). By administering a locus of control test called the Internal/External Scale (I/E Scale), a score is established by which the tendency to look to the self for reinforcement versus the tendency to look outside the self for reinforcement can be indicated. To be intrinsically motivated means that the subject is doing a task without looking to an outside source for reinforcement. A low score on the test indicates a tendency toward an intrinsic motivational orientation, but an exact score between intrinsic motivation and extrinsic motivation was not established since correlational procedures were used which made such precise distinctions unnecessary .

Extrinsic Motivation

Extrinsic motivation was defined as the tendency to do a task, not for the inherent desire to be involved in it, but for the reward that the task would

bring. For the purposes of this study, extrinsic motivation was assessed by the use of the I/E Scale in which a high score on the I/E Scale signified an extrinsic motivational orientation.

Limitations of the Study

Major limitations of this study were:

1. The sample size was small so that results could not have been generalized.
2. The class lost three subjects so the complete results were available for only 17 of the 20 subjects.
3. Due to the small size of classes in post-secondary creative writing classes, the sample obtained was from a narrow age range.
4. Creativity was difficult to assess, partly because it is such a nebulous concept.
5. It was difficult to adequately train the raters due to time constraints.
6. All of the writing assignments were given under class conditions, which may have affected the results.
7. A great number of personality and experiential factors could have affected the results.
8. Motivational orientation was treated as if it were a stable personality factor. This may not be the case.
9. Quantitative research procedures were used in an area such as creativity which is difficult to quantify.

The limitations of the study were considerable and greatly affected the results. Therefore, they are discussed further in the Discussion section.

LITERATURE REVIEW

The literature on creativity is extremely diverse, since creativity can be approached from so many points of view as well as from so many domains of creativity, ranging from such fields as pottery-making, and poetry, to innovations and inventions in science and technology. Therefore, to make the review more cohesive and focused, it was organized under five headings: definitions of creativity, research into creativity, assessing creativity, motivation research, and extrinsic reward and creativity.

Definitions of Creativity

Historically, definitions of creativity usually arose from a basic philosophical orientation. Perhaps a starting point, or an easy distinction to make, is a definition of creativity based on naturalist versus supernaturalist views (Rothenberg & Hausman, 1976). The naturalist view of creativity is to impose upon matter what has been preformed in thought, as suggested by Aristotle (Rothenberg & Hausman, 1976). The idea is conceived in the mind and a product is made as a result of thought. But the product is the evidence of a creative act having occurred.

Plato was a supporter of the supernaturalist view : "Thus Plato emphasizes inspiration and suggests that the creative artist is 'out of his mind' during the creative process. This suggestion is the basis for a tradition that makes inspiration crucial to creativity and which, in many instances, emphasizes either madness, altered consciousness, or mystery in

the creative process" (Rothenberg & Hausman, 1976, p. 28).

Kant put forward a position that differs from that of either Plato or Aristotle, but seems to incorporate some of both views. He saw the process of creativity as a "unique and spontaneous act that introduces a leap in ordinary natural processes" (Rothenberg & Hausman, 1976, p. 29). A current view of creativity in this tradition is the associationist view that creativity is the result of associating ideas that would not normally be put together. Kant saw creativity as the making of your own rules, rather than following rules that are already established by others.

Two other writers had a significant impact on the historical views of creativity: Galton and Freud. Galton, like Kant, viewed creativity as a condition to be found in genius. However, Galton differed from Kant because he considered that genetic factors were responsible for genius (Rothenberg & Hausman, 1976). Freud, on the other hand, placed the locus of creativity in the unconscious. From Freud's perspective, fantasy, especially unfulfilled fantasy, played a key role in the creative process.

From these early writings on creativity, the various major ways in which creativity is viewed took their form: creativity as supernatural inspiration (Plato), creativity as the work of a biologically creative person (Galton), creativity as the product of a creative endeavor (Aristotle), creativity as the result of a personal characteristic or set of characteristics (Freud), and creativity as a process (Kant).

Many of the more recent definitions of creativity can be categorized into historic ways of viewing creativity. A number of them follow the Aristotelean view. Spearman (1931) saw creativity as the "power of the

human mind to create new content...." (cited in Taylor, 1975, p. 2). In a similar vein, Barron (1969) defined creativity as "the ability to bring something new into existence."

Some writers felt that insight was essential to the creative process. For example, Thurston (1962) saw that the creative act "is characterized by the moment of insight which is often preceded by noverbalized prefocal thinking" which follows the tradition of Kant (Taylor, 1975, p. 2). Mednick (1962), on the other hand, saw creativity, not as creating something totally new, but as a "forming of associative and largely mutually remote elements into new combinations" (Taylor, p. 2).

Essentially, although the definitions of creativity differ a great deal from one another, there are a number of similar characteristics in many of them. Rothenberg and Hausman (1976) summarize this point of view: "Minimally, however, creativity consists of the capacity for, or a state of, bringing something into being. And bringing something into being involves at least three separable components: an agent, a process, and a product" (p. 6). Taylor and Ellison (1976) added another component to these three--the environment or place where creative acts are performed. As well, Taylor (1975) included the "climate" or atmosphere as an aspect of the environment. These four views on creativity form the basis of the current prevailing views on creativity.

Areas of Research in Creativity

The definitions of creativity are significant because the areas of research in creativity tend to follow along the lines of the definitions. For

example, since some definitions focus on creativity as a process, there is also a body of research which explores the potential processes used in a creative endeavor. The same is true with defining creativity in terms of a creative person; the research that follows this definition seeks to discover characteristics that creative individuals tend to exhibit. Research that follows the definition of creativity as demonstrated by a creative product tends to explore ways of identifying the creative qualities of the end product of a creative task. The same is true of research into the creative environment, or climate; investigators seek conditions under which individuals can accomplish creative endeavors more easily. However, research does not necessarily use only one component in its definition of creativity, but may use two or more of them.

The Creative Process

Research into understanding the creative process has yielded a small body of results. However, basic to the creative process seems to be the ability to transform information into new forms, or to associate differing ideas into new combinations (Taylor, 1975). However, beyond this, the information is sketchy.

In 1926, Wallas proposed a model of creative thought as a sequence of four stages: preparation, incubation, illumination, and verification (cited in Taylor, 1975). The preparation stage would be where information is gathered and organized into some understandable structure. Then, during the incubation stage, the mind would work on the information without the individual being consciously aware of it. At some point, the problem would

be solved in a flash of insight that was not the result of conscious effort. Then the insight would be verified by trying it out in practice. Although the model is widely known, it has not been verified by research.

From observing work patterns of creative people, Osborn concluded that a common pattern of planning used by effective problem solvers was a technique called "brainstorming". Based on his observations, he established a group form of brainstorming (cited in Taylor, 1975). This was later developed by Parnes (1980) into an important strategy for a course in creative problem solving that is taught to individuals who are attempting to improve their creative thinking skills.

Other researchers have suggested that certain styles of thought are conducive to creativity, such as divergent production, which is the ability to list a large number of alternatives in response to a question that is open-ended (Guilford, 1980). Torrance (1962) has isolated what he believes are components of creative thought processes, such as the ability to generate a great number of alternatives around a topic (fluency), or to suggest many innovative uses for items (originality).

In Torrance's view, as well as that of a number of other researchers, since these thought processes have been isolated, they can be taught to others who can then be expected to become more creative. There is a fairly large body of research in the literature devoted to this question of whether or not creativity can be taught, and what types of evidence are acceptable to support either claim (Mansfield, Busse, & Krepelka, 1978; Willhoft, 1982).

The Creative Personality

Various studies have explored the characteristics of the creative personality. The two Goertzel studies (1962, 1978) as well as the study by Simonton (1984) gathered information on some of the most eminent personalities recorded in historical accounts. They then established which characteristics were the most common in all of the subjects selected, and then isolated characteristics that were the most common to a specific domain of creative work. For instance, a large number of eminent literary people were first- or last-born children, they were voracious readers from a young age, grew up in homes that were emotionally charged, and tended to have been singled out by an adult who became their mentor.

Other researchers have focused on cognitive styles that creative individuals tend to use more frequently than do others. For example, Roe used psychological and biographical data to reach the conclusion that eminent painters and scientists have "a strong motivation to succeed..." (Taylor, 1975, p. 12). A number of other characteristics have been isolated that seem to describe the "creative personality" as well.

The Creative Product

If a creative product is to be used as verification that a creative act has taken place, then there is a need to establish what a creative product is, or perhaps more importantly, how a creative product can be identified. Some researchers would be prone to consider any product to be creative if it was developed as the result of an intention to be creative. They would judge creativity, not by the product, but by the process involved (Ghiselin, 1958).

However, many other writers and researchers would not agree with this view.

A number of writers directed their efforts in the direction of finding criteria by which to assess a creative product. Two important criteria, established by Jackson and Messick (1965), were the novelty of the product as well as the appropriateness of the product for the context within which it was developed. Ghiselin (1958) saw an important aspect of a creative product as yielding a new perspective or a unique outcome. Arieti (1976) added one more criterion to the list: the product needs to have an aesthetic quality to it.

Although there is not a great deal of consensus as to what a creative product is, part of the problem is the great diversity of types of ends that result from a creative act or process. For example, how can a piece of music be compared to the development of a new type of technological device, or to a theory in one of the sciences? If a creative product is viewed in a specific domain, then the selection of criteria could be simpler.

Creative Climate or Environment

A body of research focuses on finding or developing conditions which foster or enhance the creative process. For example, Torrance (1967) has attempted to isolate factors that contribute to the creative process. He made a number of suggestions: "respect unusual questions..., show that ideas have value, provide opportunities and credit for self-initiated learning, and allow performance to occur without constant threat of evaluation" (Taylor, 1975, p. 19). Taylor (1972) demonstrated that intensive sensory stimulation

over a short period of time could facilitate divergent thinking, which is considered to be significant in creativity in at least some domains.

Assessing Creativity

There are a number of suggested ways for assessing creativity, but the first issue is, What aspect of creativity is being assessed? For example, if an individual is being assessed for creativity, then the personal characteristics could be compared to those found in the literature based on creative personalities.

A number of tests for creativity are available, such as the TTCT (Torrance Test of Creative Thinking). However, several researchers view with skepticism the assessment of creativity by using a test. One of the reasons is that the test has been used to assess pre- and posttest gains after teaching creative thinking. Often the tests show gains in creativity scores, but if the students were asked to do a creative task as well, there appeared to be no apparent change in the quality of the product they created after taking creativity training (Crockenberg, 1972; Mansfield & Associates, 1978).

Other researchers have detected problems with creativity tests as well. A study carried out by Willhoft (1982) shows that, by giving instructions to the subjects of a TTCT in different ways, the results could be easily biased. Secondly, Zarnegar and Hocevar (1984) found that the "fluency" aspect (number of items listed) of the TTCT greatly influenced the testing for another component of creative thinking, "originality". Perkins (1984) added to the case against the acceptance of creativity test scores as an indicator

of creative functioning. In his view, the scores and the quality of creative output did not relate well to one another in practice.

Germaine to many concepts of creativity are three components: the person doing the creating, the process involved, and the product that serves as the outcome. It is difficult to assess whether or not a creative act has taken place unless a product is readily available. In Perkins' (1984) view, the most useful way to assess creativity is to have a panel of evaluators judge the quality of the creative product.

Barron and Harrington (1981) suggest that all criteria would not fit all circumstances that can be considered to be creative. Therefore, it is necessary to develop field-specific criteria that would fit creative writing alone. For example, Arieti (1976) suggests three criteria that frequently appear in the literature in assessing creative writing. These are the innovative use of ideas, an aesthetic quality in the writing, and the demonstration of wit, humor, or insight.

Motivation Research

Psychologists have long been interested in what motivates human beings to do the things that they do. Freud proposed that human beings are driven to to fulfill their needs, which are often unconscious and based on sublimated urges that could not be legimately fulfilled. Maslow (1968) proposed a counter theory which suggested that motivation can be based on needs (deprivation), or it can be aroused by a desire to rise above the needs and to fulfill the desires that a person naturally has (self-actualization).

However, Bem (1972) suggested that motivation is not just one type of

force, but two--intrinsic motivation, and extrinsic motivation. His proposal became know as the "self-perception" theory (Lepper, Greene, & Nisbett, 1973).

> When an individual observes another person engaging in some activity, he infers that the other is intrinsically motivated to engage in that activity to the extent that he does not perceive salient, unambitious, and sufficient extrinsic contingencies to which to attribute the other's behavior. Self-perception theory proposes that a person engages in similar processes of inference about his own behavior and its meaning (p. 129).

According to self-perception theory, a person will view what he/she is doing to be intrinsically motivated unless he/she receives evidence to the contrary. This issue of itself may be of minor significance, but if the consideration is made that individuals perceive themselves differently based on whether they feel they are doing something because they want to (intrinsic motivation) or because of some force outside themselves (extrinsic motivation), then the issue becomes significant for a large number of issues that apply to creativity and education (Lepper, Greene, & Nisbett, 1973).

Another concept, which arises out of the self-perception theory that is basic to much of the research on motivation is what has become called the "overjustification" hypothesis (Seligman, Fazia, & Zanna, 1980). Lepper, Greene, and Nisbett, (1973) state this as "the proposition that a person's intrinsic interest in an activity may be undermined by inducing him to engage in that activity as an explicit means to some extrinsic goal" (p. 130).

If an individual is involved in an activity because of interest, then the offer of a reward for doing the task will cause him/her to assume that

he/she is doing the task for extrinsic reasons. The resultant effect is that the individual loses subsequent interest in performing the task.

A number of studies were designed to investigate whether or not the self-perception theory, and in particular the overjustification hypothesis, could be verified. For example, Lepper, Greene, and Nisbett (1973) randomly assigned preschool children who showed an interest in drawing into three treatment groups: an expected-award condition, and unexpected-award condition, and a no-award condition. The students in the expected-award group were told that they would receive an award if they would do some drawing for a specified period of time. The unexpected award subjects were given the task of drawing, then were given the awards without being told in advance. The third group was assigned the task of drawing but was not told anything about a reward, nor did they get one.

Between one and two weeks later, the students were asked to do the same type of drawing that they had been asked to do for the research project. The observers, who watched the students from behind a one-way mirror wall, noticed that the expected reward students had lost interest in drawing, while the other two groups were as interested in the task as they had been prior to the research treatment. This study was replicated by Greene and Lepper (1974) on a larger sample; they obtained the same results.

Spence (1970) selected a sample of 100 children from lower class backgrounds (various ethnic backgrounds included) and 100 middle class children. One of the objectives of the study was to explore the results of using symbolic reinforcers as opposed to material ones, and to test the effects on children of different backgrounds. The reinforcers for correct

answers to questions were a flashing light, a bean being entered into a container, a light or a bean that represented a candy reward for each correct answer (to be given later), and candies. Of the five groups involved in the study, the number of correct responses, starting with the highest, were the group reinforced by light, beans, light representing candy, beans representing candy, and finally, candy. According to these results, the use of "material reinforcers produce poorer performance than purely symbolic ones" (Spence, 1970, p. 109). As well, no significant differences were found between the children of different socio-economic backgrounds.

Seligman, Fazi, and Zanna (1980) discovered that "many studies dealing with task satisfaction demonstrate that behavior performed under salient, external contingencies of reinforcement weakens the attribution of the behavior to intrinsic reasons..." (p. 454). For example, in the 1978 study by Batson and Associates (cited in Seligman, Fazi & Zanna, 1980), subjects who did a task after being promised payment rated themselves lower on an altruistic scale than the subjects who were not informed of any financial reward.

In a study by Salancik in 1974, housewives were interviewed about energy conservation and what they were doing in relation to the problem of a shortage of energy. Then the subjects were divided into an intrinsic treatment group and an extrinsic treatment group. The intrinsic group was given a set of reasons why they might want to conserve energy for their own purposes. The extrinsic treatment group was given only extrinsic reasons for conserving energy. When the subjects were asked to indicate what their intentions were in relation to energy conservation, the intrinsic group

expressed a significantly greater desire to practice energy conservation.

Seligman, Fazia, and Zanna (1980) applied the focusing of subjects toward intrinsic or extrinsic reasons for their behavior toward relationships. As subjects, they selected dating couples who volunteered to be involved in the study. Nineteen couples were randomly assigned to one of three groups: an intrinsic set, an extrinsic set, and no set (control group). Then, the couples in the intrinsic set were focused on open-ended questions where they were asked to choose why they went with their boyfriend or girlfriend. The extrinsic set was asked to do the same, except the questions were phrased in such a way that the subjects were focused on extrinsic aspects (external benefits) of the relationship. The results of the study indicated that the subjects who were focused on possible extrinsic reasons for dating their boyfriends or girlfriends, expressed that they felt less love for them (during the study) than the subjects who had been focused on intrinsic reasons for their relationships.

Harter (1981) attempted to take the issue of intrinsic and extrinsic motivation further into analysis by devising a scale by which students could be assessed. To accomplish this, he selected a group of dichotomous statements (p. 304):

Intrinsic	Extrinsic
Preference for challenge.	Preference for easy work.
Curiousity/interest.	Pleasing the teacher or getting grades.
Independent mastery.	Dependence on the teacher.

Independent judgment.	Reliance on the teacher's judgment.
Internal criteria.	External criteria.

These criteria were used as a basis for judging intrinsic motivation from extrinsic motivation. Although the distinction between intrinsic and extrinsic criteria for assessment purposes are obviously created for students in a school setting, they can be generalized to other situations as well.

Extrinsic Reward and Creativity

A number of studies that focused on how climate affects creativity have explored the effects of external rewards as inhibitors of creative functioning. For example, Kruglanski, Friedman, and Zeevi (1971) randomly assigned 32 high school students to two treatment groups: a no incentive group (NOINC), and an extrinsic incentive group (EXTINC). The EXTINC group was informed that, as a reward for good performance in the study, they would be taken from their kibbutz in Israel for a tour of the University of Tel-Aviv. The tasks they were asked to perform were creative ones:

1. Write as many titles as they could on a given literary work.
2. Write a short story using as many as possible of a list of fifty words that were given to them.

The no incentive group scored more highly than the extrinsic reward group, as evaluated by two judges who achieved an inter-rater correlation of .92.

McGraw and McCullers (1979) assigned a set of problem-solving tasks to two groups of college students. They offered a reward to one group, but not

to the other. The reward group did approximately as well as the non-reward group on problems that required straight computation, but the reward group did much worse on the task that required a creative solution.

In 1982, Moran and Liou conducted a study to explore the effects of rewards on 80 college students who were involved in a creative task. The subjects were divided into two groups according to their intelligence level, as assessed by an IQ test. Then each group was subdivided into a reward and a non-reward group. The findings of the study suggest that students of high ability did work that was less creative when the researchers offered them monetary rewards. On the other hand, students of lower ability tended to improve their creative functioning as a result of being motivated by the promise of a financial reward.

Amabile (1983) attempted to take the concept of external reward into another level of intrinsic and extrinsic motivators. She focused the subjects of her study on extrinsic or intrinsic reasons for writing, then checked for a differential effect in the creative quality of their writing. She found that the control group, which received no focus orientation, and the group which was focused on intrinsic reasons for writing, showed no appreciable differences between the pre- and posttest. The group that received the extrinsic focus showed significantly decreased creative quality on the posttest, as judged by a panel of 12 evaluators who were poets.

The studies by Kruglanski, Friedman, and Zeevi (1971), Amabile (1983), and Moran and Liou (1982) as well as others point in the direction that the offer of an extrinsic reward has a detrimental effect on the quality of a creative task. However, there is room for a number of studies to discover

the specifics of the detrimental effects.

Need for the Study

Various studies have explored various characteristics of creativity and motivation. A number of the them have looked at the effects of reward or other extrinsic factors, such as the anticipated evaluation of the creative product as an extrinsic treatment. Yet many of the studies ignore the personal characteristics of the subjects even though they could be as significant as the offer of a reward.

One such characteristic that was not included in any of the studies was the initial motivational orientation of the subjects. It is plausible to assume that individuals who have an intrinsic motivation toward a creative task might react differently to an extrinsic reward than subjects who have an extrinsic orientation to the task. It is the intent of this study to explore this issue.

METHODOLOGY

Research Design

This research project was designed as a correlational study whose purpose was to explore the relationship between motivational orientation and the creative quality of writing. Descriptive statistics were selected to explore the significance of the data collected.

The Sample

Since one of the objectives of the study was to explore the motivational orientation of students who voluntarily enrolled in a creative writing course, the potential institutions that could yield such subjects were a university or a college. Since the creative writing courses offered at a college were non-credit, the subjects were chosen from that institution because there was a greater chance that students were taking the course out of interest in writing, rather than for some other purpose such as credit toward a program of studies.

The original research design included the use of two college classes as subjects. However, the small size of one class (9 students) prevented the incorporation of the class into the study. This class was then used to test the instruments used in the research project as well as to test the feasibility of the research design.

The class which served as the subjects for the study consisted of twenty students. Significant class characteristics were that all of the students

were senior citizens, and all of the students who were present for all the segments of the research were women. For this reason, there was no expectation that the results of the study would be generalizable to a different population.

The class started with 20 students, but three of the original students were not present when the research treatment was administered. As a result, all of the data could be obtained for only 17 of the students, with partial data for three more.

The Instruments

Three instruments were used for this study: a locus of control test called the I/E Scale, a questionnaire, and a Likert scale for motivation.

The I/E Scale. Rotter (1982) discovered that individuals vary in the source of their reinforcement. Some tend to look for reinforcement from an external source (do a task for a reward) while others are self-reinforcing (do a task because they want to do it). Although there may be task-specific motivation, Rotter has developed and tested the I/E Scale that is designed to determine an individual's internal or external motivational orientation. For the purposes of this study, motivational orientation was determined by the I/E Scale (see Appendix A).

The I/E Scale consists of 29 items where the respondent is asked to make a forced choice between two possible statements as being closer to his/her personal beliefs. Except for a few filler items, the choices are between an item that places control of a situation in the respondent's hands, or in the control of an external source. The scale is marked according to the number of external locus of control items that are chosen. The higher the score, the

more extrinsic is the locus of control, with the highest possible score being 22 and the lowest 0. Thus, the lower the score, the more intrinsic the locus of control.

The I/E Scale has been subjected to a number of reliablity tests (Rotter, 1966). For instance, a Kuder-Richardson test on 400 combined male and female elementary psychology students at Ohio State University yielded a score of .70. A combined population of tenth, eleventh and twelfth grade students numbering 1000 subjects (both male and female) yielded a score of .69 on a Kuder-Richardson test. Test-retest reliability after one month for Ohio State University students resulted in a .60 score, while two-month reliability tests for students from the same university yielded .49.

The Questionnaire. A questionnaire was developed for the study to collect information that could provide more insight into the backgrounds of the students in relation to motivation such as previous creative writing courses taken, previous publications, and writing preferences (see Appendix B). As well, how the subjects viewed the motivator was explored. When a motivator is being used in conjunction with writing, there is the possibility that the subjects react to it in different ways based on motivational orientation. If that is the case, it was seen as important to collect data on what these different perceptions might be, and how they could affect the quality of the writing.

A Likert Scale was constructed in an attempt to investigate whether or not there was a relationship between extrinsic or intrinsic motivation for writing (see Appendix B) and general motivational orientation as judged by the I/E Scale. The source of the criteria was a set of thirteen items isolated by Amabile (1983, p. 11-12) and pretested on 20 undergraduate students. The

scale was designed with lower numbers representing intrinsic motivation and higher numbers representing extrinsic motivation to parallel the method of scoring used for the I/E Scale.

The purpose of the Likert scale on motivation was to test for a correlation between an internal or external locus of control to a set of criteria that indicate intrinsic or extrinsic motivation specific to writing. The scale was developed for this study and field tested on a class of college level students in creative writing (9 subjects). As a result of this, the five point scale (strongly agree, agree, neither agree nor disagree, disagree, and stongly disagree) was reduced to a four-point scale by dropping the "neither agree nor disagree" response because the test results showed a very flat profile, with little difference between the highest and lowest scores.

Research Procedure

During an introductory session, the subjects were informed that the study was exploring an aspect of creative writing (see Appendix C). They were told that the process would include the collection of a sample of writing, responses to two questionnaires, and a writing activity that they would be asked to do during class time.

1. During normal class activity, samples of writing were collected from each subject without informing them in advance that the specific assignment would be used for research until after the data had been collected. The writing was collected as baseline data so that the creative quality of the writing could be assessed by two raters and then the results compared to motivational orientation and to post-treatment changes in the writing.

2. Data collection and the treatment were conducted during class time

with the class as a group:

a. The locus of control test was administered first.

b. The subjects were given fluency, originality, and elaboration questions for a warm-up exercise so that the subjects were able to write more easily when the writing assignment would be given.

c. The treatment was administered immediately after the warm-up session. The students were informed that they were involved in a writing competition. The three students who would do the best creative writing would receive, as an award, their pieces of writing suitably printed and mounted for display. This award was deliberately chosen for two extrinsic motivational components: the possible receipt of a tangible reward for writing, and the appeal to public awareness in the display nature of the award.

d. The students were asked to do a short piece of writing, either prose or poetry, showing their response to, or thoughts or feelings about, any of the seasons of the year: winter, spring, summer, or fall.

e. When the subjects were finished, they were asked to fill out the questionnaire, which included the Likert scale.

f. The samples of writing were then given to the raters in reverse order so that the sequence in which the data was analyzed would not inadvertently affect the results.

Inter-rater Reliability. The creative quality of the writing was evaluated by two raters who work in the domain of creative writing. Rater 1 has written articles, and short stories, and works as an editor of a magazine. Rater 2 has written radio drama for the international market as well as articles for magazines, and is currently working as a journalist.

In order to assess creative quality, the raters evaluated the pieces of writing according to the innovative way in which ideas were treated, the demonstration of wit, humor, or insight, the aesthetics of the writing, and the effectiveness of the use of words by the writer. Each criterion was assessed on a scale from 1-10. All scores for the four components were added together, resulting in a total creativity score (a maximum of 40).

Due to the schedules of the raters, it was difficult to arrange a training session, and when one was scheduled, the raters could not come at the same time. An attempt was made to standardize the procedure and the way in which the criteria would be used for evaluating the writing by using the assessment instruments on the field test samples. However, an inter-rater reliability level that was sufficiently high enough was not obtained by this procedure.

The pieces of writing were separated into the baseline data (the pieces of writing collected prior to the treatment) and the post-treatment data. The writing was assessed by the evaluators in reverse order; one evaluator received the base-line data first, and the other one received the posttest data first. Then the data was exchanged so that both evaluators assessed all of the writing used in the study. The raters were not aware of who the subjects of the study were because all of the data was identified by code numbers only.

The rating levels were fairly stable for Rater 1 between the baseline and post-treatment assessments of writing. Rater 2 was more generous overall in the assessments given. The assessments by both raters were higher for the post-treatment.

A Pearson product moment correlation was computed on the baseline

scores between both evaluators (see Table 1). The resultant value of .13 (at a .57 probability level) was considered too low to justify using these scores in any subsequent analysis. A scatterplot was used to show the distribution of each evaluator's scores (see Figure 1).

Since inter-rater reliability could not be established for the overall assessments of creativity between both raters, the individual criterion assessments were correlated between both raters to see if the differences were on only one of the criteria (that is criterion 1 for both raters, criterion 2 for both raters, and so on). A Pearson product moment correlation between the individual criteria on baseline data for both raters yielded results that were quite similar to that of the overall correlation: .31, .54, -.06, and .07 (see Table 2).

Data Analysis Procedures

Research Question One

1. To profile the motivational orientation of the class, the following procedures were used:

    a. the I/E Scale scores were displayed on a bar graph (see Figure 2) showing both the class and normed means.

    b. the Likert motivational scores were displayed on a bar graph in the same order as the I/E Scale.

2. The motivational scores on the I/E Scale and the Likert scale (Amabile, 1983) were compared by correlation to determine if generalized motivational orientation (I/E Scale score) relates to intrinsic or extrinsic motivation (Likert scale score) that is specific to writing.

Figure 1

SCATTERPLOT OF BASE SCORES FOR BOTH RATERS

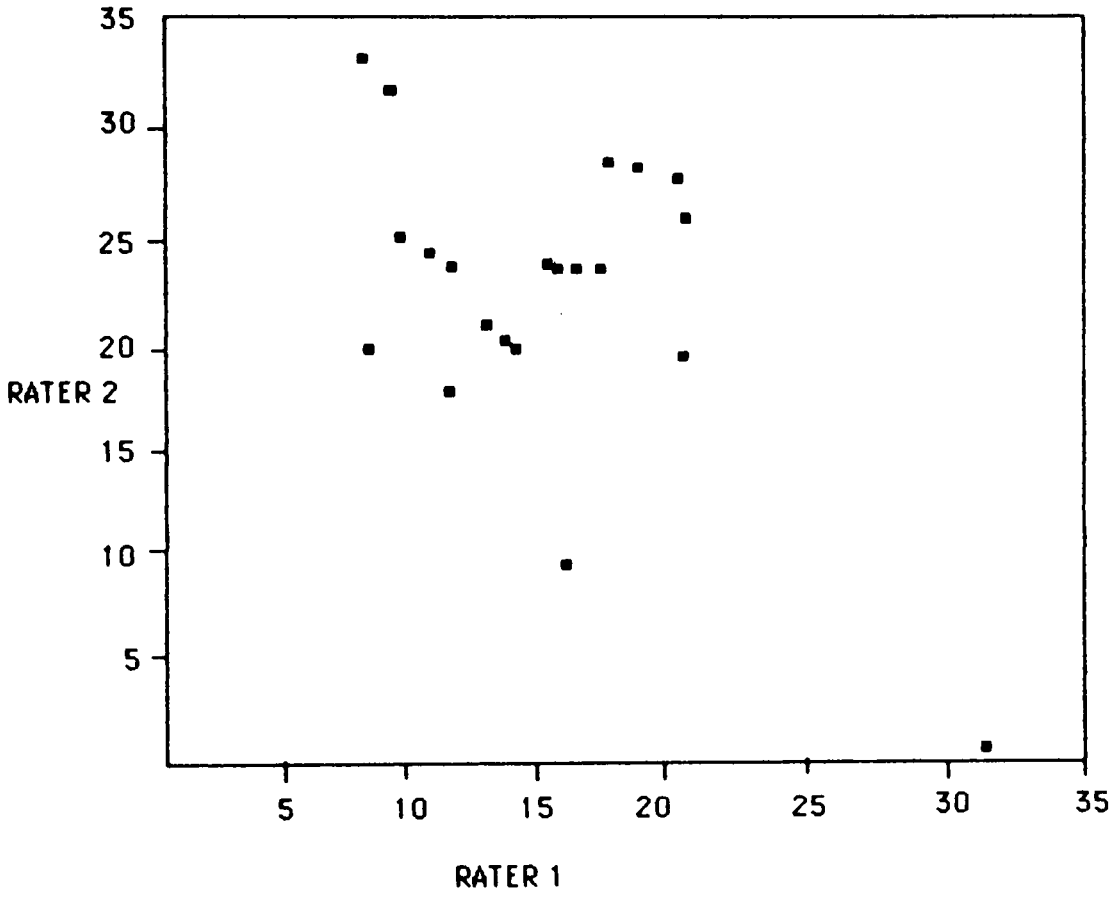


Table 1

CORRELATION OF THE TWO RATERS' ASSESSMENTS OF WRITING

STUDENTS:	SCALES:		BASELINE DATA:		POST-TREATMENT DATA:	
	I/E	LIKERT	RATER 1	RATER 2	RATER 1	RATER 2
1	14	29	16	19	9	25
2	13	29	19	28	25	24
3	12	31	13	22	14	22
4	11	23	11	24	12	21
5	11	34	16	23	25	26
6	10	30	18	28	14	21
7	10	27	19	33	24	29
8	10	22	22	27	25	29
9	8	31	21	18	9	23
10	8	32	13	22	13	22
11	7	27	21	25	21	29
12	7	—	9	33	—	—
13	7	29	12	25	19	22
14	6	26	10	24	18	28
15	5	29	15	23	20	28
16	3	28	14	19	9	26
17	2	30	11	32	20	25
18	—	—	11	17	—	—
19	—	—	8	20	—	—
20	1	25	16	24	18	31
M=	8.09	28.35	14.75	24.3	17.35	25.35
SD=	3.61	3.03	4.12	4.68	5.58	3.12

Pearson product moment correlation coefficient for:

- -baseline data = .13 (p=.57)
- -post-treatment data = .48 (p=.05)
- -I/E and Likert Scales = .26 (p=.33)
- -I/E Scale to Rater 1 on baseline data = .01 (p=.93)
- -I/E Scale to Rater 2 on baseline data = .28 (p=.24)

Table 2

BASELINE DATA BY CRITERIA

STUDENTS:	RATER 1(BY CRITERIA):				RATER 2 (BY CRITERIA):			
	1	2	3	4	1	2	3	4
1	3	4	4	5	4	5	5	5
2	5	5	4	5	7	7	7	7
3	3	3	3	4	3	3	9	6
4	4	2	2	3	6	5	7	6
5	4	3	5	4	6	5	6	6
6	4	5	4	5	6	7	7	7
7	5	5	4	5	8	8	8	9
8	6	6	4	6	6	6	8	7
9	6	4	5	6	4	4	5	5
10	3	4	1	5	6	5	5	6
11	6	5	4	6	6	6	7	6
12	2	3	2	2	6	9	9	9
13	3	4	2	3	6	6	7	6
14	3	2	2	3	7	5	6	6
15	4	4	3	4	5	5	7	6
16	3	3	3	5	5	5	4	5
17	3	3	2	3	8	8	8	8
18	3	2	3	3	4	4	4	5
19	2	2	2	2	4	4	7	5
20	3	4	4	5	6	6	6	6
M=	3.75	3.65	3.15	4.2	5.65	5.65	6.6	6.3
SD=	1.22	1.35	1.10	1.16	1.31	1.50	1.40	1.19

Pearson product moment correlation coefficient for:

-Criterion 1 (innovative ideas) between the two raters= .31 (p=.18)

-Criterion 2 (aesthetics) between the two raters= .54 (p=.02)

-Criterion 3 (wit, humor, or insight) between the two raters= -.06 (p=.77)

-Criterion 4 (use of words) between the two raters= .07 (p=.75)

Research Question Two

To determine whether or not there was a relationship between the creative quality of the writing produced by the subjects and motivational orientation, each student's average score was to be calculated between the two raters and then a correlation was to be calculated between the average scores and the I/E Scale scores. Since a significant correlation was not established between the two raters' assessments of the creative quality of the writing, this procedure was replaced by the following procedures which were exploratory in nature and were not expected to give definitive results.

Rather than using an average creativity score for each student the overall baseline creativity scores for Rater 1 and Rater 2 were individually correlated with the motivational scores from the I/E Scale in an exploration for a possible trend between motivational orientation and the creative quality of writing. A graph and a box-and-whisker plot were used to display the data.

There was a possibility that the inter-rater correlation was largely affected by the ratings on one or two of the criteria used to calculate the overall creativity quality. Therefore, a correlation was calculated between the individual scores for each criterion by each rater.

Research Question Three

To explore whether the offer of a reward for writing had a differential effect on the subjects according to their motivational orientation, it would have been necessary to establish a high inter-rater reliability. Therefore, the following procedure was only exploratory in nature, with the search for possible trends:

1. The correlations between the baseline and post-treatment data were analyzed for Rater 1 and Rater 2 separately by comparing the means, and changes in the individual creativity scores. These relationships were displayed on charts, a box-and-whisker plot, and a display of difference scores.

2. Correlations were calculated between the creativity assessments for each criterion by both raters. The correlations, means, and standard deviations were compared between the baseline and post-treatment assessments and between the two raters.

Research Question Four

In order to explore the differential effects between subjects who were intrinsically motivated and those who were extrinsically motivated, it would have been necessary to establish a high inter-rater correlation. Since this was not obtained, and the exploration for links between motivational orientation and creative quality of writing failed to reveal any significant relationships, the exploration focused on the data in the questionnaire with respect to:

-reactions to being involved in the study

-reactions to being offered a reward for writing

-stated reward preferences for a writing task

-personal reasons for wanting to write.

RESULTS

Research Question One

What is the profile of the creative writing class in terms of motivational orientation?

The motivational profile of the creative writing class was explored by the use of two instruments: the I/E Scale for locus of control, and the Likert Scale to profile the motivational orientation toward writing. The class ranged from a low score of 1 (most intrinsic) to a high score of 14 (moderately extrinsic) on the I/E Scale, with the mean score being 8.09 for the 18 students whose test results were available. Although Rotter recorded several normed means for college students on the I/E Scale, the mean for his largest sample of subjects was 8.29 (see Figure 2), with other means for college students ranging from 7.71 to 8.42. Although it is difficult to have much confidence in scores from a small sample, the data suggest that the creative writing class did not exhibit a strongly intrinsic or extrinsic pattern.

As well, an attempt was made to profile the motivational orientation of the subjects toward writing itself on a Likert Scale (see Figure 3). The profile turned out fairly flat, with the scores ranging from 22 (most intrinsically oriented toward writing) to 34 (most extrinsically oriented toward writing), with the mean being 28.35. The profile of the Likert Scale did not suggest any motivational pattern either.

A correlation was calculated between the scores on the I/E Scale and the Likert Scale to see if a relationship would be indicated between them.

Figure 2

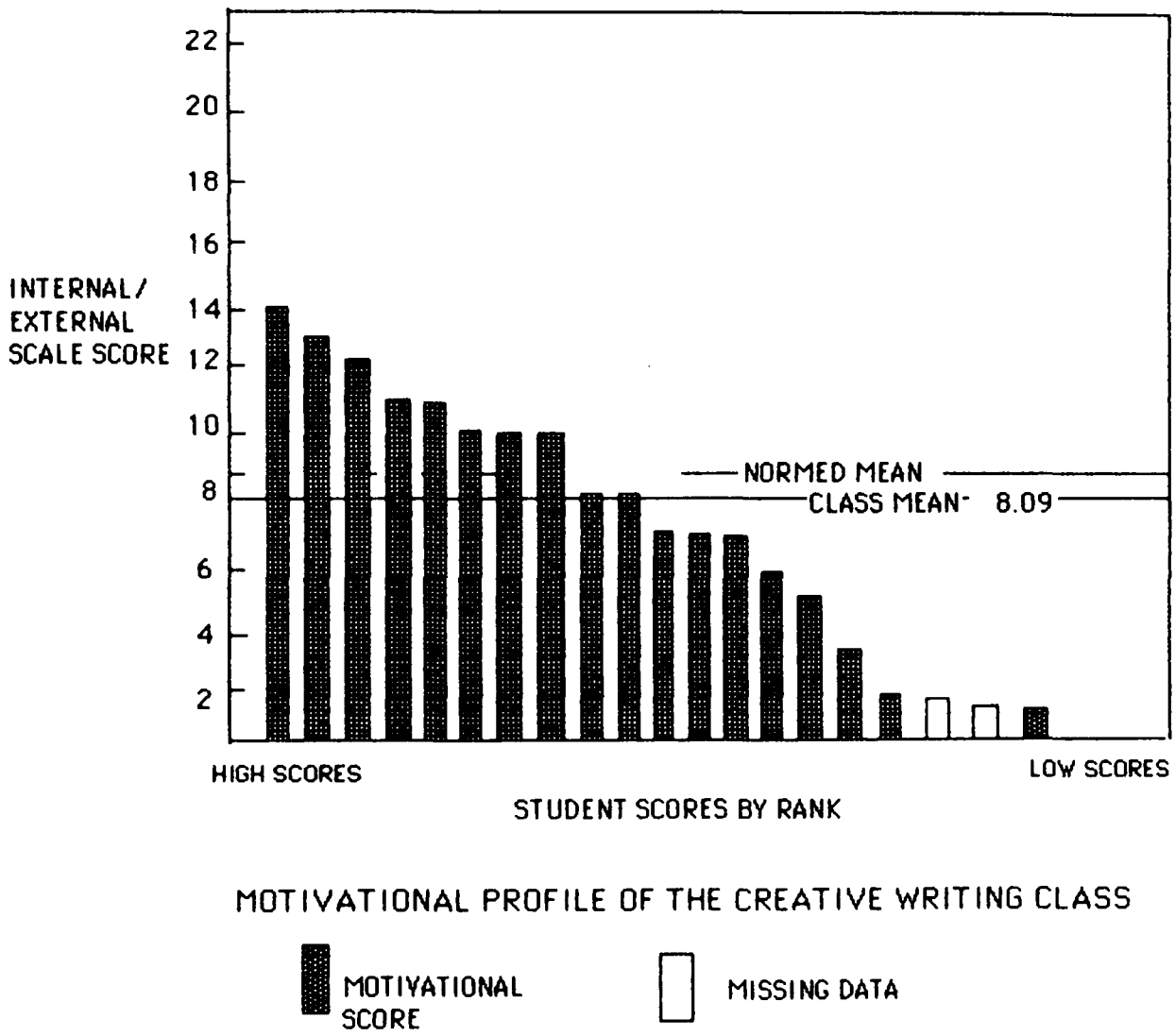
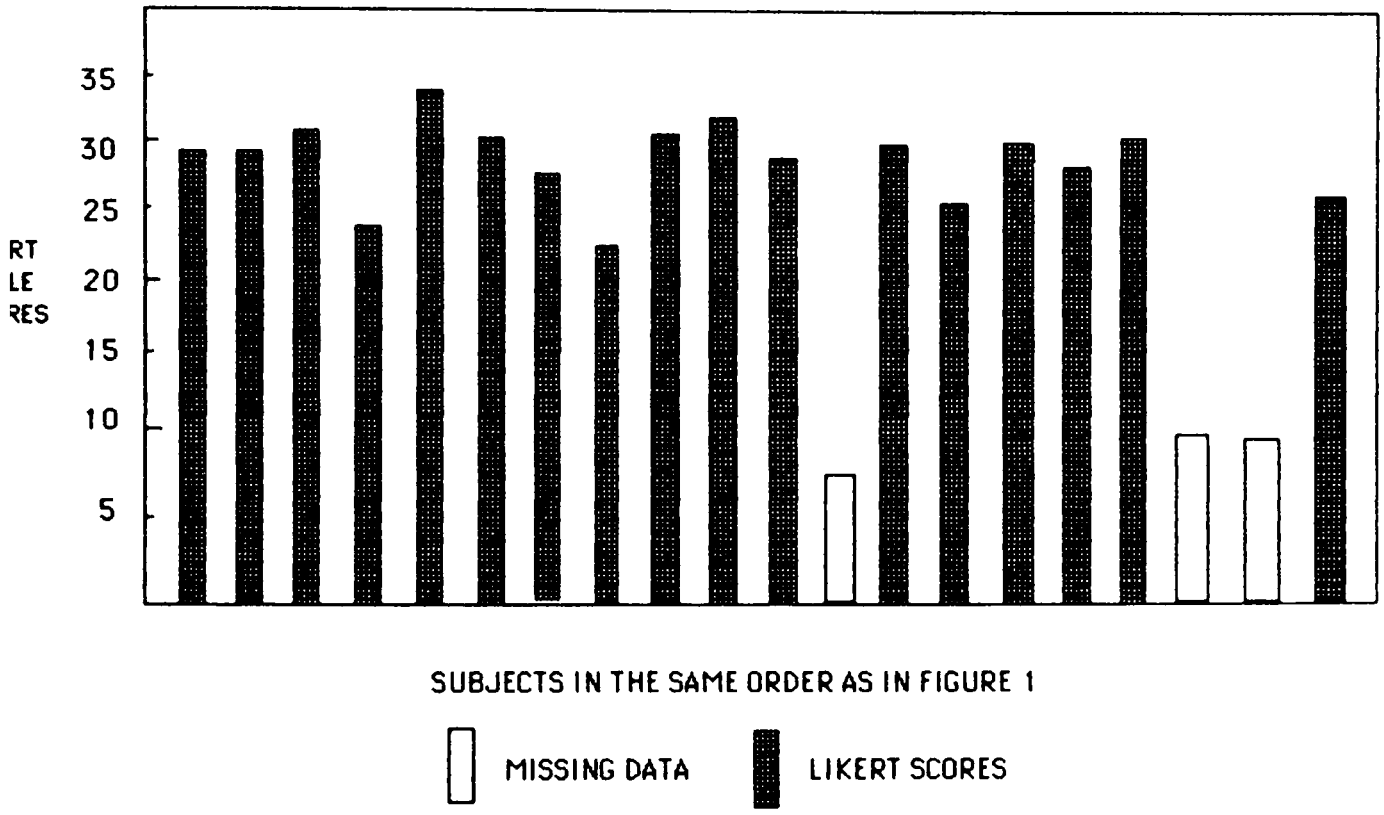

22
20
18
16
14
12
10
8
6
4
2
INTERNAL/
EXTERNAL
SCALE SCORE
NORMED MEAN
CLASS MEAN- 8.09
HIGH SCORES
LOW SCORES
STUDENT SCORES BY RANK
MOTIVATIONAL PROFILE OF THE CREATIVE WRITING CLASS
MOTIVATIONAL
SCORE
MISSING DATA

Figure 3

LIKERT SCALE DISTRIBUTION SCORES FOR THE CLASS



The correlation coefficient was .26, positive, but not significant at the .05 level (see Table 1). Therefore, there was no evidence to suggest that intrinsic or extrinsic motivation to write, as assessed by the Likert Scale scores, was significantly related to locus of control. The lack of validity in the Likert Scale suggests that this instrument needs further refinement.

Research Question Two

Is there a relationship between the creative quality of the writing students produce and motivational orientation?

In order to correlate the creative quality of the subjects' writing to motivational orientation, it is first necessary to demonstrate that one has a reliable measure of the "creative quality" of the subjects' writing. Since the inter-rater correlation was only 0.13, the original methodology could not be followed.

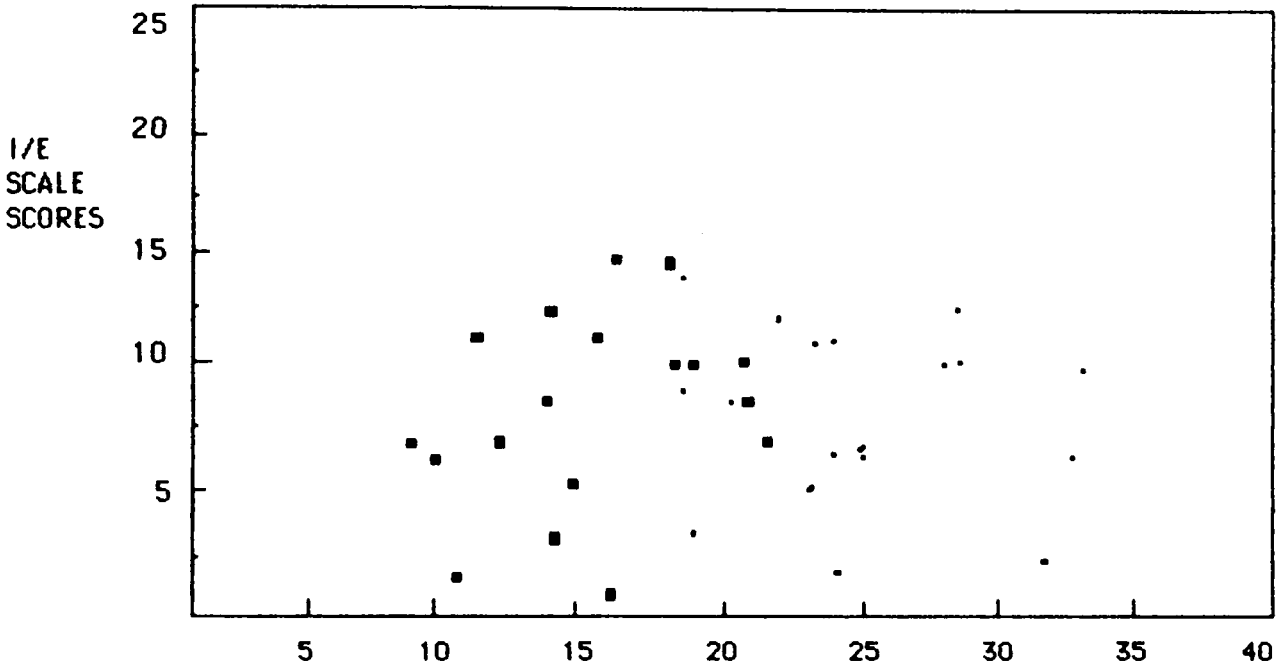
Therefore, an alternate procedure was attempted. The creative quality assessments by each rater were correlated to the scores from the I/E Scale. The correlation coefficient for the baseline writing assessments with the I/E Scale was 0.01 for Rater 1 and 0.28 for Rater 2, both positive but not significant (see Table1). The distribution of the two raters' scores were displayed on a graph (see Figure 4), but again, no discernible pattern emerged.

Research Question Three

What will be the effects of offering students an extrinsic reward for doing a piece of writing, and is the effect different for the intrinsically motivated students than for the extrinsically motivated ones?

Figure 4

DISTRIBUTION OF BASELINE CREATIVITY SCORES IN RELATION TO LOCUS OF CONTROL SCORE



Since no significant reliabilities could be established for the creative quality of writing, the data could not be used to provide information for this question. However, the data for Rater 1 and 2 were inspected for possible trends by comparing the baseline and post-treatment data.

The mean for Rater 1 between the baseline and post-treatment assessments increased from 14.75 to 17.35 (see Table 1) while the mean for Rater 2 increased from 24.3 to 25.35, which was not a substantial amount. Rater 2 was more generous in overall assessments, but the increase between baseline and post-treatment was smaller than for Rater 2 (see Figure 5).

The data was inspected for patterns based on the individual criteria assessments. For each criterion, the means for each rater increased, with the greatest increases by Rater 1 (see Tables 2 & 3). The standard deviations were lower for Rater 1 on the baseline data, while they were lower for Rater 2 on the post-treatment data. When the raters were given the data to assess, Rater 1 received the data for the post-treatment first while Rater 2 received the baseline data first. The ratings that were carried out first had the greatest variability on the overall ratings as well as for each criterion (see Tables 1, 2, and 3).

The correlations were higher between the two raters for the post-treatment than for the baseline data. The baseline inter-rater correlation coefficient for overall creativity assessments was .13 and .48 ($p=0.05$) for the post-treatment data (see Table 1). This same pattern carried through for the assessments of the individual criteria as well, but no relationship could be established between the quality of writing and motivational orientation.

In order to assess what effect the offer of a reward had on creative

writing in reference to motivational orientation, the differences in the scores between baseline and post-treatment ratings were calculated for both raters (see Table 4). Although the data for both raters showed a slightly larger number of decreases in scores between baseline and post-treatment ratings for the subjects with higher I/E Scale scores (extrinsic motivation), the pattern is not established clearly enough to form the basis for any conclusions.

Research Question Four

If there is a difference between the motivational groups, what is the nature of the difference?

None of the data provided any evidence of differences between intrinsically and extrinsically motivated subjects in relation to the creative quality of writing. Some subjects with high extrinsic motivational scores had higher scores after the treatment, while others had lower scores, so there was no clearly discernible difference between the two groups.

The data from the questionnaire was then explored in order to check for apparent differences based on intrinsic or extrinsic motivation. The data did not indicate that there was a pattern based on how the subjects reacted to the study (see Table 5), but there seemed to be a pattern based on how the subjects reacted to the offer of a reward for writing (see Table 6). All of the positive responses were close to the mean, while most of the negative responses were in the higher extrinsic scores. Most of the neutral responses were in the intrinsic locus of control range. Although the sample was too small to have any confidence in the pattern that was suggested, the

TABLE 3

POST-TREATMENT DATA BY CRITERIA

STUDENTS:	SCALES:		RATER 1(BY CRITERIA):				RATER 2 (BY CRITERIA):			
	I/E	LIKERT	1.	2	3	4	1	2	3	4
1	14	29	2	2	2	3	6	6	7	6
2	13	29	6	6	6	7	6	5	7	6
3	12	31	3	4	3	4	5	5	6	6
4	11	23	3	3	2	4	5	5	6	5
5	11	34	6	6	5	8	6	6	7	7
6	10	30	3	4	3	4	5	5	6	5
7	10	27	6	7	6	5	7	7	8	7
8	10	22	6	6	6	7	8	7	7	7
9	8	31	2	2	3	2	5	5	7	6
10	8	32	3	4	1	5	5	5	6	6
11	7	27	5	6	5	5	7	7	8	7
12	7	—	—	—	—	—	—	—	—	—
13	7	29	5	5	4	5	7	5	5	5
14	6	26	5	3	4	6	7	7	7	7
15	5	29	3	5	5	7	7	7	8	6
16	3	28	2	2	2	3	7	6	6	7
17	2	30	5	5	4	6	6	6	7	6
18	—	—	—	—	—	—	—	—	—	—
19	—	—	—	—	—	—	—	—	—	—
20	1	25	5	6	6	5	8	8	8	7
M=	8.09	28.35	4.12	4.47	3.9	5.06	6.29	6.00	6.82	6.24
SD=	3.61	3.03	2.21	1.57	1.58	1.58	1.03	.94	.86	.78

Pearson product moment correlation coefficient:

-Criterion 1 (innovative ideas) between the two raters = .50 (p=.04)

-Criterion 2 (aesthetics) between the two raters = .48 (p=.16)

-Criterion 3 (wit, humor, insight) between the two raters = .71 (p=.01)

-Criterion 4 (use of words) between the two raters = .38 (p=.13)

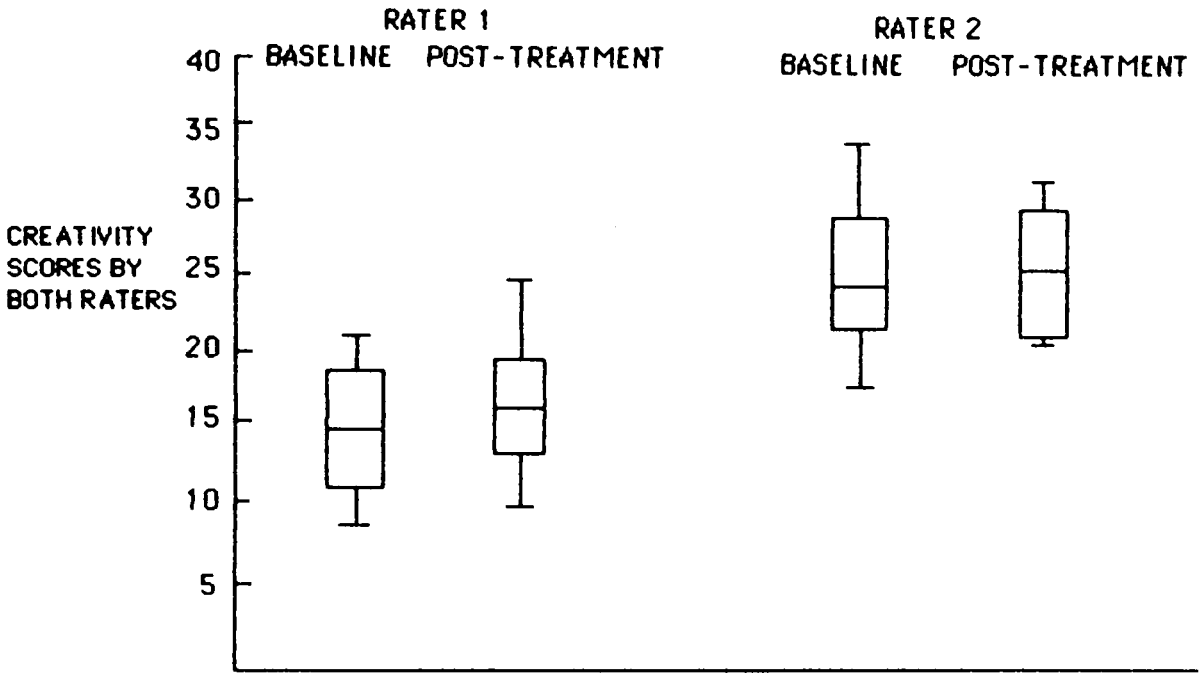
Table 4

DIFFERENCES BETWEEN BASELINE AND POST-TREATMENT CREATIVITY SCORES

I/E SCALE	RATER 1			RATER 2		
	BASE	POST	DIFFERENCE	BASE	POST	DIFFERENCE
14	16	9	-7	19	25	+6
13	19	25	+6	28	24	-4
12	13	14	+1	22	22	0
11	11	12	+1	24	21	-3
11	16	25	+9	23	26	+3
10	18	14	-4	28	21	-7
10	19	24	+5	33	29	-4
10	22	25	+3	27	29	+2
8	21	9	-12	18	23	+5
8	13	13	0	22	22	0
7	21	21	0	25	29	+2
7	Missing data					
7	12	19	+7	25	22	-3
6	10	18	+8	24	28	+4
5	15	20	+5	23	28	+5
3	14	9	-5	19	26	+17
2	11	20	+9	32	25	+7
	Missing data					
	Missing data					
1	16	18	+2	24	31	+7

Figure 5

BOX-AND-WHISKER PLOTS OF CREATIVITY RATINGS



(THE WHISKERS REPRESENT THE FIRST AND LAST QUARTILES OF THE DATA.)

Table 5

FREQUENCY DISTRIBUTION OF REACTIONS TO INVOLVEMENT IN THE STUDY

I/E SCORES	POSITIVE	NEUTRAL	NEGATIVE
10-14 (EXTRINSIC TENDENCY)	14, 12, 11 10, 10	13, 11, 10	
7-9 (MID-RANGE BETWEEN ORIENTATIONS)	8, 8, 7, 7		
1-6 (INTRINSIC TENDENCY)	6, 3, 2, 1	5	

NOTE: THE FIGURES IN THE CELLS REPRESENT I/E SCALE SCORES.

THE CELLS DISIGNATED "POSITIVE", "NEUTRAL" OR "NEGATIVE" ARE SUBJECTS' RESPONSES TO BEING INVOLVED IN THE STUDY.

Table 6

FREQUENCY DISTRIBUTION OF REACTIONS
TO THE OFFER OF A REWARD

I/E SCORES	POSITIVE	NEUTRAL	NEGATIVE
10-14 (EXTRINSIC TENDENCY)	10, 10	13, 10	12, 11, 11
7-9 (MID-RANGE BETWEEN ORIENTATIONS)	8, 8	7	
1-6 (INTRINSIC TENDENCY)	2	6, 5, 3	1

NOTE: THE FIGURES IN THE CELLS REPRESENT I/E SCALE SCORES.

THE CELLS DISIGNATED "POSITIVE", "NEUTRAL" OR "NEGATIVE" ARE SUBJECTS' RESPONSES TO BEING OFFERED A REWARD.

response to the motivator according to I/E Scale score could be explored in another study based on a larger sample.

When the subjects were asked to suggest future motivators for research, the possible choices were either extrinsic motivators or intrinsic ones. Contrary to what was expected, the motivators that were chosen bore no clear relationship to the type of motivation (extrinsic or intrinsic) that the subjects themselves exhibited, as assessed by the I/E Scale. However, it is interesting to note that only one intrinsic motivator (no reward at all) was suggested by a subject, and all of the rest of the motivators were extrinsic rewards. The reason for this is not clear, but one possible explanation is that the idea of an extrinsic "motivator" for writing may have been suggested by the use of an extrinsic reward in the study.

When the class was told what the motivator for the study would be, several of the subjects responded negatively to the motivator. Four of the subjects declined from receiving the award if they were to win, but there was no apparent pattern based on I/E Scale score, since two of the subjects were above the class mean and two were well below it.

When the subjects were asked to state their reasons for wanting to write without being given a set of responses from which to choose, most of the selections were for intrinsic reasons, such as writing for "self-expression" or to write their autobiography (see Table 7). There seemed to be no relationship between the I/E Scale scores and reasons for writing, except that three of the four extrinsic selections were in the range of I/E Scale scores that were approximately at the class mean, suggesting neither an intrinsic nor extrinsic motivational orientation. However, with the sample being as small as it was and the mid-range incorporating only a few cases, a

larger sample would be needed to explore whether or not this pattern suggested a relationship between reasons for writing and motivational orientation.

Table 7

DISTRIBUTIONS OF REASONS GIVEN FOR WRITING

I/E SCORES	INTRINSIC	EXTRINSIC
10-14 (EXTRINSIC TENDENCY)	14, 13, 12, 11, 11, 10, 10, 10	8
7-9 (MID-RANGE BETWEEN ORIENTATIONS)	7	8, 7
1-6 (INTRINSIC TENDENCY)	6, 5, 3, 2	1

NOTE: THE FIGURES IN THE CELLS REPRESENT I/E SCALE SCORES.

"INTRINSIC" DESIGNATIONS WERE BASED ON WANTING TO WRITE FOR REASONS SUCH AS SELF-FULFILLMENT.

"EXTRINSIC" DESIGNATIONS WERE BASED ON WANTING TO WRITE BECAUSE OF THE REWARD WRITING WOULD BRING, SUCH AS SOCIAL STATUS OR FINANCIAL GAIN.

DISCUSSION

This study did not lead to any clear conclusions about the nature of creativity or the role of motivation in the creative process. Perhaps one of the few observations that can be made is that the motivational profile of the class is fairly similar to that found in a random sample of subjects. The class mean is slightly lower (more intrinsic) than a normed mean established by Rotter for a large sample of college students. But since the class size is small, this statement can be made as an observation of the class, but it cannot be generalized to a larger population.

It is extremely difficult to apply research methodology to a field such as creativity. Part of the problem is that the definition of the word "creativity" is not clearly elucidated and can be taken to mean quite different phenomena. As well, the processes involved are not available to inspection, nor are the criteria by which one can judge creativity as easy to isolate as various other types of behavioral criteria.

Assessing Creativity

One of the major difficulties encountered in this study was the evaluation of the quality of creative writing. Assessing creativity is an extremely complex task because there are so many potential factors that are involved in the process. Firstly, there are few clear models which can be used as a basis of comparison because a predominant concept in creativity is innovation. Therefore, if the product of a creative task is similar to an existing model, then its innovative quality is in question. Yet, evaluators may

be using models of similar creative pieces as standards by which to judge a new product.

As well, there is the difficulty of assessing innovation in reference to other works. In other words, How innovative is the creative product to be? For example, if the product is a piece of writing such as a short story, the story is not likely to be so innovative that it is totally unique. What is more likely is that new nuances or twists are used to otherwise familar plots.

The next problem with assessing creative quality is the extent to which innovation is a positive characteristic. It is possible to write a story that is so innovative that it loses all of the expected qualities of a short story. It may be completely innovative, but at the same time not be acceptable to the population that would expect to read it. This places the person who assesses a creative product in the position of not only judging the innovative quality of a product, but also the suitability of that product for a certain public. Yet, it is difficult for an assessor to be able to predict the responses a creative product will receive from others.

A case in point was a piece of writing that was assessed by the two raters for this study. One rater gave an assessment that was very high while the other rater gave an assessment that was extremely low. The reason for the discrepancy was that the subject had used an unusual colloquial style of writing which one rater took as innovation but the other saw as ineffective writing. Basic to the assessment was what the raters thought the subject was intending to accomplish by the piece of writing. So, it seems the rater's view of the writer's intent is another factor that can affect the assessment of the creative quality of a piece of writing.

Inter-rater Reliability

The establishment of a high inter-rater reliability is a crucial factor in the methodology used in this study. In order to establish a high level of inter-rater correlation, it would have been necessary for the training period to be fairly lengthy, since creativity is a difficult phenomenon to assess. However, one of the problems with deliberately obtaining a high inter-rater correlation through training sessions is that the raters learn to assess the creative product, at least in part, through someone else's views. Yet, the raters were chosen from the domain of creative writing because it was expected that their expertise in that area was what would make their assessments valid. The training sessions would have changed the way in which they evaluated writing. Thus for the sake of inter-rater reliability, the validity of their judgments would have been affected.

The Sample

The sample that was used had a number of characteristics which may have affected the results of the study. The sample consisted of a creative writing class whose members were all senior citizens. It would have been preferable to include other classes in the study that had a more diverse age range because age may well have affected the subjects' responses to the study. For example, most of the subjects would have gone through their early schooling at approximately the same time. Since the study was carried out in a classroom setting, perhaps their reactions to the setting were affected by the processes used in the schools at the time of their early education.

Since the subjects for whom a complete set of data was obtained were all women, the results of the study could have been affected by this

characteristic as well. Rotter (1966) found that the means for the I/E Scale varied somewhat based on whether the subjects were male or female. However, he found the differences to be minimal.

The sample size for this study was small to begin with, but it became even smaller after the data for three subjects could not be obtained. It was difficult to establish a larger sample because of the scarcity of creative writing classes in close enough proximity to the study area. For this reason, the data did not show clear patterns which may have become apparent with a larger sample. A future study would likely need to incorporate subjects from a larger population in order to obtain an adequate sample size.

Instruments

Three instruments were used in conjunction with the assessment of motivation. The first one, the I/E Scale for determining the locus of control for an individual's reinforcement, may have not been adequate to determine intrinsic or extrinsic motivation. A measure of intrinsic or extrinsic motivation toward creative writing alone would have been preferable, but the instruments that were available relied heavily on rater judgments, which could have led to the same problems as those experienced by the assessments of writing quality.

An instrument that would explore extrinsic and intrinsic motivational styles was developed for this study in the form of the Likert Scale which was included as a part of the questionnaire. Although further use of this instrument in the study of the quality of writing may lead to some insights into creativity, no clear relationships were discernible either to the locus of control test or to the quality of creative of writing.

Research Conditions

All of the components of the study were applied under classroom conditions. This may have had an adverse effect on one motivational group more than the other, thereby skewing the results. On the other hand, the results may have been affected by personality factors as well. It is possible that certain subjects, perhaps because of a characteristic such as a high anxiety level, may have performed worse on the post-treatment writing because they knew it would be assessed. Therefore, the lack of clarity of the results may have been affected by such factors.

A Reward as a Motivator

When the reward was offered as a motivator for this study, the reactions to it were mixed. Some of the subjects responded by suggesting that they did not want the reward even if they won, while others saw the reward as a positive aspect of the study. The problem with the offer of a reward as a motivator for doing a creative task is that the response to it was not clear. For example, some of the subjects responded as if a reward was being offered, while others responded as if the award was not a reward at all.

Although it might be difficult to choose a motivator that would suit all of the subjects, it became apparent from the questionnaire that the prospect of having their work published was a very high motivator to nearly all of the subjects. Therefore, if it were feasible to use a motivator such as that, the response to the reward would have been much more consistent. Under these conditions, the effects of the offer of a reward may have been more evident.

Future Research

There are a number of key problems based on the fact that quantitative methods were used in the study. First of all, creativity is such a nebulous concept that the definition of what is being researched is difficult enough to clarify. The assessment of creativity based on a set of criteria is as difficult to accomplish.

Perhaps a more useful way to research creativity and motivation is to choose published authors as subjects. The creative quality of the writing would not need to be assessed because the quality of the writing would already have been established by society through the public record of publication. The problem might still be whether to choose the subjects based on a few highly rated publications, or on the basis of the number of publications. It might be useful to include some subjects from both categories of writers so that differences in motivational styles might be detected.

The main thrust of the study would be on the motivational styles used by the authors. Through the use of questionnaires and interviews, it seems likely that the kind of information that would suggest motivational style (intrinsic or extrinsic motivation) could be obtained. But the use of qualitative research methodology would add a further dimension to the study. Instead of exploring only intrinsic and extrinsic motivation, which might be irrelevant concepts in relation to creativity, there will also be the option to do exploratory work into motivational style that is not restricted by the need to use quantifiable data as part of the methodology. In researching an area such as creativity and motivation, where firm data is difficult to obtain, it seems likely that an exploratory approach could prove useful.

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APPENDIX A

I-E SCALE

In each of the numbered statements below, there are two choices ("a" or "b") that deal similar ideas. For each numbered statement, choose **either "a" or "b", but not both**. Be sure to make one choice per numbered item and leave none of the items blank.

1. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are

influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective leader.

   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try some people just don't like you.

   b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.

   b. It is one's experiences in life which determine what they're like.

9. a. I have often found that what is going to happen will happen

   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student there is rarely ever such a thing as an unfair test.

    b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work; luck has little or nothing to do with it.

    b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence in government decisions.

    b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.

    b. It is not always wise to plan too far ahead because many thing turn out to be a matter of good or bad fortune.

14. a.There are certain people who are just no good.

    b. There is some good in everybody.

15. a. In my case getting what I want has little or nothing to do with luck.

    b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.

    b. Getting people to do the right thing depends upon ability; luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.

    b. By taking an active part in political and social affairs the people can control world events.

18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.

b. There really is no such thing as "luck."

19. a. One should always be willing to admit mistakes.

b. It is usually best to cover up one's mistakes,

20. a. It is hard to know whether or not a person really likes you.

b. How many friends you have depends upon how nice a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.

b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.

b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.

b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.

b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.

    b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.

    b. There's not much use in trying too hard to please people; if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.

    b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.

    b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.

    b. In the long run the people are responsible for bad government on a national as well as a local level.

NAME_____ CODE #_____

I/E SCALE ANSWER SHEET

The I/E scale consists of 29 pairs of statements, "a" or "b." Select <u>either "a" or "b"</u>, but not both, according to which statement is the closest to the truth for yourself. Try to respond as accurately as you can.

<u>RESPONSES</u>

1.	a.	b.			
2.	a.	b.	16.	a.	b.
3.	a.	b.	17.	a.	b.
4.	a.	b.	18.	a.	b.
5.	a.	b.	19.	a.	b.
6.	a.	b.	20	a.	b.
7.	a.	b.	21.	a.	b.
8.	a.	b.	22.	a.	b.
9.	a.	b.	23.	a.	b.
10.	a.	b.	24.	a.	b.
11.	a.	b.	25.	a.	b.
12.	a.	b.	26.	a.	b.
13.	a.	b.	27.	a.	b.
14.	a.	b.	28.	a.	b.
15.	a.	b.	29.	a.	b.

APPENDIX B

QUESTIONNAIRE

Please respond to each statement or question. Show your selection where multiple choices are given by checking the appropriate spaces provided.

1. Have you ever published anything you have written?

a. Yes_____ b. No____

2. If you have published anything, please indicate the type of pubication in which it appeared (for example, newspaper or magazine).

_____

_____

3. Did you ever take a creative writing course prior to this one?

a. Yes____ b. No____

4. If you have, through which institution was it taken?

_____

_____

5. What is the highest formal educational background that you have?

a. elementary or junior high ___ b. high school ___

c. college or technical school ___ d. some university ___

d. university graduate ___ (which degree?)_____

e. other _____

6. Do you enjoy writing?

a. Yes ___ b. No ___

7. If you enjoy writing, then which type do you prefer? Rank your preferences by numbering them (1 would be first choice, 2 would be second, and so on).

a. poetry ___ b. articles ___

c. short stories ___ d. essays ___

e. letters or other correspondence ___ f. other_____ ___

8. How did you feel about being involved in this study?

a. positive ___ b. strongly positive ___

c. neutral ___ d. negative___

e. strongly negative. ___

Comments?_____

_____

_____

9. In your opinion, what is the purpose of this study?

_____

_____

10. How did you react to the offer of a reward for doing a piece of writing?

a. neutral ___ b. negative ___

c. strongly negative ___ d. positive. ___

e. strongly positive ___

Comments:_____

_____

_____

11. Which of the following motivators for writing would be the greatest reward for you? Rank all of the following choices (1 for first choice, 2 for second, and do on).

a. no reward at all. ___ b. a small amount of money. ___

c. a large amount of money. ___ d. a plaque or certificate. ___

e. possible publication in a magazine. ___ f. publication of the list of

g. the same as this study. ___ winners in the local newspaper. ___

Comments:

12. Listed below are several possible reasons why people might want to take a creative writing course, or to develop their writing skills. Circle the number (1, 2, 3, or 4) that best describes your reasons for writing. Please check only one column for each statement. (Checking code: SA=Strongly agree; A=Agree; D=Disagree; and SD=Strongly Disagree.)

	SA	A	D	SD
a. I want to write because I get a lot of pleasure from writing.	1	2	3	4
b. I want to write because I want to be a free-lance writer.	1	2	3	2
c. I want to write so that I can do well in courses or in my career.	1	2	3	4
d. I want to write because I enjoy expressing myself through writing.	1	2	3	4
e. I want to write because I like to gain new insights through writing.	1	2	3	4
f. I like to write because someone else, like a teacher or friend, has encouraged me to write.	1	2	3	4
g. I want to write because the ability to				g. I
want to write because the ability to write well may provide me with the opportunity to do well in one or more fields.	1	2	3	4

	SA	A	D	SD
h. I want to write because I enjoy public recognition for my writing.	1	2	3	4
i. I want to write because I derive satisfaction from expressing myself clearly and eloquently.	1	2	3	4
j. I want to write because I feel relaxed when I am writing.	1	2	3	4
k. I want to write because I enjoy playing with words.	1	2	3	4
l. I want to write because I feel that writing has the potential for leading to financial rewards.	1	2	3	4
m. I want to write because I enjoy becoming involved with ideas, characters, events, and images in writing.	1	2	3	4

13. If you were to choose only one reason why you want to write, what would it be?

_____

_____

14. Please add any comments that would help me gain insight into how you viewed the procedure in the research, and how you reacted to what happened.

_____

_____

_____

APPENDIX C

RESEARCH PROJECT IN CREATIVE WRITING

AN INFORMATION HANDOUT TO CREATIVE WRITING STUDENTS

The processes involved in writing creatively have tended to be quite elusive and difficult to understand. Some inroads have been made into understanding the creative process, but there is a great deal that remains a mystery. It is the purpose of this study to attempt to expand the understanding of an aspect of the process of creative writing.

I am currently working toward an M. Ed. degree at the University of Lethbridge. This research project,which will be written up as a paper, is a part of the requirements to complete my program.

I am requesting your help in the project, which will take about an hour of your time. In order to keep the information that you supply confidential, please do not put your name on any of the materal. A tag will be clipped to each of your documents where you will write your name. A code number will be assigned to each of your documents, and your name will be removed and kept separate from your documents.

Your names will not be used in the study, or the paper that results from the study. All information that you supply will be used in a confidential manner.

You will receive two documents from me:

1. A statement soon after the study that informs you of what I was attempting to discover.

2. A summary of the overall results of the study. Personal results on any of the research procedures will not be given out.

APPENDIX D

PURPOSE OF THE RESEARCH

A HANDOUT TO THE SUBJECTS AFTER THE PROCEDURE IS COMPLETED

A significant number of research studies have indicated that the offer of a reward for doing a creative task such as writing impedes the creative process. However, the research does not indicate how people are affected based on their motivational styles (intrinsic or extrinsic). Intrinsic motivation is wanting to do a task because you enjoy doing the task. Extrinsic motivation is doing a task for the results of doing it. For example, if someone were to want to write to earn money, that is extrinsic motivation. The first questionnaire was given to establish motivational orientation.

The purpose of this study was to attempt to understand a number of things:

1. What motivational styles are most common in the creative writing class involved in the project? Is there a difference in creative quality based on motivational orientation?

2. Is there an effect on the quality of creative writing if a reward is offered, and in particular, is there a difference based on whether a person is intrinsically or extrinsically motivated?

3. How do people who are involved in a creative task view the offer of a reward for writing?

I would like to thank you for taking the time to be involved in this study. I will mail a summary of the results to you once the research project is completed.