Organizing and Disseminating Information About Creativity: Journal of CreativeBehavior 2002 In Summary

Danielle M. Ohar
Buffalo State College

To learn more about the International Center for Studies in Creativity and its educational programs, research, and resources, go to http://creativity.buffalostate.edu/.

Buffalo State College
State University of New York
The Center for Studies in Creativity

Organizing and Disseminating Information About Creativity: *Journal of Creative Behavior* 2002 In Summary

A Project in Creative Studies

By

Danielle M. Ohar

Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Science
August 2006

Abstract of Project

Organizing and Disseminating Information about Creativity:
***Journal of Creative Behavior* 2002 In Summary**

This Master's project contains an analysis of articles from the *Journal of Creative Behavior*, 2002. This was the final chapter in a five-year initiative previously analyzed by Bowman-Jones (1999); Moynihan (2001); Noetzel/Schlau (2003); and Carr (2003) for the *Journal of Creative Behavior* 1998, 1999, 2000 and 2001 respectively. Established schema supplied by Feist and Runco (1993) was the structure for data analysis. Data were collected across five domains: Structural Characteristics; Authorship Patterns; Research Methods; Populations Studied; and Issues in Title and Focus. Data were then examined within the journal. An analysis was then conducted across four years of the journal while the *Journal of Creative Behavior* 2000 was excluded since it was unavailable for review.

In addition to the reports on the data analysis, this project contains figures and tables illustrating the findings, project history and significance, rationale and guiding questions and methods and procedures. Key learnings and recommendations conclude the project. The appendices include coding criteria, concept paper, CBIR annotations, article worksheets and raw data as well as a copy of the Feist and Runco article.

Findings from the qualitative analysis of the *Journal of Creative Behavior* for the calendar year 2002 are listed below:

- The total number of articles (16) per year of the *JCB* was the same throughout all four years of the *JCB* studied. Of those 16 articles for the *JCB* 2002, 14 were empirical while only 2 were non-empirical.

- The number of female authors was one more than the number of male authors for the *JCB* 2002 which was quite an increase in female authors from the previous years of the *JCB* studied in which there were always more male authors.

- University students were the most studied population for the *JCB* 2002 as well as across all four years studied of the *JCB*.

- Longitudinal studies were missing across all four years of the JCB studied while laboratory studies, field studies, archival studies, and meta-analytic studies were rarely used.

- The most popular issues addressed by the *JCB* 2002 were personality and creative behavior.

- Ten categories were never studied during any of the four years of the JCB reviewed, including developmental processes, emotion, freewill/will, humor, intelligence and creativity, intuition-thought processes, intuition-nature and role, neurobiological.

Dedication

To my family and friends who have encouraged as well as contributed to my creative being.

Acknowledgments

To Dr. Mary Murdock, my advisor, for encouraging me through this entire project. She defines the word 'creative' and is an inspiration to anyone who comes in contact with her.

To the other authors of this project, Linda Bowman-Jones, Patricia Moynihan, Lisa Noetzel, Carrie Schlau, and Robin Carr. Without the work completed by these women I could not have completed mine.

To my parents, Daniel and Jennifer, who have always supported my educational and creative pursuits. They are the most wonderful parents a girl could have.

To my fiancé, Bryan Bufkin, who has helped me to stay on task and finish this project. If it were not for his skills in Excel it would have taken me a lot longer.

Table of Contents

List of Figures

List of Tables

SECTION 1: THE PROJECT

Project History and Significance

This project concludes a five-year initiative to aid in the disciplinary development of creativity (Murdock, 1999). The International Center for Studies in Creativity took on this initiative in response to concerns that "with a 40-year history, little effort has been directed at the study of changes in the field, and no effort has been made to develop a historical perspective of the work being conducted" (Feist & Runco, 1993, p. 271). Analyzing the themes and trends in the journal literature will not only tell us where we have gone but where we may be going in the future in the field of creativity (Feist & Runco, 1993). Previous analysis has been addressed by Bowman-Jones (1999); Carr (2003); Carroll (2000); Donaldson (1999); Douglas (2003); Ezrin (1999); Moynihan (2001); Myers (2002); and Noetzel/Schlau (2003) who also discussed the importance of synthesizing the creativity journal literature on a regular basis to develop the discipline. Through these works, creativity professionals will be able to build upon and enhance the journal literature rather than repeat work. According to Murdock, Isaksen and Coleman, such approaches will "provide the field of creativity with what it needs in order to move forward to the desired future state of a discipline" (1993, p. 527).

Rationale and Questions Guiding the Project

The purpose of this project was to promote awareness of the content, themes and trends appearing in creativity research journals by continuing to organize and disseminate the information in those journals using an established process model for synthesizing journal literature.

The questions guiding this project were:
- What are the similarities and differences in trends and themes in articles from *The Journal of Creative Behavior* for the calendar year 2002?
- What contents and methods are apparent?
- What kinds of materials appear?
- What are the implications of this information for the development of the domain of creativity?

Methods and Procedures

This project involved reading, investigating and carefully examining each article published in the issues of *The Journal of Creative Behavior* for the calendar year 2002. Qualitative analysis techniques were used to examine themes and trends in the journal articles, and quantitative analysis techniques were used to examine descriptive statistics as specified in the established schema supplied by Feist and Runco (1993). The project followed these five steps: (1) study the Feist and Runco (1993) process model for analyzing journal literature; (2) acquire and read the journal material published by *The Journal of Creative Behavior* for the calendar year 2002; (3) analyze the material according to the categories outlined in Feist & Runco (1993); (4) make changes, additions, modifications, or adjustments to their schema as necessary or as dictated by the data; and (5) prepare the full project report that includes all findings and is organized as suitable for publication.

The five categories outlined by Feist and Runco for analyzing data were **structural characteristics**, **authorship patterns**, **research methods**, **populations** and **issues in title and focus**.

Structural Characteristics contained the number of articles per issue, pages for articles, pages for book reviews, total references per issue, total recent reference index, total classic reference index and number of authors per article. "Recent references"

meant ones that were 5 years old or less from publication date, while classic references referred to ones that were 25 years old or older from publication date.

Authorship Patterns contained total number of authors, total number of male authors, total number of female authors, number of male-first authors, number of female-first authors, and finally, number of authors with an undetermined gender.

Research Methods contained two categories: empirical studies-those studies that included explicit or implicit methods sections; and non-empirical studies-those studies that did not report original empirical data. Empirical studies were subdivided into eleven different methods: laboratories, questionnaires, tests, interviews, field studies, longitudinal studies, archival studies, multimethod studies, meta-analytic studies, quantitative analyses, qualitative analyses. Non-empirical studies were subdivided into four different methods: descriptive/review, prescriptive, technique, theoretical. Once we determined if an article was empirical or non-empirical, the article was coded with more than one sub-method.

The category **Populations Studied** identified the participants in empirical studies only and included the following categories: preschool children, elementary-school children, junior high school students, high school students, university students, adults, artists, scientists/engineers, business people, and others as its own category.

The final category, **Issues in Title and Focus**, required each article to be rated once or twice according to the article's main focus. There were thirty-one topics identified by Feist and Runco (1993) initially:

problem solving/incubation, synthetic/divergent thinking,

imagery/visualization/dreams, intuition, intelligence and creativity, education,

giftedness, personality, developmental process, testing/measurement,

business/management, gender differences, cross-cultural differences,

enhancement of creativity, social/environmental influences of creativity,

motivation/source/origin, brainstorming, humor, intuition, science/scientific,

art/artistic, emotion, leadership, therapy, mental health, freewill/will, potential,

creative product, creative behavior, neurobiological, psychi/futuristic. (p. 285)

There were additional categories added in previous project work in the ICSC initiative.
See Bowman-Jones (1999); Carr (2003); Carroll (2000); Donaldson (1999); Douglas
(2003); Ezrin (1999); Moynihan (2001); Myers (2002); and Noetzel/Schlau (2003) for
details.

SECTION 2: THE RESULTS

Introduction

The *Journal of Creative Behavior* is a refereed journal, published by The Creative Education Foundation , Inc. I examined the *JCB* for the calendar year 2002, which contained 16 articles; one book review; one bibliography; and one index. I collected data across five domains created by Feist and Runco (1993) in their analysis of trends and themes across 25 years of the *JCB*. I compared data across four years of the *Journal of Creative Behavior* thanks to the works completed by Bowman-Jones (1999) who researched the *JCB* 1998, Moynihan (2001) who researched the *JCB* 1999, Carr (2003) who researched *JCB* 2001. One year was missing, the JCB 2000 researched by Noetzel/Schlau (2003). Data for the JCB 2000 were unavailable for inclusion in this assessment.

Discussion of Structural Characteristics

In Feist and Runco "Structural Characteristics" referred to technical aspects of how articles were set up- e.g. number of pages. Results of **Structural Characteristics** in the 6 categories in this study were: **total number of articles** (16); **number of pages for articles** (total 294, average 17.31); **number of pages for book reviews** (4); **total references per article** (total 591, average 36.94); **total recent reference index** (179); and **total classic reference index** (98).

The journal was separated into 4 volumes or numbers as they are referred to in *JCB*, Number 1 contained articles #1-4, Number 2 contained articles #5-9, Number 3 contained articles #10-12 as well as a book review, Number 4 contained articles #13-16 and 1 bibliography and 1 index, which is a standard feature in Number 4 of the *JCB*. A

classic reference referred to one dating back 25 years or later than the article referencing
it while a recent reference was defined by one dating back 5 years or earlier. Figure 2.1
shows the total number of references used in each article while Figure 2.2 shows the
number of recent references and classic references used in each article. The average
number of recent references for all volumes was 11.19 while the average for classic
references was 6.13. The range of references was 15-77 references while the range of
recent references was 1-40 and range of classic references was 0-23.

Figure 2.1 Total Number of References Per Article in the *JCB* 2002
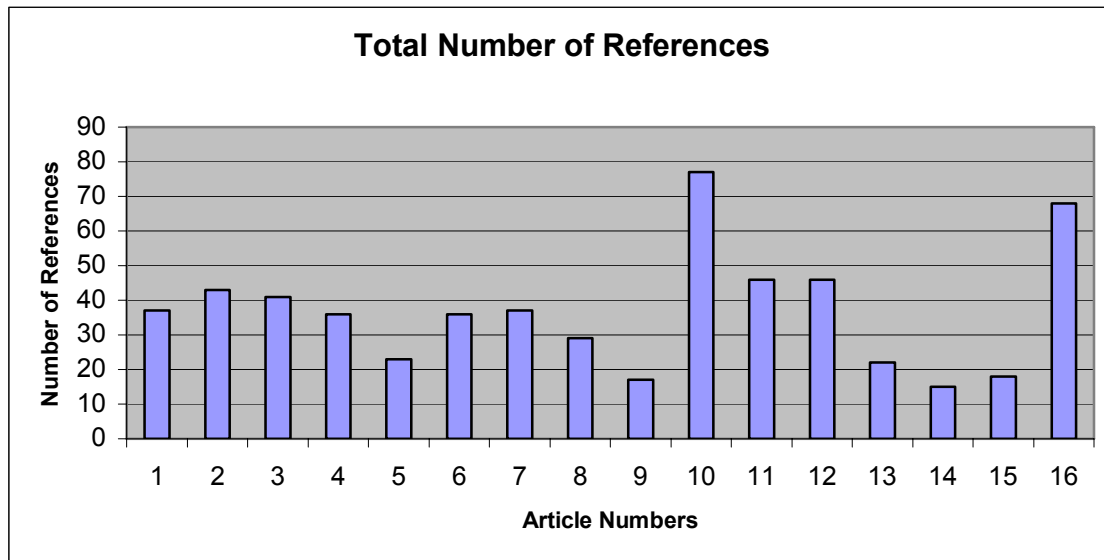
Figure 2.2 Total Number of Recent References Per Article Vs. Total Number of

Classic References Per Article in the *JCB* 2002
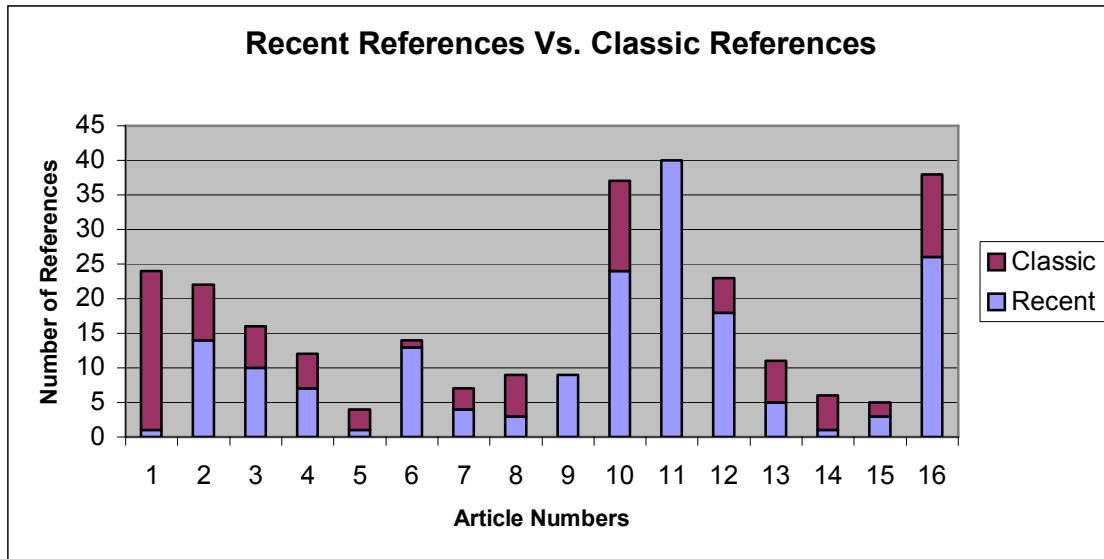
After thorough investigation of the articles, a few key findings were apparent.

Article #10 incorporated the most references (77 references) while article #16 contained

the next highest number of references at 68. Article #16 was a nonempirical article

discussing creativity crossculturally and Article #10 was an empirical article discussing

people's beliefs and creative performance across three tasks. Articles #5, 9, 14 and 15

had the lowest number of references. None of the references in article #9 were classic

references. After further investigation of article #9 entitled "The Motivational Function

of Regulatory Focus in Creativity", the authors noted that the role of self-regulation has

not been investigated very frequently and the purpose of the article was to contribute to

the research on it. Article #11 also had no classic references, which made sense because

the title of the article was "Changing the Rules: Education for Creative Thinking". It

looked at revising education and looking at it in new ways. The first article of the *JCB*

2002 entitled "The Relationship Between Creativity and Conformity Among Preschool

Children" included many classic references and one recent reference. A possible

explanation for this could be that in the authors' opinion little current research has been

written about conformity and creativity being linked, especially in children.

Looking at *the Journal of Creative Behavior* across the four previous journal

studies, as seen in Table 2.1, all four years contained the same number of articles per

year. There was a steady increase across the years in the total number of pages for

articles per journal year. Feist and Runco expected that there would be an increase in the

total number of references per journal year while their results supported this claim. Carr

(2003) noticed the same occurance when comparing her data to the previous journal

studies but as you can see from Table 2.1 with the addition of the *JCB* 2002 data, the total

number of references decreased in 2002.

Table 2.1 Structural Characteristics Compared Across Four Years of the *JCB*

Structural Characteristics	1998	1999	2001	2002
Total Number of Articles	16	16	16	16
Total Number of Pages	263	278	280	294
Pages Per Article (Average)	16.4375	17.375	17.5	17.31
Total Number of References	505	578	642	591
References Per Article (Average)	31.5625	36.125	40.125	36.94
Number of Recent References	177	115	181	179
Percentage of Recent References	35%	20%	28%	30%
Number of Classic References	73	148	83	98
Percentage of Classic References	16%	26%	13%	17%

Adapted from Carr (2003).

<u>Discussion of Authorship Patterns</u>

Authorship Patterns contained 7 categories for which results were: **number of authors per article** (average 2.1875); **total number of authors** (35); **total number of male authors** (16); **total number of female authors** (17); **number of male first authors** (7); **number of female first authors** (6); **number of authors of undetermined gender** (2).

The distribution between male and female authors was well balanced as seen in Figure 2.3. There were 2 authors whose gender was undetermined. In order to distinguish their gender, I completed a Google search using the internet as well as emailed the editor of the *JCB*, without any luck of discovering their genders. The distribution between male first and female first authors was also fairly even. There were 7 male first authors and 6 female first authors. As you will see according to Table 2.2, the number of female authors in 2002 had drastically increased over the 4 years of data presented while the number of male authors began to grow and then declined slightly in 2002. Only three articles were single-authored for the year 2002. Carr had noted that this was a reversal in the trend set in 1998 in which 13 articles were single-authored and in 1999 with 12, but in 2001 the number went down to 4 single-authored articles (2003). Feist had predicted an increase in co-authored articles and these finding support their predictions (1993).

Figure 2.3 Gender of Authors in the *JCB* 2002
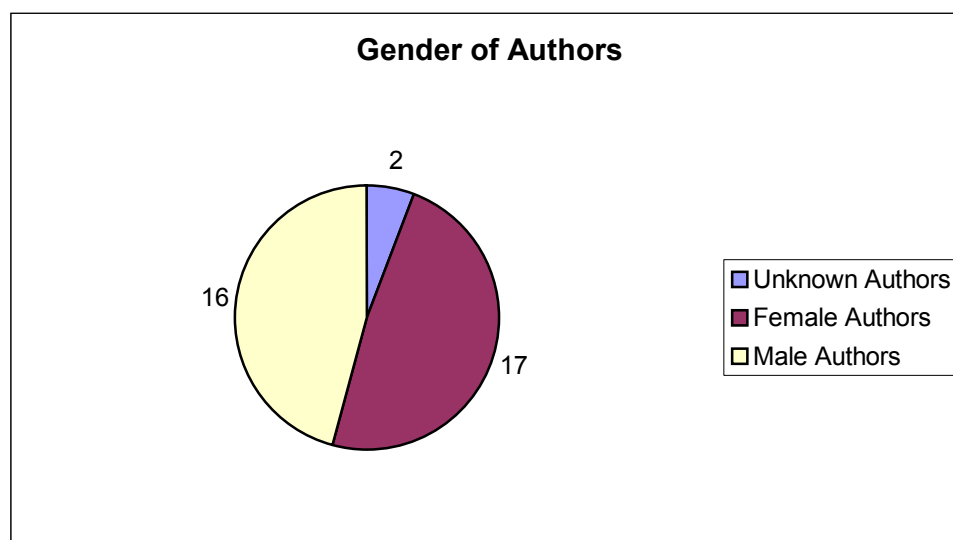
Gender of Authors

Table 2.2 Authorship Patterns Compared Across Four Years of the *JCB*

Authorship Patterns	1998	1999	2001	2002
Total Number of Authors	23	31	37	35
Authors Per Article	1.4375	1.9375	2.3125	2.1875
Female Authors	4	5	8	17
Male Authors	18	26	25	16
Female First Authors	0	0	2	6
Male First Authors	2	4	7	7
Author Gender Undetermined	1	0	4	2

Adapted from Carr (2003).

<u>Discussion of Research Methods</u>

There were two sections within **Research Methods**: 1, empirical studies, articles with either explicit or implicit methods sections; and 2, non-empirical studies, articles that did not report original empirical data. There were 12 categories for **Empirical Methods**: **number of empirical studies** (14 or 87.5% of all studies); **number of laboratories** (1); **number of tests** (2); **number of questionnaires** (3); **number of interviews** (0); **number of field studies** (0); **number of longitudinal studies** (0); **number of archival studies** (0); **number of multi-method studies** (8); **number of meta-analytic studies** (0); **number of quantitative analysis** (14); and **number of qualitative analyses** (2). There were 5 categories for **Non-empirical Methods**: **number of non-empirical studies** (2 or 12.5% of all studies); **number of descriptive/review studies** (2); **number of prescriptive studies** (0); **number of technique studies** (0); and **number of theoretical studies** (0). Each non-empirical study could be coded under more than one non-empirical category.

Methods used in studies in the *Journal of Creative Behavior* 2002 were primarily empirical. Empirical articles outnumbered non-empirical articles 7 to 1 as shown in Figure 2.4. There were 3 nonarticles including 1 book review, 1 bibliography and 1 index. Thirteen of the fourteen empirical articles used quantitative methods, or numerical statistics, of analyzing data while 1 article used qualitative data, or verbal summaries, quotes, and 1 article used both quantitative and qualitative data.

Figure 2.4 The Number of Empirical Studies Vs. Non-empirical Studies in the *JCB* 2002

Empirical Vs. Non-Empirical Studies

2

14

☐ Empirical
■ Non-Empirical
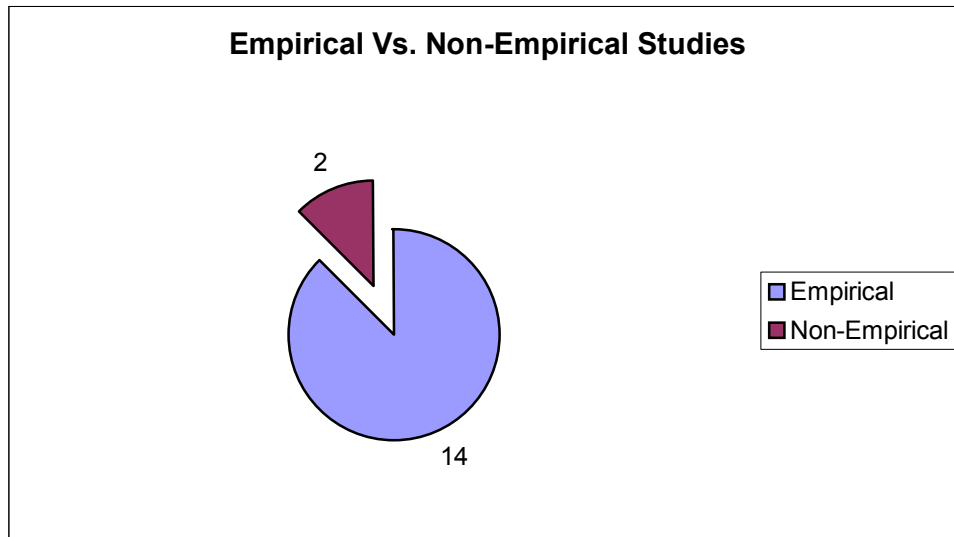
Figure 2.5 Empirical Methods Used in the *JCB* 2002

Empirical Methods Used

Laboratories
Questionaires
Multimethod
Tests

0   2   4   6   8   10
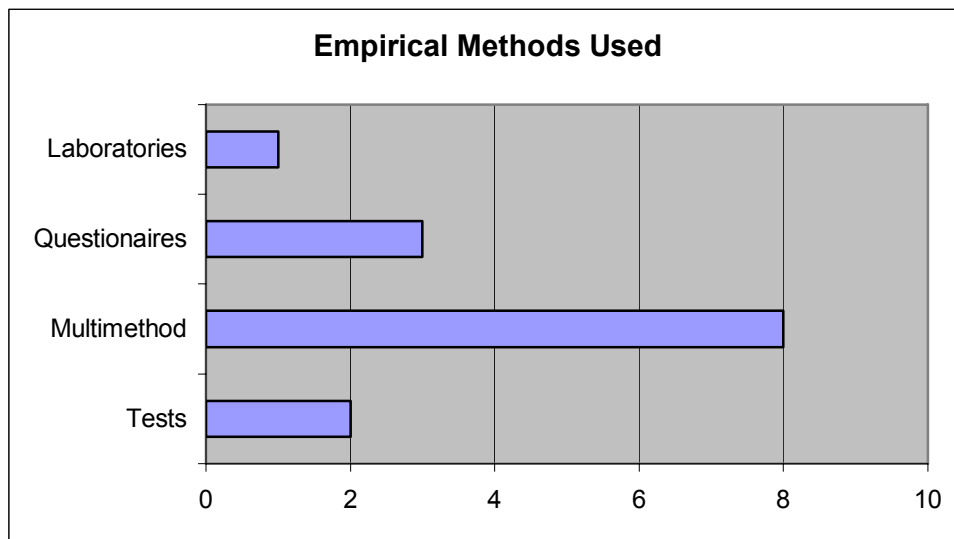
The types of empirical methods defined by Feist and Runco were laboratories, questionnaires, tests, interviews, field studies, and multimethod, which was any combination of two or more of the other types. As seen in Figure 2.5, the four types of

empirical methods used in the *JCB* 2002 contained laboratories, questionnaires, multimethod, and tests. There were no interviews, field studies, longitudinal studies, archival studies or meta-analytic methods used in the *JCB* 2002. Feist and Runco's definition of laboratories, questionnaires, field studies and tests left room for much interpretation; therefore I further defined each term in order to correctly label each article as such. In this study I defined laboratory as that which occurred in a controlled setting, field study as that which occurred within a natural setting, test as a formal instrument developed and used by others and questionnaire as open-ended, opinions, thoughts or a scale of some sort.

Of the empirical articles the most popular method used was a combination of the other methods or what Feist and Runco considered a multimethod. Their view of multimethod did not describe what specific methods were used within each article. I re-examined the articles for additional information. Table 2.3 illustrates that article #2 included tests and questionnaires, article #5 included laboratories and tests, #9 included laboratories and questionnaires, #10 included tests and laboratories, #12 included laboratories, tests, and questionnaires, #14 included tests and laboratories, and #15 included laboratories and tests. Here also there were no interview and field study methods used.

Table 2.3 Methods Included in Multimethod Studies Per Article of the *JCB* 2002

Art #	Method
2	tests, questionnaires
5	labs, tests
9	labs, questionnaires
10	tests, labs
12	tests, labs, questionnaires
14	tests, labs
15	tests, labs

There were only 2 non-empirical articles, and both of them fit into the descriptive/review sub-category created by Feist and Runco. The three non-empirical sub-categories not used in the *JCB* 2002 were prescriptive, techniques and theoretical. Table 2.4 shows that there was an increase in multi-method studies as well as quantitative analysis across the four years reviewed. Longitudinal studies were not used in any of the studies during any year while laboratory studies, field studies, archival studies and meta-analytic studies were rarely used.

Table 2.4 Research Methods Used Compared Across Four Years of the *JCB*

Research Methods Used	1998	1999	2001	2002	Range
Empirical Methods	10	8	15	14	47
Laboratory Studies	0	1	0	1	2
Tests	0	1	5	2	8
Questionnaires	5	2	2	3	12
Interviews	2	0	0	0	2
Field Studies	3	0	0	0	3
Longitudinal Studies	0	0	0	0	0
Archival Studies	3	0	2	0	5
Multi-Method Studies	3	4	7	8	22
Meta-analytic Studies	0	0	1	0	1
Quantitative Analysis	6	4	15	14	39
Qualitative Analysis	3	4	0	2	9
Non-empirical Methods	6	8	1	2	17
Descriptive/Review	5	6	1	2	14
Prescriptive	3	1	1	0	5
Technique	1	0	0	0	1
Theoretical	1	1	0	0	2

Adapted from Carr (2003).

<u>Discussion of Populations Studied</u>

Populations Studied contained 10 categories for empirical studies: **preschool children** (1); **elementary school children** (1); **junior high school students** (1); **high school students** (1); **university students** (7); **university students and business people** (1); **university students and adults and business people** (1); **adults** (1); **artists** (0); **scientist/engineers** (0); **business people** (0); and **others** (0).

I created two new categories for this study since Feist and Runco did not have categories for populations of mixed categories such as "junior high school students and high school students". I created a category "university students and business people" for article #7 and a category "university students and adults and business people" for article #14.

Figure 2.6 illustrates that the most common population studied was university students. This makes sense because this population is probably the most accessible to study. It is important to note that all of these populations studied were from a traditional education setting including article #16 in which adults were studied. The adults in this article happen to be primary and secondary teachers, which would be considered within the realm of traditional education.

Figure 2.6 Populations Studied in the *JCB* 2002
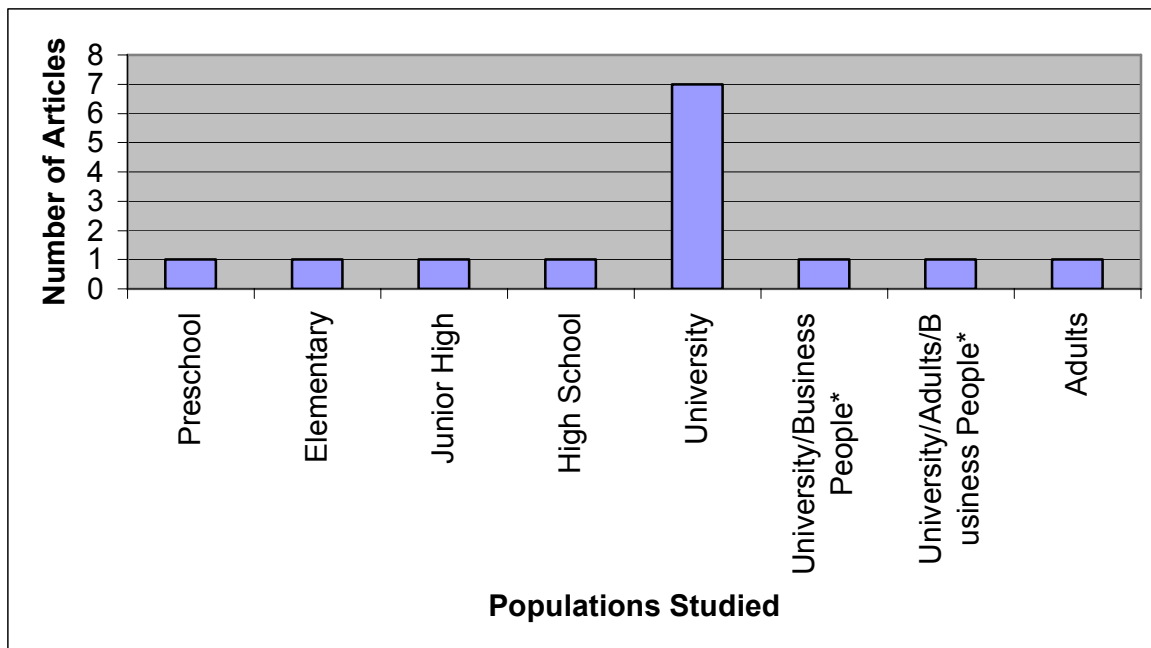
*added category based on data in this study

Examining the *JCB* across the four years reviewed, as shown in Table 2.5, indicated that certain populations were studied more than others. University students were increasingly used in more studies overall while artists and scientists/engineers were never studied. Preschool children were only used for one study while elementary school children, high school students, adults, general population and business people were studied minimally.

Table 2.5 Populations Studied Across Four Years of the *JCB*.

Populations Studied	1998	1999	2001	2002	Range
Preschool Children	0	0	0	1	1
Elementary School Children	1	0	1	1	3
Junior High School Students	4	1	0	1	6
High School Students	0	1	0	1	2
University Students	0	4	9	7	20
Adults, General Population	0	0	0	1	1
Artists	0	0	0	0	0
Scientists/Engineers	0	0	0	0	0
Business People	0	1	0	1	2
Others	5	1	5	0	11

Adapted from Carr (2003).

Discussion of Issues in Title and Focus

Issues in Title and Focus contained 31 categories: **art/artistic** (0);

brainstorming (0); **business/management** (0); **creative behavior** (3); **creative product**

(2); **cross-cultural differences** (1); **developmental processes** (0); **education** (0);

emotion (0); **enhancement of creativity** (0); **freewill/will** (0); **gender differences** (2);

giftedness (0); **humor** (0); **imagery/visualization/dreams** (2); **intelligence and**

creativity (0); **intuition-thought processes** (0); **intuition-nature and role** (0);

leadership (0); **mental health** (1); **motivation/source/origin** (1); **neurobiological** (0);

personality (3); **potential** (0); **problem solving/incubation** (1); **psychic/futuristic** (0);

science/scientific (1); **social/environmental influences of creativity** (2);

synthetic/divergent thinking (0); **testing/measurement** (2); and **therapy** (0).

Of the 31 categories defined by Feist & Runco, 12 were addressed in the issues of

the *JCB 2002*. As figure 2.7 shows, the top 2 issues with 3 articles each were personality

and creative behavior. Five issues were dealt with twice including gender differences,

testing/measurement, social/environmental influences of creativity,

imagery/visualization/dreams, and creative product. Also, 5 issues were covered only

once including mental health, sciences/scientific, motivation/source/origin, problem

solving/incubation, and cross-cultural differences.

Figure 2.7 Issues in Title and Focus in the *JCB* 2002
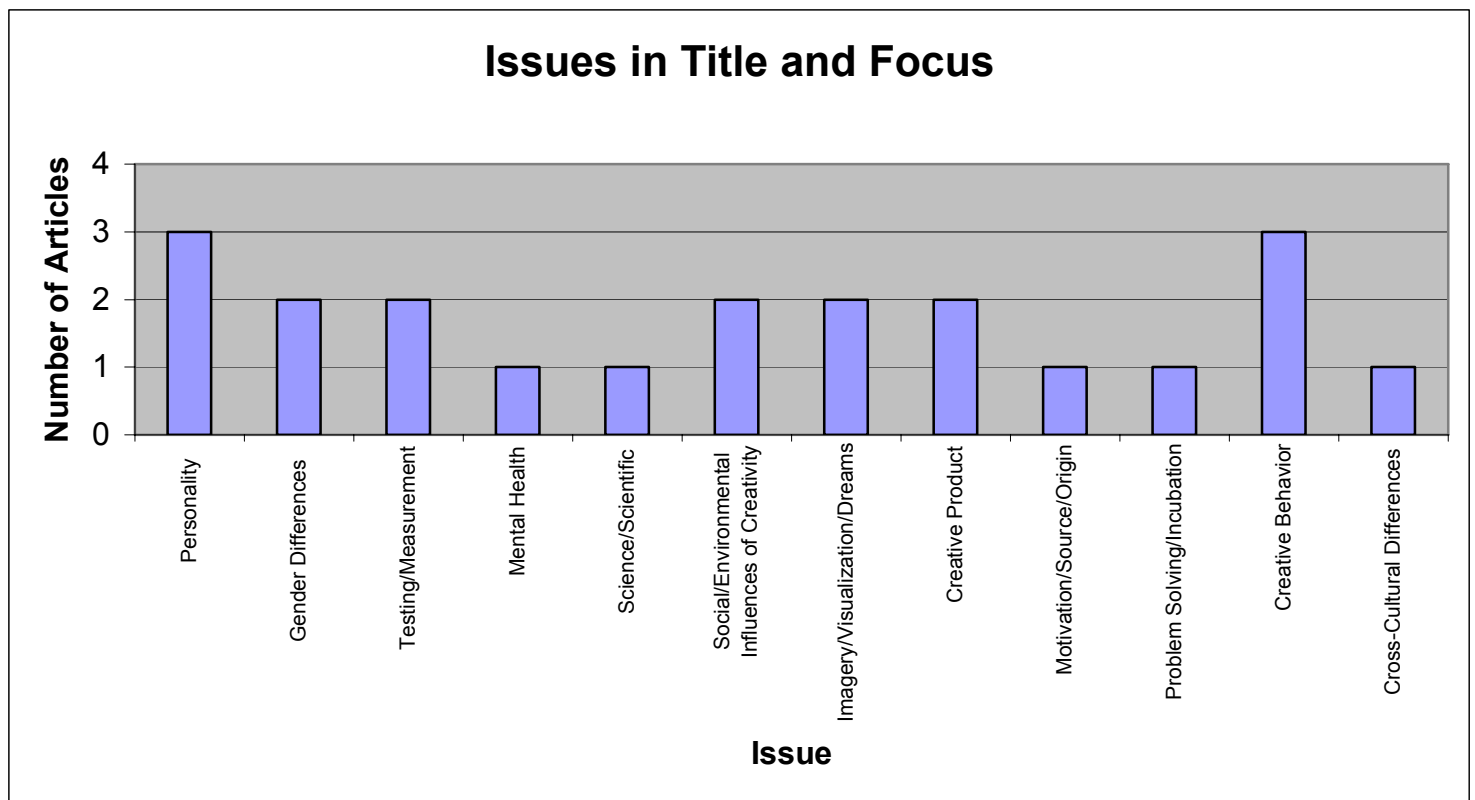
Nineteen issues were never discussed in the *JCB* 2002: synthetic/divergent thinking, intuition, intelligence and CR, education, giftedness, developmental processes, business/management, enhancement of CR, brainstorming, humor, intuition, art/artistic, emotion, leadership, therapy, freewill/will, potential, neurobiological, and psychic/futuristic. Articles were either coded with one issue or two issues as directed by Feist and Runco, this is illustrated in Table 2.6.

Table 2.6 Issues in Title and Focus Per Article in the *JCB* 2002

Number	Art #	Issues in Title and Focus
1	1	Personality AND Social/Environ. Inf. Of Creat.
1	2	Gender Differences AND Mental Health
1	3	Testing/Measurement
1	4	Gender Differences AND Personality
2	5	Testing/Measurement AND Science/Scientific
2	6	Social/Environmental Influences of Creativity
2	7	Imagery/Visualization/Dreams
2	8	Imagery/Visualization/Dreams AND Creative Product
2	9	Motivation/Source/Origin
3	10	Problem Solving/Incubation
3	11	Creative Behavior
3	12	Creative Behavior
3	N/A	N/A- A book review
4	13	Creative Behavior
4	14	Creative Product
4	15	Personality
4	16	Cross-Cultural Differences
4	N/A	N/A-A bibliography
4	N/A	N/A- An index

Table 2.7 shows that ten issues were never discussed during the four years of the

JCB reviewed including: developmental processes, emotion, freewill/will, humor,

intelligence and creativity, intuition-thought processes, intuition-nature and role,

neurobiological, psychic/futuristic and therapy. Feist and Runco (1993) noted that five of

these categories: humor, emotion, freewill/will, intuition-nature and role, intuition-

thought processes were among the least studied topics during their research. After

reviewing the issues in title and focus data across the four years of the *JCB* reviewed,

four issues stood out as the most popular: creative behavior (13); enhancement of

creativity (10); motivation/source/origin (14); social/environmental influences of

creativity (15).

Table 2.7 Issues in Title and Focus Across Four Years of the *JCB*

Issues in Title and Focus	1998	1999	2001	2002	Range
Art/Artistic	2	1	2	0	5
Brainstorming	2	0	0	0	2
Business/Management	1	1	0	0	2
Creative Behavior	8	2	0	3	13
Creative Product	1	0	2	2	5
Cross-cultural Differences	1	2	2	1	6
Developmental Processes	0	0	0	0	0
Education	5	1	1	0	7
Emotion	0	0	0	0	0
Enhancement of Creativity	3	2	5	0	10
Freewill/Will	0	0	0	0	0
Gender Differences	1	0	0	2	3
Giftedness	1	0	0	0	1
Humor	0	0	0	0	0
Imagery/Visualization/Dreams	1	0	0	2	3
Intelligence and Creativity	0	0	0	0	0
Intuition-Thought Processes	0	0	0	0	0
Intuition-Nature and Role	0	0	0	0	0
Leadership	2	0	0	0	2
Mental Health	0	0	1	1	2
Motivation/Source/Origin	8	3	2	1	14
Neurobiological	0	0	0	0	0
Personality	3	0	2	3	8
Potential	3	0	0	0	3
Problem Solving/Incubation	1	0	2	1	4
Psychic/Futuristic	0	0	0	0	0
Science/Scientific	2	0	0	1	3
Social/Environmental Influences of Creativity	3	4	6	2	15
Synthetic/Divergent Thinking	1	0	4	0	5
Testing/Measurement	1	0	1	2	4
Therapy	0	0	0	0	0

Adapted from Carr (2003).

<u>Summary</u>

I reviewed the *Journal of Creative Behavior* 2002 for a total of 4 issues that contained 16 articles, 1 book review, 1 bibliography and 1 index. I collected data across five domains based on the works by Feist and Runco (1993) when they analyzed the *Journal of Creative Behavior* across 25 years. I compared my data to those found by Bownman-Jones (1999); Moynihan (2001); and Carr (2003) for the *Journal of Creative Behavior* 1998, 1999, and 2001 respectively.

The average number of pages per article was 17.31 with a total number of references of 591. There were 179 recent references while there were 98 classic references. It was interesting to note that for all four years of the *JCB* studied, the total number of articles per year was the same while the number of pages for articles increased.   The total number of authors for the *JCB* 2002 was 35 with 2.1875 authors per article on average. Of the authors, 16 were male while 17 were female showing a true balance between male and female authors and an increase in female authored articles over the four years reviewed. There were 7 male first authors and 6 female first authors for the *JCB 2002*.

Of the 16 articles for the *Journal of Creative Behavior* 2002, 14 articles used empirical research methods while 2 used non-empirical methods. The empirical methods used were labs (1), tests (2), questionnaires (3) and multi-method (8). The non-empirical articles were both categorized as descriptive/review. Over the four years reviewed longitudinal were never used while laboratory studies, field studies, archival studies, and meta-analytic studies were rarely used. University students were the most studied population for the *JCB* 2002 as well as the most studied overall when looking across the

four years of the *JCB*. I created two new categories of populations studied: university students AND business people and university students AND adults AND business people, this was necessary to correctly code the articles for the *JCB* 2002 as well as to keep categories organized for review across other years of the *JCB*.

Out of the 31 categories for Issues in Title and Focus created by Feist and Runco only 12 were addressed in the *JCB* 2002. The top two issues were personality and creative behavior with three articles addressing these issues. The second most popular, with two articles addressing each issue, were gender differences, testing/measurement, social/environmental, imagery/visualization/dreams and creative product. Each of the following issues were addressed by one article for the *JCB* 2002: mental health, science/scientific, motivation/source/origin, problem solving/incubation, cross-cultural. Ten categories were never discussed during the four years of the *JCB* reviewed: developmental processes, emotion, freewill/will, humor, intelligence and creativity, intuition-thought processes, intuition-nature and role, neurobiological.

Project results are available at the International Center for Studies in Creativity. I have annotated all 16 of the articles for the *Journal of Creative Behavior* 2002 and they can be located in the Creativity Based Information Resources database (CBIR) maintained by the center.

SECTION 3: KEY LEARNINGS

The following section describes what I have learned in completing this project including process learnings, content learnings and recommendations for future students completing their Master's projects.

<u>Process</u>

The process of completing this Master's project was a bit abstract for me at first. I found it challenging to take a large idea and break it up into something to work on daily that would eventually become the project with a write-up. Having Dr. Murdock for an advisor was wonderful, she was able to help me build layers of depth to my project. Below is a list of my key process learnings:

- How to self-motivate after moving from Buffalo to Denver during the completion of the project.

- How to stay organized on a daily, weekly and monthly basis.

- How to organize qualitative data and research.

- How to review previous projects and incorporate the authors' ideas and views into my project when comparing data.

- How to make peace with not having the *JCB* 2000 data to include in the summary of the five year initiative.

<u>Content</u>

The content of this project was fun to work with since the *Journal of Creative Behavior* has always been my favorite journal to work with during my study at Buffalo State College. I enjoyed being the "caboose" to the five year initiative because I was able

to summarize all of the hard work that had been completed. Below you will find my content learnings:

- The total number of articles per year of the *JCB* was the same throughout all four years of the *JCB* studied.

- The number of female authors was one more than the number of male authors for the *JCB* 2002 which was quite an increase in female authors from the previous years of the *JCB* studied in which there were always more male authors.

- The incredible magnitude that goes into creating an article for a referred journal such as the *JCB*.

- University students are used quite frequently as study subjects and were the most studied population used for studies in the *JCB* 2002 as well as across all four years studied of the *JCB*.

- Longitudinal studies were missing across all four years of the *JCB* studied while laboratory studies, field studies, archival studies, and meta-analytic studies were rarely used.

- Not having accessibility to the *JCB* 2000 made it difficult to accumulate info across the five year initiative.

Recommendations

The Below recommendations are for the future student as well as for the future study of the *JCB*:

- Enjoy the process of completing a Master's project and ask a lot of questions along the way instead of "throwing in the towel" and getting distracted.

- Be forgiving of your timeline; if you get away from it, come back with increased energy.

- Stay with it until it is complete; it is never too late to finish!

- Ten categories were never studied during any of the four years of the *JCB* reviewed, including developmental processes, emotion, freewill/will, humor, intelligence and creativity, intuition-thought processes, intuition-nature and role, neurobiological. These topics might be of interest for consideration as topics for future articles for the *JCB*.

References

Bowman-Jones, L. C. (1999). *Organizing and disseminating knowledge about creativity: Themes in the 1998 creativity journal literature-Journal of Creative Behavior.* Unpublished Master's project, State University College at Buffalo, NY.

Bowman-Jones, L. C., Donaldson, J. E., & Ezrin, S. T. (1999). In Stein, M. (Ed.), *Creativity's global correspondents-1999.* New York: Winslow Press.

Carr, R. D. (2003). *Organizing and disseminating knowledge about creativity: Journal of Creative Behavior 2001 in summary.* Unpublished master's project, State University College at Buffalo, NY.

Carroll, H. S. (2000). *Creativity Research Journal, 1999 in summary.* Unpublished master's project, State University College at Buffalo, NY.

Donaldson, J. E. (1999). *Organizing and disseminating knowledge about creativity: Themes in the 1998 issues of the Creativity Research Journal.* Unpublished master's project, State University College at Buffalo, NY.

Douglas, N. (2003). *Organizing and disseminating information about creativiy: Themes in the Creativity and Innovation Management Journal 1999.* Unpublished master's project, State University College at Buffalo, NY.

Ezrin, S. T. (1999). *Organizing and disseminating knowledge about creativiy: Themes in the 1998 creativity journal literature – Creativity and Innovation Management.* Unpublished master's project, State University College at Buffalo, NY.

Feist, G. J. & Runco, M. A. (1993). Trends in the creativity literature. *Creativity Research Journal,* 6(3), 271-286.

Moynihan, P. L. (2001). *Organizing and disseminating knowledge about creativity: Themes in the 1999 journal of creative behavior,* Unpublished Master's project, State University College at Buffalo, NY.

Murdock, M. C. (1999). *CRS project/thesis menu topics.* Unpublished instructional handout for CRS 690/795. Buffalo, NY: International Center for Studies in Creativity.

Murdock, M. C., Isaksen, S. G., & Coleman, S. E. (1993). Moving to a desired future state in the field of creativity. In S. G. Isaksen, M. C. Murdock, R. L. Firestien, & D. J. Treffinger (Eds.), *Understanding and recognizing creativity: The emergence of a discipline* (pp. 499-528). Norwood, NJ: Ablex Publishing Corporation.

Myers, S. A. (2002). *Organizing and disseminating information about creativity: Creativity Research Journal 2001 in summary.* Unpublished master's project, State University College at Buffalo, NY.

Noetzel, L. M. (2003). *Organizing and disseminating information about creativity: Journal of Creative Behavior 2000 in summary.* Unpublished master's project, State University College at Buffalo, NY.

Schlau, Carrie (2003). *Organizing and disseminating information about creativity: Journal of Creative Behavior 2000 in summary.* Unpublished master's project, State University College at Buffalo, NY.

APPENDIX A:

CONCEPT PAPER

Project/Thesis Title: Organizing and Disseminating Information About Creativity: *Journal of Creative Behavior* **2002 In Summary**

Rationale and Questions: The purpose of this project is to promote awareness of the content, themes and trends appearing in creativity research journals by continuing to organize and disseminate the information in those journals using an established process model for synthesizing journal literature. The questions guiding this project are:

- What are the similarities and differences in trends and themes in articles from *The Journal of Creative Behavior* for the calendar year 2002?
- What contents and methods are apparent?
- What kinds of materials appear?
- What are the implications of this information for the development of the domain of creativity?

Statement of Significance: This project concludes a five-year initiative to aid in the disciplinary development of creativity (Murdock, 1999). The International Center for Studies in Creativity took on this initiative in response to concerns that "with a 40-year history, little effort has been directed at the study of changes in the field, and no effort has been made to develop a historical perspective of the work being conducted" (Feist & Runco, 1993, p. 271). Analyzing the themes and trends in the journal literature will not only tell us where we have gone but where we may be going in the future in the field of creativity (Feist & Runco, 1993). Previous analysis has been addressed by Bowman-Jones (1999); Carr (in preparation); Carroll, (2000); Donaldson (1999); Douglas (in preparation); Ezrin (1999); Moynihan (2001); Myers (in preparation); and Noetzel (in preparation) who also discussed the importance of synthesizing the creativity journal literature on a regular basis to develop the discipline. Through these works creativity professionals will be able to build upon and enhance the journal literature rather than repeat work. According to Murdock, Isaksen and Coleman, such approaches will "provide the field of creativity with what it needs in order to move forward to the desired future state of a discipline" (1993, p. 527).

Description of the Method or Process: The project will involve reading, investigating and carefully examining each article published in the issues of *The Journal of Creative Behavior* for the calendar year 2002. Qualitative analysis will be used to examine themes and trends in the journal articles, and quantitative analysis will be used to examine descriptive statistics as specified in the established schema supplied by Feist and Runco (1993). The project will follow these five steps: (1) study the Feist and Runco (1993) process model for analyzing journal literature; (2) acquire and read the journal material published by *The Journal of Creative Behavior* for the calendar year 2002; (3) analyze the material according to the categories outlined in Feist and Runco (1993); (4) make changes, additions, modifications, or adjustments to their schema as necessary or as dictated by the data; and (5) prepare the full project report that includes all findings and is organized as suitable for publication.

Learning Goals:
- Create professional relationship with advisor and journal project partners.
- Become more knowledgeable in Creative Studies through journal reading.
- Learn how to use Microsoft Access and Excel 2000 properly.
- Analyze journals and become aware of current creativity literature trends.
- Stick to timeline with graduation date May 2003.

Outcomes:
- A concise and complete analysis of themes from *The Journal of Creative Behavior* for 2002;
- A concise and complete analysis of pertinent statistics as outlined in the schema used;
- 20 CBIR Annotations;
- Project Write-Up.

Timeline:
- November-December 2002: Concept paper approved;
  Obtain journals;
  Buy Microsoft Office 2000, begin to explore program;
  Continue to use Spring 2002 journal students as resources;
  Obtain data sheets, make copies to use with each article;
  Begin reading journals and tracking data on data sheets.
- December-January 2003: Continue reading journals and tracking data on data sheets;
  Import database for project onto my computer;
  Complete Application for Graduation (due Feb. 1, 2003).
- January-February 2003: Begin importing data from data sheets onto database;
  Meet with advisor.
- February-March 2003: Analyze data and begin writing project write-up;
  Submit project write-up for review;
  Meet with advisor.
- March-April 2003: Submit final project write-up and all materials;
  Complete 20 CBIR Annotations from JCB 2002.
- April-May 2003: Get project write-up copied and bound (2 copies).
- May 2003: Graduate.

Principal Investigators:
- Advisor, Mary C. Murdock, Ed. D.; Candidate, Danielle M. Ohar

Related Literature:
Bowman-Jones, L. C. (1999). *Organizing and disseminating knowledge about creativity: Themes in the 1998 creativity journal literature-Journal of Creative Behavior.* Unpublished Master's project, State University College at Buffalo, NY.

Bowman-Jones, L. C., Donaldson, J. E., & Ezrin, S. T. (1999). In Stein, M. (Ed.), *Creativity's global correspondents-1999*. New York: Winslow Press.

Carr, R. D. (in preparation). *Organizing and disseminating knowledge about creativity: Journal of Creative Behavior 2001 in summary.* Unpublished master's project, State University College at Buffalo, NY.

Carroll, H. S. (2000). *Creativity Research Journal, 1999 in summary.* Unpublished master's project, State University College at Buffalo, NY.

Donaldson, J. E. (1999). *Organizing and disseminating knowledge about creativity: Themes in the 1998 issues of the Creativity Research Journal.* Unpublished master's project, State University College at Buffalo, NY.

Douglas, N. (in preparation). *Organizing and disseminating information about creativiy: Themes in the Creativity and Innovation Management Journal 1999.* Unpublished master's project, State University College at Buffalo, NY.

Ezrin, S. T. (1999). *Organizing and disseminating knowledge about creativity: Themes in the 1998 creativity journal literature – Creativity and Innovation Management.* Unpublished master's project, State University College at Buffalo, NY.

Feist, G. J. & Runco, M. A. (1993). Trends in the creativity literature. *Creativity Research Journal,* 6(3), 271-286.

Moynihan, P. L. (2001). *Organizing and disseminating knowledge about creativity: Themes in the 1999 journal of creative behavior,* Unpublished Master's project, State University College at Buffalo, NY.

Murdock, M. C. (1999). *CRS project/thesis menu topics.* Unpublished instructional handout for CRS 690/795. Buffalo, NY: International Center for Studies in Creativity.

Murdock, M. C., Isaksen, S. G., & Coleman, S. E. (1993). Moving to a desired future state in the field of creativity. In S. G. Isaksen, M. C. Murdock, R. L. Firestien, & D. J. Treffinger (Eds.), *Understanding and recognizing creativity: The emergence of a discipline* (pp. 499-528). Norwood, NJ: Ablex Publishing Corporation.

Myers, S. A. (in preparation). *Organizing and disseminating information about creativity: Creativity Research Journal 2001 in summary.* Unpublished master's project, State University College at Buffalo, NY.

Noetzel, L. M. (in preparation). *Organizing and disseminating information about creativity: Journal of Creative Behavior 2000 in summary.* Unpublished master's project, State University College at Buffalo, NY.

APPENDIX B:

CODING CRITERIA

Appendix: Coding Criteria

Structural Characteristics

Total number of articles/issue = total number of creativity (CR) articles per issue. (An *article* is not a book review, an abstract, or a bibliography.)
Pages for articles = last page minus first, plus 1.
Pages for book reviews = last page minus first page, plus 1.
Total references per issue = total number of references divided by total number of articles.
Total recent reference index = number of references that are 5 years old or less from publication date (i.e., publication date minus 25).
Total classic reference index = number of references that are 25 years old or older.
Authors per article = total number of single-authored papers, double-authored papers, triple-authored articles, and so forth.

Authorship Patterns

Total number of authors = total number of authors per issue.
Total number of male authors = total number of male authors per issue.
Total number of female authors = total number of female authors per issue.
Number of male-first authors = total number of male-first authors, for *coauthored* articles only.
Number of female-first authors = total number of female-first authors, for *coauthored* articles only.
Undetermined gender of author = total number of authors per issue whose gender cannot be determined.

Methods

Number of empirical studies per issue = total number of articles that have either explicit or implicit methods sections (i.e., subjects, instruments, procedures).
Number of laboratories = total number of empirical articles that used laboratory methods only.
Number of questionnaires = total number of empirical articles that used questionnaire methods only.
Number of tests = total number of empirical articles that used creativity test methods only.
Number of interviews = number of empirical articles that used interview methods only.
Number of field studies = number of empirical articles that used field study methods only.
Number of longitudinal studies = number of empirical articles that used longitudinal data.
Number of archival studies = number of empirical articles that use archival data.
Number of multimethod studies = number of empirical articles that use *more than one of the above methods.*

Number of meta-analytic studies = number of empirical articles that report analyses of multiple articles and report statistics from each study on a particular topic.
Number of quantitative analyses = number of empirical articles that use quantitative statistics to analyze its data (numerical stats).
Number of qualitative analyses = number of empirical articles that use qualitative analyses to describe its data (verbal summaries, quotes).
Number of nonempirical studies per issue = total number of articles that do not report original empirical data.
Descriptive/Review = total number of nonempirical articles that describe a phenomenon or that review the literature on a particular issue.
Prescriptive = total number of nonempirical articles that prescribe a technique, topic of study, or issue that *should* be studied.
Technique = total number of nonempirical articles that simply describe a new technique.
Theoretical = total number of nonempirical articles that put forth a theory explaining or interpreting a set of phenomena.

Populations Studied (Empirical Studies Only)

Preschool children = under 6 years old, not yet in first grade.
Elementary-school children = grades 1 through 5.
Junior high school students = grade 6 through 8.
High school students = grades 9 through 12.
University students = students at the undergraduate or graduate level.
Adults = adults in the general population.
Artists = adults whose primary profession is art.
Scientists/Engineers = adults whose primary profession is in one of the science or technical fields.
Business people = adults whose primary profession is in business (white collar or management) or who are entrepreneurs.
Other = adults who do not fit in the above categories.

Issues in Title and Focus (Each article is coded on its explicit title and its main focus; sometimes this will mean each articles can be rated twice, or sometimes once.)

Problem solving/Incubation = deals with any aspect of problem solving (and any of its stages) or incubation.
Synthetic/Divergent thinking = deals with thought processes that are synthetic (bringing diverse elements together) or divergent thinking (a broad search to usually an open-ended question, in which there are a number of possible solutions [cf. Guilford, as quoted in Isaksen, 1987, p. 47]).
Imagery/Visualization/Dreams = deals with any aspect of imagery, visualization, or dream processes.
Intuition = deals with thought processes that involve intuitive (not conscious, verbal, rational) elements.

Intelligence and CR = deals with the relationship between intelligence (or IQ) and CR.

Education = deals with any aspect of teaching, training students, or testing students.

Giftedness = deals with gifted (high IQ, high creativity) children or adults.

Personality = deals with personality (individual differences) characteristics of creative people.

Developmental processes = deals with development across time in either children or adults.

Testing/Measurement = deals with test construction, test taking, or measurement (methodological) issues of creativity research.

Business/Management = deals with creativity in business, management, or training of employees.

Gender differences = deals with differences between males and females.

Cross-cultural differences = deals with differences between different cultures (countries or ethnic groups).

Enhancement of CR = enhancement, training, or encouragement of creative thinking or behavior.

Social/environmental influences of creativity = environmental, social (role models, mentors), or group influences on creative thinking or behavior.

Motivation/Source/Origin = deals with motivational (drive) components of creativity or the source or origin of creativity.

Brainstorming = deals with the relationship techniques (must explicitly say "brainstorming").

Humor = deals with the relationship between humor, wit, joking, and CR.

Intuition = deals with the nature of intuition and its role in CR.

Science/Scientific = deals with scientific CR or the role of CR in scientific thinking and problem solving.

Art/Artistic = deals with artistic CR or the role of CR in art and artistic thinking or problem solving.

Emotion = deals with the role of emotion in CR.

Leadership = deals with the relationship between leadership or leadership qualities and CR.

Therapy = deals with the role of therapy or therapeutic techniques in CR.

Mental health = deals with the relationship between mental health (or mental illness) and CR. Mental health/illness includes topics such as emotional stability, psychological health, ego-strength, self-actualization, depression, suicide, alcoholism, manic-depression, and schizophrenia.

Freewill/Will = deals with the role of freewill (or personal control) in CR.

Potential = deals with creative potential.

Creative product = deals primarily with the creation of a creative product or its evaluation.

Creative behavior = emphasis is on creative behavior or expression.

Neurobiological = deals with neurobiological elements such as hemisphericity, brain-lateralization, or any other aspect of physiology.

Psychic/Futuristic = deals with psychic phenomena (i.e., ESP, clairvoyance, predictive dreams) or aspects of futuristic theory (what sort of society can we, usually with the aid of science, hope to create in the future).

APPENDIX C:

RAW DATA

APPENDIX D:

CBIR ANNOTATIONS

APPENDIX E:

ARTICLE WORKSHEETS

APPENDIX F:

FEIST AND RUNCO ARTICLE