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A STUDY OF THE GENERAL NATURE OF CREATIVE
TEACHING OF MUSICAL COMPOSITION
IN SECONDARY SCHOOLS

DISSERTATION

Presented in Partial Fulfillment of the
Requirements for the Degree Doctor of Philosophy
in the Graduate School of The Ohio State
University

By
Thomas NG Tin-Fook, B.A., M.A., M.M.

**********

The Ohio State University
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iii
FIELDS OF STUDY

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CHAPTER I
INTRODUCTION

Statement of the Problem

In many secondary schools, Musical Composition not only has never been taught but also is never considered important. The scarcity of qualified teachers for the subject has been one reason, and little understanding of creative teaching of musical composition and the popular misconcept of music creation another.

The music educator should delve in the matter, because it is his/her concern whether or not the teaching of musical composition is important. If important, it should be encouraged and directed. The nature of teaching composition should be deeply investigated, and the misconcept about music creation rectified.

Thus, a study of the general nature of creative teaching of musical composition is one of timeliness and necessity. In addition, a study of this nature will complement the writings of authors of books or methods of Creative Music Teaching.

Significance and Justification of the Study

Many studies on Creative Teaching of Music have been done in the recent years.¹

To this writer's knowledge, however, no one has really explored the core problem of creative teaching of musical composition. In other
words, no scholar has yet spent considerable effort and energy on solving the many problems which a music composition teacher may encounter in a classroom situation, teaching a group of would-be composers. No one should think that teaching musical composition to High School students is only a matter of triviality, for the presentation of this subject to the youngsters must be done very well, and failing to do so will possibly influence them to give up composition for good. In this sense, the responsibility of the musical composition teacher is great.

In addition, musical composition is the most striking and unmistakable instance of creative expression, and creative expression is self-actualization; and according to Broudy, to compose is to become musically literate as well. Thus, the need of the study in this branch of music education is necessary.

Purpose of the study

To briefly summarize the previous ideas, the present research on creative teaching of musical composition is to look into a matter of great importance and serious consequence. It has two purposes to realize:

a. to help solve the challenges of teaching and learning musical composition; and

b. to build a system, a framework, a structure of teaching principles, so as to train, stimulate and nurture that kind of creativity that musical composition alone can offer to the young composers.
Research Methodology and Procedures

The main steps the present writer followed toward the solution of the problem are as follows:

1. A review was done of the related research and literature on the nature of creativity. This study is indispensable, for composition is one type of creativity. The review was directed to the following topics:
   a. The Definitions of Creativity and Creative Process
   b. Creative Product
   c. Traits of the Creative Person
   d. Creative Climate

2. Next, Creative Teaching of Musical Composition was investigated, which consisted of examining:
   a. Musical Composition defined as creative behavior:
      Both composers and music educators' opinions were scrutinized.
   b. Whether Musical Composition can be taught as creativity; and
   c. How Musical Composition can be taught.

3. A survey was conducted to detect the possible problems inhibiting creative teaching of musical composition and the challenges the students may confront in writing their own music. The random sample was taken from the freshman class of the School of Music, the Ohio State University, and students of theory and composition classes in some High Schools in Columbus, Ohio, and its vicinity.
4. Finally, a framework of principles for creative and efficient teaching of Musical Composition was structured.

Assumptions

As every house or tower has to be based on some foundation, so is this research, built on some beliefs:

1. Musical Composition is the most striking and unmistakable instance of Creative Expression.  

2. Before the study of Musical Composition as a creative behavior, the nature of creativity must be clarified first. This is essential to the study.

3. The techniques or methods promoting creativity can be applied in creative teaching of musical composition effectively.  

4. The Creative Process can be analysed and studied stage by stage, and its knowledge is of tremendous value and can be put to use.

5. To structure a framework of principles stimulating creative teaching of musical composition is possible and beneficial.

Limitations

Since no study can consider everything, this dissertation was limited to:

a. Studying the teaching of musical composition only in Secondary Schools;
b. Investigating some techniques stimulating creative writing of vocal and keyboard music;
c. Using a questionnaire survey to explore the present teaching of musical composition in the High School; and
d. Selecting a small random sample from the area of or near Columbus, Ohio - i.e. the present students of Theory Class in High School and the freshmen in the School of Music, the Ohio State University.

Definitions

In this section, the writer will explain the various terms used in the statement of the problem: "A STUDY OF THE GENERAL NATURE OF CREATIVE TEACHING OF MUSICAL COMPOSITION."

a. Study: This simply means investigation, exploration, or a careful examination of something. It is a synonym of 'research.'
b. General: It is meant 'Involving to the whole.'
c. Nature: By nature, we mean 'the basic constitution of a thing' - the fundamental components.
d. Creative: It is the adjective of creativity. Generally speaking, creativity may be defined in terms of personality, product, process, or environmental conditions. Of the many definitions of creativity, that of Von Fange, for its comprehensiveness, seems preferable to the present thesis:
1. A creator is one who achieves a combination of existing elements that is new as far as he is concerned.

2. A creation is this new combination.

3. To create is simply to combine existing elements in new ways.\textsuperscript{11}

In short, creative means productive - having the quality of something achieved through creativity.

e. **Teaching**: Concisely defined, teaching means organization and conduct of learning experiences, by which problems are solved through the apprehension, clarification, and application of meaning and which result in a change of behavior.\textsuperscript{12} In other words, to teach is to stimulate and nourish the autonomous powers of the learner:

   a. the power of extraction,
   b. the power to make transformation,
   c. the power to handle abstractions,
   d. the power of stressing and ignoring - of abstraction,
   e. the power of control, organization of materials and coordination of activities, and
   f. power to undertake increasingly larger tasks and to accept more complex challenges as a consequence of practice in learning.\textsuperscript{13}

The ideas of Gattegno about teaching are quoted here because they better illustrate the kind of teaching, with which this thesis is particularly concerned.
f. Musical Composition: Etymologically, composition means 'put together' of things in order to make something meaningful.

In music, the putting together consists in:

1. combining successive notes to make MELODY;
2. combining notes simultaneously performed to make HARMONY;
3. combining melodies to make COUNTERPOINT;
4. combining Phrases to make Sentences and sentences to make long passages;
5. combining Themes and their treatment to make Movements or pieces of movements;
6. combining movements to make Cyclic Forms, such as Sonata, Symphony, Variations, etc.14

Based on the idea that composition is putting things together, musical composition should comprise many types of non-functional music: experiencing with sound, creating with non-musical instruments, combining usual and unusual musical sounds to make experimental music, vocal improvisation, instrumental improvisation, creating with sounds generated by electronic devices, etc.
The following are some of the many studies that have been done on Creative Teaching of Music in the recent years:


5Mursell, 275.


Plan of the chapter

Musical Composition is itself a creative behavior. To teach it creatively the teacher needs to know what is creative - Creativity, in the first place. Since 1950 the literature related to creativity has been steadily increased. The field is rapidly expanding, and it is not easy to keep abreast of developments (Mooney & Razik, 1967, ix). In no way can it be exhausted in a dissertation. What is planned to do now is to study only the essential elements of creativity. The greatest concern would be to give the reader an adequate framework of the general nature of creativity. In the following pages an attempt will be made to answer the following questions:

a. How do scholars define creativity and Creative Process?

b. What are creative products? What are the criteria by which we may identify a creative product?

c. Who is the Creative Person? What are the traits of creative persons?

d. What is a creative climate? Can creativity be developed? What can be done to stimulate creativity?

In the course of our discussion we will take care of collection
of useful informations and principles, related to teaching creatively musical composition.

At the end of the chapter we will make a summary of the findings that, in my judgment, are most beneficial to music teachers.

**Definitions of Creativity**

Creativity is a complex human function. James Freeman calls it 'such multifarious and high-level phenomena'.² It has been investigated and studied by a good number of scientists from many different aspects and defined in myriad of ways. Some defined it by where, they thought, it came from - the origins. Some defined it as an intellectual ability, or a set of abilities. Some described it as process, or product, in their definitions. Some investigators have formulated criteria to identify creative products in the definitions. Some definitions are concise, or of a very general nature, other adequately long and detailed.

Before going into individual definitions we need to specify the different aspects we have mentioned above, of the investigators who had studied creativity at length. I. A. Taylor's article, 'A Retrospective View of Creativity Investigation'³ is certainly an outstanding help to our purpose, for the comprehensive picture it gives us, of the five systematic approaches to creativity:

a. Psychoanalytic

b. Humanistic

c. Trait-Factorial
d. Holistic

e. Associationistic

With this structure in mind, we can not only penetrate the definitions more but also better appreciate the logic of a number of divergent definitions for a single word - CREATIVITY.

I. A. Taylor's study of Systematic Approaches to Creativity in brief:

a. Psychoanalytic

The leading figure of the psychoanalysts was Freud, whose conception of creativity may be presented as follows:

1. Creative production is the result of unconscious conflicts of drives and needs sublimated through the ego's effort into outcomes useful to both the creator and society.

2. Creativity is a substitute for obtaining pleasure and thus avoiding suffering.

3. The creative person turns from reality to fantasy, where he gives full play to his erotic wishes.

4. Creative behavior is an overt manifestation of sublimation, an unconscious process through which libidinal or aggressive energies are converted into culturally sanctioned behaviors.

In addition to the above, Taylor stated that Jung emphasized the concept of the collective unconscious, a storehouse of racial memories handed down from distant past in the form of
archetypes which explains man's consisting development from a less perfect image to a more complete one; Adler\textsuperscript{7} opposed Freud and Jung in stating that creativity sprang from man's consciousness rather than from his unconsciousness; Kris\textsuperscript{8} proposed the concept of "regression in the service of the ego," suggesting that during the time of creative process, the artist's ego is temporarily tempered and regressive material is employed for its own creative purposes; and that Fairbairn\textsuperscript{9} and Grotjahn\textsuperscript{10} proposed creation to be a restitution for destructive impulses."

b. Humanistic\textsuperscript{11}

Taylor remarks that the roots of humanism stemmed from the positive aspects of psychoanalytic approach and Rogers's\textsuperscript{12} "Fully functioning," Fromm's\textsuperscript{13} "Productive orientation," Lecky's\textsuperscript{14} "Unified self-consistent personality," Existential being," and Allport's "Creative becoming and functional autonomy" are all concepts similar to "Self-actualization" of Goldstein.\textsuperscript{17}

Their main statements are:

1. Creativity is synonymous to self-actualization.
2. Everyone possesses creative potential.
3. Creative impulses stem from man's essential health.
4. The human beings are basically good but corrupted by societal demands.
Individually, Fromm\textsuperscript{18} observes that one should accept human sensuality, for in so doing, he is brought to a state of awareness and to a readiness for creativity; Maslow\textsuperscript{19} asserts that the creative person may be both childlike and mature at the same time, and people generally, are afraid to learn about their inner processes and thereby do not grow or become self-actualized; Rogers\textsuperscript{20} stresses that the mainspring of creativity is man's tendency to actualize himself, to become his potential, to desire to achieve fully his potential through interaction with a supportive environment. R. May stated that the creativity of poets and other creative persons is the basic manifestation of man's fulfilling his own being in his world.\textsuperscript{21}

c. Trait-Factorial\textsuperscript{22}

Trait theory, as Taylor states, diverges markedly from other approaches. This group of scholars study the traits of eminent creative persons, and frequently use statistical techniques of factor analysis to identify those traits that significantly distinguish the truly creative from the less creative.

The representatives of trait-factorial approach are Galton, Cattell, Spearman, Roe, Thurstone, MacKinnon, Barron and Guilford. Galton was an early exponent of trait theory. His book 'Hereditary Genius' proposed hereditability of mental capacities, which are also subject to observation and investigation.\textsuperscript{23}

Cattell was the first who did statistical studies of eminent
men. He believed that innate characteristics were more potent than social tradition or physical environment. Spearman's "Creative Mind" had aroused much interest in the trait approach to creativity.

Roe did influential work in this field, examining the distinguishing characteristics of eminent artists and scientists. Thurstone (1950) pointed out that many intelligence tests do not measure certain factors which are closely related to creativity.

The trait-factorial studies of MacKinnon, Barron, Cattell, and their associates, involving direct observation of highly creative men and women in Mathematics, Physics, Biology, Architecture, and Painting, have found excellent informative conclusions, related to the traits of creative persons.

Guilford, the most notable proponent of this trait-factorial approach to creativity, has identified 120 factors of intellectual ability and developed marker tests for many of them. Guilford embodied these factors in his well known three-dimensional theoretic model of Intelligence called the "Structure of Intellect" (SI). Guilford has contributed two important statements about creativity: that creativity involves processes different from intelligence, and that creativity is a multidimensional variable.
d. Holistic

The holisticists related creativity to "Insight." They all agree that creativity is not a piecemeal operation but rather one in which each step is subsumed or affected by the whole situation. This involves a process of closure, without gaps or divisions.

More recent holistic investigators are Schachtel and Arnheim. Schachtel's theory combines elements of Psychoanalysis, Humanism, and Cognitive Approach. He related creativity to AUTOCENTRICITY - self-centered stage of the infant and ALLOCENTRICITY - the object-centered stage of the mature person. Arnheim stated that perceptual preference for balance, symmetry, and dynamic richness are expressed in creative art forms. A creative contribution, then, is made through such preference.

e. Associationistic

The associationists hold that the ability of creative thinking is a matter of using a variety of associations that the individual can reach.

Ribot described the creative process as one in which mental states become joined in such a way that one state tends to bring out the other. He also indicated 4 phases occurring in a mechanical invention: germ, incubation, flowering, and completion.

Mednick has suggested 3 types of creative associations: serendipity, similarity, and mediation.
Koestler was the first scholar who used the word 'Bisociation.' By this he means that the routine skills of thinking which occur on a single plane are markedly different from the creative act, which operates on more than one plane.38

These divergent Systematic Approaches, obviously, bring forth or need to use divergent definitions for creativity. Judging from the surface, we all find this discrepancy a source of confusion, but in fact, is a blessing, because by numerous approaches of various nature, the multi-dimensional nature of creativity has ever been made clearer and clearer than before. These different definitions will complement each other to give a much better description - an overall, side-in and side-out, comprehensive - of such a complex human function: CREATIVITY. And now, let us turn our attention to individual definitions.
A. Creativity Defined as Abilities or Potentials

C. Spearman defined creativity in his "Creative Mind" as the "power of the human mind to create new content — by transferring relations and thereby generating new 'correlates' — (this power) extends its sphere not only to representation in ideas but also to fully sensuous presentations." 39

Erick Fromm answering to 'What is Creativity?', remarks: "The best general answer I can give is that creativity is the ability to see (or to be aware) and to respond." 40

Rollo May in the discussion of "The Nature of Creativity, defined creativity as the ability of "bringing something new into birth." 41 This definition was used, ten years later, in F. Barron's book entitled Creative Person and Creative Process, with a little change.

Stated Barron:

"Creativity may be defined, quite simply, as the ability to bring something new into existence." 42

J. P. Guilford in his article 'Traits of Creativity' stated that "we may arbitrarily define creative thinking as DIVERGENT THINKING, but it would be incorrect to say that divergent thinking accounts for all the intellectual components of creative production." The aptitude traits he suggested and explained are factors of fluency of thinking and of flexibility of thinking, as well as
well as originality, sensitivity to problems, redefinition, and elaboration. These, he stressed, "belong most clearly logically in the area of creativity." Eight years later, in another article 'Intellectual Factors in Productive Thinking,' Guilford defined creative potential as a collection of abilities and other traits that contribute toward successful creative thinking. By abilities and traits he meant Divergent Thinking and Aptitude Traits, most of which we have already mentioned in the above.

H. D. Lasswell in The Social Setting of Creativity defined creativity as "the disposition to make and to recognize valuable innovations." Disposition here means power of arrangement and order.

In the article, 'Environmental Factors in Creative Function; functional creativity was defined by P. S. Weisberg and K. J. Springer as "the ability to produce in a given situation, compositions, products, or ideas which are essentially new or novel and previously unknown to the producer."

These definitions, complementary to each other, have projected creativity as quite a collection of:

- Ability to see; to be aware and to respond;
- Ability to fluency;
- Ability to flexibility;
- Ability to originality;
- Ability to redefine;
- Ability to elaborate;
- Capability to bring something new into existence;
- Power to create a new content by transferring and generating;
Ability to produce something novel and previously unknown to the producer; and Disposition to make and recognize valuable innovations.

It is doubtless that in these definitions there is not only some overlapping of what these writers wanted to say about creativity but also divergency of ideas. Nevertheless, they all seem to converge to one truth: a collective potential for creative achievement is creativity. This picture indeed, is very true of creative production, for it is multifarious in nature. Thus, many psychologists have already redefined creativity, e.g.

a. I. A. Taylor

Taylor has described the processes of creativity as system involving a person who shapes and designs his environment by transforming basic problems into fruitful outcomes facilitated by a stimulating climate.

b. MacKinnon

"It (creativity) involves a response or an idea that is novel or at the very least statistically infrequent. But novelty or originality, while a necessary aspect of creativity, is not sufficient if a response is to lay claim to being a part of the creative process; it must also to some extent be adaptive to reality. It must serve to solve a problem, fit a situation, or accomplish some recognizable goal. And thirdly, true creativeness involves a sustaining of the original insight, an evaluation and elaboration of it, a developing of it to the full."

To conclude this section, this investigator thinks, John Foster's words are very appropriate:

"Creativity is probably best viewed by the teacher as a very complex dimension covering all aspect of behavior, and will include all the abilities involved in reinterpreting ideas induced by a variety of stimuli, as well as the abilities required in innovating new ideas."
B. Creativity Defined as a Manifest Product

Henry A. Murray defined creation in these words: "Creation will refer to the occurrence of a composition which is both new and valuable." For Murray a creative product must have the qualities of newness and value.50

T. B. Sprecher on 'the Committee Report on Criteria of Creativity' stated that "a truly creative product or contribution has the characteristic of being itself creative in the sense that it generates additional creative activity."51 The definition sounds good but is as broad as life. The additional creative activity mentioned, is not clear enough.

A. Newell, J. C. Shaw and H. A. Simon formulated an omnibus definition of creative production, including four criteria, of which one or more must be satisfied for a product to be considered creative:

1. a product that has novelty and value either for the thinker or the culture;

2. a product that is unconventional in the sense that it requires modification or rejection of previously accepted ideas;

3. a product resulting from higher motivation and persistence either over a considerable of time or at a high intensity;

4. a product resulting from the formulation of a problem which was initially vague and ill-defined.52
This long definition was reported by Getzels as having the advantage of inclusiveness but also the disadvantage of being an inventory without a unifying rationale.53

According to B. Ghiselin "a creative product is intrinsically a configuration of the mind, a presentation of constellated meaning, which at the time of its appearance in the mind was new in the sense of being UNIQUE, without precedent."

This definition was discussed in M. Gilchrist's book titled 'The Psychology of Creativity'. The writer states that Ghiselin insists that creative products must be original in the absolute sense of priority in the time of their introduction into the sphere of human thought. The second thing related to the definition, is that Ghiselin, at most, concedes two levels of creativity: the first and major one requires uniqueness in human thought; the second and minor one involves a new application or modification or an old idea.55

Morris I. Stein in his article 'Creativity and Culture,' defined creative product as "a novel work that is accepted as tenable or useful or satisfying by a group in some point in time."56 The definition needs some explanation. What Stein means by this is that the results of the creative process must be communicated to others, for communication with the self alone is insufficient. The creative person must achieve, i.e. his creative product has to win acceptance by a group.57
Frank Barron stated in his book entitled 'Creative Person and Creative Process,' saying: "The important defining properties of these creative products are their originality, their aptness, their validity, their adequacy in meeting a need, and a rather subtle additional property which for the time being perhaps we can call "esthetic fit" or elegance."\(^{58}\)

I. A. Taylor as did Newell et al., suggested some criteria for identifying a creative product: Generation; Reformulation; Originality; Relevancy; Hedonics; Complexity, and Condensation.\(^{59}\)

Generally speaking, creative products come under study before the creative potential, creative process, and creative persons. Because it is from the tangible work of art that we recognize the artist. Then we begin to study him as a creative person, and his distinguishing characteristics - traits, and also investigate his psychological creative process.

Says Gilchrist:
"Creative products are visible proof of the potential and are usually the most practical starting point for the investigator. But lack of productivity need not indicate lack of potential..."\(^{60}\)

The definitions we have collected in the above, present us with another picture of creativity. Creativity is like the tree, and the creative product is the fruit. As from the fruit we know the tree, so from the creative product we can better know creativity. These contributors of definition seemed all agree on that to be considered as creative, the product should meet certain standard or satisfy certain criteria.
Required qualities of creative product are:
According to Murray: Novelty; Value.
Sprechen: Generation.
Newell et al.: Novelty; Value; Originality; High Motivation; Persistence; Considerable Time; Reformulation
Ghiselin: Newness; Uniqueness.
Stein: Novelty; Tenability; Usefulness; Satisfaction.
Barron: Originality; Aptness; Validity; Need Fulfilment; Elegance.
Taylor: Generation; Reformulation; Originality; Relevancy; Hedonics; Complexity; Condensation.

C. Creativity Defined as Process

In the previous two sections, the definitions of creativity as abilities, traits or potentials, and those that focus on creativity as product were discussed. The reason why creativity is defined as ability or potential is because creativity usually is seen or demonstrated in these so called creative abilities and traits. That creativity is also defined as product is also not less understandable, for in general, creativeness can be easily observed in those products that possess a certain standard or certain set of creative qualities, for which they are considered to be creative. Thus, a person who has defined creativity as creative product, has certainly said something about creativity.
Creativity has been also defined as process by a group of psychologists, who view creativity as a mental procedure, differentiated by stages, through which creativity regularly passes.

In the 1920s G. Spearman expounded his theory of 'Noogenesis'. In explaining how ideas are created in the mind, he suggested three ways by which new ideas come about:

1. the apprehension of experience;
2. the eduction of relations;
3. the eduction of correlates.

In the apprehension of experience, we are aware of our experience and respond to it. In the second, we find the relations between ideas. In the third stage, we discover a novel idea or ideas from the relations that we've found.

In his book entitled The Art of Thought Graham Wallas argued that creative thinking passes through four stages and they are: Preparation; Incubation; Illumination; and Verification. A good explanation of these terms can be found in Stein's Book *Stimulating Creativity*. The following is Stein's explanation:

"Preparation is the stage during which the problem is investigated from all directions. Incubation is the stage during which no conscious thought is devoted to the problem, but "work" still continues on nonconscious levels. Illumination is the stage during which the "happy idea" occurs together with the psychological factors that immediately preceded and accompanied its appearance. And verification is the stage during which the validity of the idea is tested and reduced to exact form."

Kris also proposed three phases of creativity, which are quite similar to those of Wallas and Spearman. Kris proposed:
1. Inspiration; 2. Elaboration; and 3. Communication. **Inspiration** is the stage during which the creative person is 'driven' to experience something unusual: thoughts or images tend to flow; things appear in his mind of which he never seemed to have known. **Elaboration** is the stage during which the creative person works, concentrates himself, and tries hard. **Communication** phase contains those factors involved in communicating the final product to other people.

R. Mooney stresses the idea of 'Change' in the definition of creativity:

"Creativity is a process by means of which things do not yet belong, come to belong; things which have not yet become, come to become; things which are not yet existent, come to be."

Ghiselin defined creativity as "the process of change, of development, of evolution in the organization of subjective life."

Rollo May in his article 'The Nature of Creativity,' stated that he could define the actual creativity as "the process of bringing something new into birth." And in answering "What Is Creative Process?", he writes that it consists of three elements. The first thing we notice in a creative act is the encounter. The creative person may encounter with an idea, an inner vision, a problem, a challenge, etc. The second element in the creative act is the intensity of the encounter, that is, genuine creativity is always characterized by an intensity of awareness, a heightened consciousness.
The third element we may notice in a creative act is that such an act will keep on interrelating between world and self, and self and world. By world he means the "pattern of meaningful relations in which the person exists and in the design of which he participates." And at the end of the article May condensed what he had said in this definition of creativity: "Creativity is the encounter of the intensively conscious human being with his world."  

Paul Torrance saw creativity as "the process of sensing gaps or disturbing elements; forming ideas or hypotheses concerning them, testing these hypotheses; and communicating the results, perhaps modifying and retesting the hypotheses." This definition is a practical one and has been well used in his book entitled 'Encouraging Creativity in the Classroom.' This is quite understandable by comparing the definition with the following words he wrote on the first page of the book. Under the heading - Creativity and Learning he stated:

"Learning creatively takes place in the process of becoming sensitive to or aware of problems, deficiencies, gaps in knowledge, missing elements; searching for solutions, making guesses, or formulating hypotheses about the problems or deficiencies; testing and retesting these hypotheses and modifying and retesting them; perfecting them; and finally, communicating the results. This is a natural, healthy human process."  

Both Mednick's and Koestler's definitions of creativity are associationistic in nature. Mednick described the creative thinking process as "the forming of associative elements into new combinations which either meet specified requirements or are
According to Mednick, creativity is a matter of novel arrangements of temporarily contiguous, unusual associations to a given stimulus, and the more mutually remote the elements of the new arrangement, the more creative the process or solution.

Koestler in his work called "The Act of Creation" suggested that creativity involved "the displacement of attention to something not previously noted, which was irrelevant in the old and is relevant in the new context; the discovery of hidden analogies as a result of the former; the bringing into consciousness of tacit axioms and habits of thought which were implied in the code and taken for granted; the uncovering of what has always been there." The creative act does not create something out of nothing; it uncovers, selects, re-shuffles, combines, synthesizes already existing facts, ideas, faculties, skills.

J. W. Getzels and M. Csikszentmihalyi recently published an article entitled 'From Problem Solving to Problem Finding' in Perspectives in Creativity. The central idea of the article was to draw the readers' attention to Problem Finding, which according to the authors seems to be a crucial component of creativity, and it can be observed and assessed with satisfactory reliability and validity. To support their argument, Einstein's words were quoted:

"The formulation of a problem is often more essential than its solution, which may be merely a matter of mathematical
or experimental skill. To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science," and also a few trait-factorial studies were reported in the article for the same purpose.

Sidney J. Parnes thinks that in psychology literature it is not unusual to find a recurring three-faceted description of the elements involved in a creative process. Bruner was reported using 1. Acquisition; 2. Transformation; 3. Evaluation when he was talking about "creative" learning; Guilford used 1. Contents; 2. Operations; 3. Products when he was explaining the "structure-of-the-intellect" with his terms; Osborn used 1. Fact-Finding; 2. Idea-Finding; 3. Solution-Finding when he was describing Problem-Solving; Selye used 1. True; 2. Surprising; 3. Generalizable when he was speaking about "creative" ideas. And Parns remarks that in each case, knowledge or sensory input (acquisition, contents, fact-finding, 'truth') is manipulated (transformation, operations, idea-finding, 'surprise') for a meaningful or reality-oriented purpose (evaluation, products, solution-finding, 'generalization').

In his article 'An Emerging View of Creative Actions' I. A. Taylor has presented a five-faceted description of creative process:

I. Exposure Phase --- the initiating stage in which the person is perceptually open to the environment and to his thought process.
2. Predivergent Phase — the stage in which the inputs are directed toward a central reformulation in accordance with transactional forces.

3. Conversion Phase — the stage in which the structure of the inputs is converted into a new configuration, the moment of insight.

4. Postidvergent Phase — the stage in which the new organization is elaborated into a tangible form.

5. Expression Phase — the stage in which something new is formulated and released.77

Taylor believes that there should be an underlying pattern of creative process, even though creativity manifests itself in various forms, and the just above-mentioned pattern of five stages is the one. He states that "the same processes may be involved in various forms of creativity but with different phases emphasized."78

Only after the aspect of creative process has been investigated an over-all and comprehensive view of creativity is possible. In the first section the creative abilities, traits and potentials are explored in relation to definition of creativity; in section two, the criteria for identifying creative products are enumerated and discussed; and in the final section, the possible stages or phases through which creative thinking is expected to pass are searched out and examined.

The definitions in section three seem to have shown that creativity IS life indeed. Because judged from the contents, creativity in this section has been defined, described and pictured as the process bringing something new; an emergence;
an inspiration; an acquisition. It is life itself, "by virtue of its organizing, pattern-forming, questing quality, its most distinctive character." It grows, develops, transforms, matures, and becomes.

Although different words are used to define creative processes, some clear-cut similarity can be detected in their connotations, and so are some analogies. A comparative diagram of these terms will be inspiring to a creative teacher, if he wants to use the information it gives.

See Figure 1.
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**Figure 1**

**COMPARATIVE DIAGRAM**
Creative Product

In the study of creativity the creative product is the primary object of research, because, as all know, it is manifest and tangible expression, or resultant of the creative activity. The same idea has been expressed by George S. Welsh:

"The study of creativity by means of products seems in many ways so obvious and natural that it is often assumed or implicit even when it is not singled out for special study."

Before a creative person can be examined he must be identified, and before a person can be identified as creative, people have to study what he has produced - his creative products. Then, criteria will be established, and evaluation passed. In this sense therefore, to identify the levels of creativity creative products are the first things to be investigated.

Such investigation, however, is not a simple thing to do. First of all, the products to examine should be available; and secondly, the scrutiny of these, feasible. Besides, there are many problems, which the researcher has to solve.

For research scientists in a large organization, for instance, there are:

1. the problem of identifying and assembling their products, which consist of the new methods or designs produced the new ways invented to use a company's products, the matters discovered of theoretical interest concerning
the nature and behavior of certain compounds, or relationships discerned between these compounds and other phenomena;

2. the problem of comparing and evaluating the products, with the assistance of experts in each field;

3. the problem of comparing products in different fields and comparing different kinds of products, such as ideas and research papers, etc.

In addition to problems of identifying, assembling and comparing the creative products, Judith Groch draws our attention to the problem of evaluation itself. She stated that "to identify the creative person by judging the product invites the difficult task of evaluating creativity." Historically, many creative persons' products were disregarded or even condemned for a long time, and then, suddenly, re-valued and became "CREATIVE."

"Objective evaluation of the creative product is a worthy goal, but who evaluates the evaluators?"

R. W. Skager, C. B. Schultz and S. P. Klein found that judgments of art products vary according to the judges, and reflect individual value judgments and preferences.

Although Welsh has expressed the idea that the study of creativity by means of products seems obvious and natural, and that products have the advantage that they can be studied at leisure, he doubts whether a product can tell anything about the
creative personality of the individual who produced it. He also reported that studies of artists and of philosophers fail to find any direct and systematic relationship between person and his production.

In case of some contemporary poets, L. D. King has found that, at least, there is evidence that better artists disclose less personal material about themselves in their literary products than the less creative.

Gordon W. Allport believed that conclusions drawn from formal literary work was not always justified, if about the author's personality, but he stated that the informal work such as diaries and letters, might be helpful in some instances. In general, spontaneous and unselfconscious expression does reveal something about the author, but not the consciously produced literature.

With these reservations in mind, one finds C. W. Taylor's words quite agreeable. Taylor stated: "There is no more crucial problem in creativity than the criterion problems."

Nevertheless, in spite of difficulties and problems, creativity investigators have attempted different approaches to the problem of assessing creativeness of the person in his products.

One approach was made by L. R. Harmon. This approach seems to offer complete objectivity. The number of products of each person was counted within a certain time. Full credit for publication, and partial credit for joint publication. These credits served as criterion of creative achievement for the
Another approach was made by D. Pelz. A technique, devised to estimate achievement among a group of physiologists, was reported to involve quantity and to some extent, quality of accomplishment. The number of times each physiologist received a mention in the ANNUAL REVIEW OF PHYSIOLOGY during a period of three years, served as criterion of accomplishment for the individual. Quantity here, seems to be the only thing that counts, but each mention in such serious REVIEW is an indicative of significant work of some quality the individual has accomplished.

A third research, worthy of mention, is the study of 166 scientists by Taylor, Smith and Ghiselin. This approach utilized the objective information that could be obtained, on the characteristics and accomplishments of this group, through a large research center. The information contained number of publications, papers completed but not accepted, studies completed but not written up, number of patents and patent disclosures per years of experience; and also level of pay, official awards which had been received. In addition, subjective judgments were employed too, as criteria. They came from the ratings of senior scientists, supervisors, laboratory chiefs, and fellow-workers. These had to judge by the standard of "quality and originality of research papers, and by criteria such as productivity, creativity and drive-resourcefulness."
In the article 'IPAR's Contribution to the Study of Creativity' MacKinnon reported one IPAR's study of architects.

The steps of procedure were as follows:

1. A Nominating Panel composed of five professors of architecture was organized.

2. Then, 40 most creative architects in the country were picked out, based on

3. A definition of creativity in architecture, which was set up for the Nominating Panel to follow:

   "...definition of creativity in architecture: originality of thinking and freshness of approaches to architectural problems; constructive ingenuity; ability to set aside established conventions and procedures when appropriate; a flair for devising effective and original fulfillments of the major demands of architecture: technology (firmness), visual form (delight), planning (commodity), and human awareness and social purpose."99

4. Each nominated architect was rated by each member of the Nominating Panel.

5. Each member had the final task of writing a summary evaluation of the work of each architect whom he nominated; and a statement as to what particular work justified his choice as one of the most creative architects in the nation.

6. Also, another group of architects as representatives, identical in age and geographical location with the nominated group, was selected.
7. Whether the two groups differed in creative accomplishments, the number of articles and pages written by and about each man in architecture journals within the previous eight years, was checked.

8. Finally, a list of the architects in both groups was mailed to a. 19 professors of architecture; b. each architect in the list; and c. six editors of architectural journals, all of whom would rate each architect in the list, on a six-point scale.

9. The findings were that the representatives had two articles and three pages written by or about them, and the creative group 97 articles and 131 pages; and that a real significant difference between the two groups was demonstrated.

Of all the four researches, the MacKinnon's approach seems to offer more objectivity and better result. The nominations were based upon specific creative work or works rather than mere reputation. The summary evaluation and the explanatory statement of the choice were to insure real research on the part of the nominators before their selection. The pre-establishment of a definition of creativity-criteria in architecture, gave the rators solid directive to adjudicate by.

Harmon's approach seems to be of value, only if in the field where the investigations are conducted, all significant publications and patents are carefully recorded in the technical
journals. This approach also appears not to favor the infrequent writer or innovator of quality.

To those who based research on the number of publications and patents, Stein remarked that these criteria are deficient in a variety of ways: a company might refuse to publish the inventions or patents its employees had made; on other occasions, the names of those published in technical journals are not necessarily those of the real inventors or innovators; on some occasions, the names of those who had only a small contribution might also be included in the formal list; and so forth.101

D. Pelz's technique seemed to work well with his group of physiologist, but might not work in other fields at all. An approach based on one (shaky) criterion will certainly leave much to be desired.

Although Taylor and his associates' approach of multiform nature appears to have taken care of the limitations of the previous two researches by the use of objective criteria for different groups' judgments of quality and originality based on the comparison of individual creative products, it still has its weakness: namely, the use of different criteria (ratings of senior scientists, supervisors, laboratory chiefs, and fellow-workers) for appraising creative achievements resulted in, if not contrary, different estimates of such achievements. Besides, subjective judgments can never be free from being biased by the judges' own preferences and values.
Reflecting on the above, the writer has concluded some of his reactions as follows:

a. The analysis of creative products, in terms of quantity and quality, seems to be the most obvious and basic method in creativity study.

b. Quantification of a person's creative products usually presents practical problems, though not insurmountable, and these the researcher should know before he plans anything.

c. The number obtained by totalling one's products should never be used as the only criterion score.

d. Evaluation, by nature, is subjective. Nevertheless, it may become accurate if done collectively and objectively. For instance, judgments of an art-product may vary from judge to judge, and reflect the judges' own preferences. Such puzzle can, at least partly, be solved by averaging the judges' ratings.

e. An appropriate criteria-definition should be pre-established as adjudication-basis, according to which judgments will be beaconed.

f. Besides, in any setting of a criterion-definition, H. E. Brogden and E. K. Taylor's four types of bias must be avoided: criterion deficiency (omitting important elements); criterion contamination (introducing extraneous elements); criterion scale unit bias (inequality of scale units in the criteria); criteria distortion (improper weighting in combining criterion elements).
Creative Person

Creative products come from creative persons. At the thought of the creative person, one's mind goes directly to the geniuses of the past: Mozart, Beethoven, Leonardo da Vinci, Marconi, Newton, Einstein, and so forth. But, what makes our mind think of them? Their outstanding works or inventions are certainly the number one reason for their excellence, but besides their creative products, was there any sign that positively distinguished them from their ordinary contemporaries? Any traits? Any personal characteristics?

Guilford thought that creative persons, in general, have three kinds of traits that distinguish them from the less creative: 1. Intellectual Traits; 2. Motivational Qualities; 3. Temperamental Qualities.\footnote{103}

1. Intellectual Traits:

Based on his factorial findings and those of other writers (Wilson et al., 1954;\footnote{104} Roe, 1953;\footnote{105} Drevdahl, 1956;\footnote{106} Guilford, 1957a;\footnote{107} Guilford, et al. 1957,\footnote{108} and Berger, et al. 1957)\footnote{109} Guilford (1959, 142-161) listed the following intellectual characteristics as most likely to be valid measures of creative persons: a. Evaluative Ability
  b. Word Fluency
     - Associational Fluency
     - Expressional Fluency
     - Ideational Fluency
  c. Flexibility
     - Spontaneous Flexibility
     - Adaptive Flexibility
a.) Evaluative Ability

Presence of a factor as a generalized sensitivity to problems was hypothesized. Some time later, this factor was identified and found as belonging to the general category of evaluative abilities. This factor, essentially, is judgment, by which it is decided what is not all right, what goal not reached, what to be desired, etc. Such decision has no part in productive thinking but is the step to get productive thinking started.

b.) Fluency

According to Guilford, word fluency is an ability to produce words each containing a specified letter or combination of letters. This, evidently, is important in creative work.

Associational fluency requires that the subject know also the meaning of the words given.

Expressional fluency requires that the subject produce not only words but phrases and sentences.

Ideational fluency is the ability to beget ideas in order to fulfill certain requirements in a limited time. This ability is important in problem-solving that demands novel solutions.
c.) Flexibility

Spontaneous flexibility is a disposition of creative persons to produce a variety of ideas, with freedom to roam about in his thinking.

Adaptive flexibility is the ability to produce unusual types of solutions - i.e. correct and satisfactory ideas, but also unusual.

d.) Originality

Originality is the ability to generate statistically unusual ideas. Parnes stated that it may also be defined as statistical infrequency or remoteness.112

Guilford proposed three criteria to measure originality: a* unusualness of responses; b* remote associations or relationships; c* quantity of clever responses.113

e.) Redefinition

This is an ability to abandon conventional use of familiar objects in order to use them or their parts in some innovative ways. For instance, improvising is a redefinition.

f.) Elaboration

This is an "ability to implement or spell out ideas (Parnes, 1967, 29); e.g. use of a tie clasp, gold-plate it, add wire initials and sell for $2.98."114 Guilford differentiated elaboration of meaningful material and that of figural material.115
2. **Motivational Qualities:**

Guilford, before discussing the other two groups of traits, declared that there is no clear-cut taxonomy of motivational or temperamental traits, as there is in the intellectual domain.¹¹⁶

To Guilford, motivational traits are those which direct creative persons' interests and determine, to a certain extent, their sources of satisfaction; they include needs, attitudes and interests.

Temperamental traits are those which aid the creative person to decide on his strategies; they comprise some qualities describing the manner or style of behavior.

The motivational traits that Guilford found from scattered sources are listed as follows:

a. The creative person has a high level of **curiosity**; he feels the need to know; he possesses a strong desire to learn and to accumulate information.

b. He is interested in **reflecting thinking**, from which satisfaction is derived.

c. He is also interested in **productive thinking**: both divergent and convergent.

d. Readiness: the more creative adolescents have more readiness to let transformations occur, or even to look for them.

e. A sense of **humor**: the creative person has an unusual appreciation of humor and facility for producing humor.

f. **Adventure**: the creative person has a **need for adventure**.

g. Variety: he **loves variety**.
h. He has a high level of tolerance for ambiguity.

i. He has a preference for disorder, in visual form, at least.

j. He has a desire to resolve the ambiguity and to organize the disordered information.

k. Qualities that may be summed up in the word of "Individuality":

1. The creative person is a self-starting creature, with a strong need for autonomy and self-direction.

2. The young creative persons show interest in unconventional careers.

3. The creative person needs recognition from others for personal accomplishments.

4. He is in possession of independent judgment.

5. He has a low level of sociability but a high level of self-sufficiency.

6. He is unwilling to accept things as they are; he looks for improvement.

7. His showing of self-confidence reflects high evaluation of himself.

8. Rejecting some conventional standards, the creative male may show some feminine interests, and the creative female may show some masculine interests.

Temperamental Qualities:

Under this heading, Guilford gave only four qualities:

a. Higher level of self-sufficiency
b. Higher level of self-confidence
c. Thinking Introversion
d. Impulsiveness

Self-sufficient manner and self-confident style of behavior are characteristic of the creative person, rather
than of the less creative. Inclination for Thinking Introversion, in general, helps to determine his way of life, his strategies or the way in which his talents are employed. With regard to the last quality, Guilford stated that "creative people are sometimes said to be impulsive, and this may be limited to the sphere of thinking activities."\textsuperscript{118} Such impulsiveness could also be an aspect of risk-taking - need for adventure.

All the three sections on traits were summarized from the two articles of Guilford.\textsuperscript{119} To the researcher of this paper, Guilford's description of the creative person's traits seems to be more detailed than others. This was the reason why his work was chosen for close studies. Nevertheless, an additional report of some other summaries on the same subject will be presented also for reference; principally the summaries of

1. G. S. Welsh;
2. D. W. MacKinnon;
3. The 19 Adjectives of A C L; and
4. Dellas and Gaier.

1. Summary of G. S. Welsh:

In the presentation of personality traits of the creative person, G. S. Welsh did not distinguish temperamental from motivational. He simply stated that the creative person is characterized by the
following personality traits:

a. Independence in attitude and social behavior;
b. Dominance;
c. Introversion;
d. Openness to stimuli;
e. Wide interests;
f. Self-acceptance;
g. Intuitiveness;
h. Flexibility;
i. Social presence and poise;
j. An asocial attitude; and
k. Unconcern for social norm.
l. Radicalism and
m. Rejection of external constraints, according to Welsh, seem to be more closely related to aesthetic than to scientific creativity.120

2. Summary by D. W. MacKinnon:

D. W. MacKinnon described the important traits of the creative person, with the respective studies made at the Institute of Personality Assessment and Research (IPAR) in the last two decades.121

1* It was hypothesized that creative persons would be intelligent and often highly so, and so was found.122

2* The effective use of intelligence depends upon the mechanism which an individual employs, and more specifically upon his avoiding the mechanisms of repression and suppression.123

3* Psychopathology was found in creative persons but also evidence of ego-strength, and courage to be open to experience, especially of the inner life. A study on 'An ego-strength scale which
predicts response to psychotherapy" was made by Barron. The hypothesis was tested with the Minnesota Multiple Personality Inventory, and also with life-history interviews.

4* Creative men give a more integrated expression to the feminine side of their nature than less creative men. This was confirmed by findings that creative men earn high score on the feminine interest scale of the MMPI.

5* Creative men tend to be introverted and to show a preference for intuition over sensation, and for perception over judgment. This was confirmed by the administration of the Myers-Briggs Type Indicator.

6* Barron's earlier work with aesthetic preference confirmed that creative persons would show a perceptual preference for the complex and asymmetrical. That creative persons show considerable independence and need for autonomy was confirmed by Crutchfield's and Barron's studies of independent judgment.

7* The interests of creative persons are similar to those of psychologists, author-journalists, lawyers, architects, artists and musicians, and unlike those of purchasing agents, office men,
bankers, farmers, carpenters, veterinarians, policemen, and morticians. This was studied and confirmed, with the test of Strong Vocational Interest Blank. This finding, according to MacKinnon, suggests that creative persons are relatively less interested in small details, but more concerned with their meanings and implications.

8* The theoretical and aesthetic values are very highly prized by the creative persons. This was measured by the Allport-Vernon-Lindzey study of Values. For creative scientists the theoretical value is highest, with the aesthetic value almost as high, for the creative architects the order is reversed; and among creative mathematicians the two values are high and approximately equally strong.

9* Highly creative persons tend to be less interested in socialization, self-control, desire to make a 'good impression,' and achievement via conformity. This was shown by the California Psychological Inventory (CPI) test, in MacKinnon's study of architects.

10* Creative persons are seen as quite different from relatively uncreative persons. This was confirmed by Barron's and Mackinnon's studies, in
three techniques were employed: a. the Adjective Check List,\textsuperscript{132} b. the Q-sort method,\textsuperscript{133} and c. trait rating. The findings also showed that highly creative persons were seen as ingenious, imaginative, courageous, insightful, interest wide, versatile, intelligent, individualistic, preoccupied, complicated, ...etc.

In the Q-sort test, the following traits of a creative person received an average of 8 or 9 on a 9-point scale, judged by the staff panel:

\textbf{9 points}

Appears to have a high degree of intellectual capacity. Values own independence and autonomy. Is verbally fluent; can express ideas well. Enjoys esthetic impressions; is esthetically reactive.

\textbf{8 points}

Is productive; gets things done.

Is concerned with philosophical problems; e.g. religion, values, the meaning of life, etc. Has high aspiration level for self. Has wide range of interests.

Is an interesting, arresting person.

Appears straightforward, forthright, candid in dealing with others.\textsuperscript{134}
Creative persons are different in self-imagery, from the less creative people. This hypothesis was tested with the ACL; with a specially developed Q-sort deck of statements describing talents, skills, interests, values, modes of working, work habits and so forth; and with life-history and professional field interviews.

The findings confirmed the statement.

3. The 19 Adjectives of A C L:

ACL is the abbreviation of Adjective Check List. According to Gary A. Davis, Smith, and Schaefer have devised creativity scoring keys for Gough's Adjective Check List. The 19 Adjectives which were chosen purposely on both scoring keys, and thus, must be reliable traits of creative individuals.

Here are the 19 adjectives:


4. Summary of Marie Dellas and Eugene L. Gaier:

In Dellas and Gaier's article 'Identification of Creativity,' the traits of the creative person are classified to 1. The Cognitive Capacities and
2. The Personality Factors.

Their summary was a conclusion of a serious research of the creative personality characteristics, based on an adequate quantity of psychological findings. The whole article is highly recommendable.

1. **The Cognitive Capacities** that are most frequently associated with the creative person:

a. An above-average intelligence and the effective use of this intelligence.

b. The ability to produce unusual and appropriate ideas.

c. An exceptional retention and more ready availability of life experiences.

d. Ideational fluency.

e. The ability to synthesize remote or disparate ideas.

f. Discriminative observation and

2. **The Personality Factors** that characterize the creative person:

a. Relative absence of impulse and imagery control by means of repression: this explains why the creative person can have "fuller access to his conscious and unconscious experiences,
and therefore, a greater opportunity to combine dissociated items." 141

b. An openness to internal and external stimuli: this tells us why the creative is disposed to allow into his perceptual system "complexity, disorder, and imbalance for the satisfaction and challenge of achieving an idiosyncratic order." 142 This characteristic is also manifested in that the creative shows wide interests, greater aesthetic sensitivity and self-awareness.

c. Ego-strength:

The creative individual is possessed of superior ego-strength, and reacts to obstructions and problems in a constructive way.

d. Intuitiveness:

The creative individual has an immediate apprehension of the current events. He is not accepting things superficially as they are: he searches for deeper meanings and eventualities.

e. Independence in attitude and social behavior: this factor accounts for his individualistic
orientation, low level of socialization
and less concern with other people's
opinion about him.

f. Self-actualization:
He appears to be freer to be himself, to
realize his potentials, and to be a more
fully functioning person.

g. Strong aesthetic and theoretical sense: this
suggests that the creative person has high
esteem for the values of beauty and truth.

h. Self-assertiveness:
He is not afraid of making mistakes, and is
indifferent to social disapproval. He is
possessed of high self-confidence, and
unshakable strong faith in the worth and
validity of his own efforts.143

A Summary of the summaries

Of the above lists, Guilford's intellectual traits seems to
be the best in its kind; Welsh's is a good concise summary of
other writers' findings; MacKinnon's list is valuable for the
respective studies given that inform the reader of the sources;
the 19 Adjectives of ACL by Gough are certainly authentic expres­
sions of the creative person, easy to remember; and lastly, Dellas
and Gaier's, is an orderly collection of scientific findings.
Thus, reflecting upon these findings, one can form a sufficiently complete picture of the creative person. Such information is not only helpful but necessary for the educator to identify the creative person at a young age and offer proper cultivation to their talents. Failure to do so is a sin of wasting Man-Power. Unfortunately, such waste has existed in many schools for the lack of a creative climate. But what is a creative climate? What conditions facilitate and stimulate creativity? These are all the questions we will answer in the next section.
Creative Climate

One is not surprised at seeing a tropical flower in full bloom, in a green house in Alaska, for he knows that the climate the flower needs IS there, in that well equipped house. So is creativity. It grows in a creative climate.

Carl Rogers believes that conditions favorable to creative activities, must be set up, if we want constructive creativity to emerge.

For Rogers, the two necessary conditions fostering constructive creativity are Psychological Safety and Psychological Freedom.

A. Psychological Safety:

According to Rogers, psychological safety is established by three associated processes: acceptance, absence of external evaluation, and empathy.

a. Accepting the individual as of unconditional worth.

This attitude of respect and trust should be that of the teacher in dealing with his students. The effect of sincere acceptance generates a climate of safety, in which the subjects feel free from fear and rigidity. They become relaxed and easy. Being themselves, they can self-actualize with spontaneity. This is the initial step toward Constructive Creativity.

b. Providing a climate in which external evaluation is absent.

Rogers states that 'evaluation' is always a threat, always
creates a need for defensiveness, always means that some portion of experience must be denied to awareness.' Evaluation generates reactions from the one who is being judged. It tends to put the individual at the mercy of outside forces, and thus, he is forced away from creativity. Besides, defensiveness implies, according to P. G. Bower 'the anxious avoidance of thoughts and feelings which might be unacceptable. It functions by tying the non-creative person more exclusively than his creative counterpart to the established categories and conventions, to conscious rather than preconscious thought.'

c. Understanding empathically.

By these two words Rogers wants to express that when one understands the other person with empathy, he sees the other and what the other is feeling and doing from this other person's point of view, enters his private world and sees it as it appears to this person -- and still accepts him -- then, this is safety indeed. In this climate, the individual can allow his real self to emerge, and to express it in any form he thinks fit. This is real fostering of creativity.
B. **Psychological Freedom:**

When one is free to think, to feel, to be whatever is most inward within himself, he is enjoying psychological freedom. This is what Rogers wants for a creative climate. The teacher should permit the students a complete freedom of symbolic expression, then creativity will be nurtured. This permissiveness fosters the openness, and the spontaneous toying with percepts, concepts, and meanings, which is a part of creativity.

It is this freedom that is responsible for the development of a safe locus of evaluation within oneself, and hence, the inner conditions (openness, locus of evaluation, ability of toying with materials) for constructive creativity are brought about. In brief, Rogers's theory is:

The student, being accepted by the teacher and permitted to symbolic expression, acquires psychological safety and freedom, which enable him to openness, sound evaluation and ability to toy with percepts, concepts, and meanings, and thus, Constructive Creativity is enhanced.

See Figure 2.
Figure 2 Carl Rogers's Theory
Doubtlessly, here Rogers tried a rationale for an ideal climate fostering creativity. His opening words explained the reason for such an effort. He said: "I maintain that there is a desperate social need for the creative behavior of creative individuals." And later, he complained that 'we tend to turn out conformists, stereotypes, individuals whose education is "completed," rather than freely creative and original thinkers.

G. R. Lefrancois in his usual joking way, drew a picture of some anticreativity school education. In order not to offend anyone, he used 'other' for a name.146

"Creativity is that special quality in students that OTHER teachers in OTHER classrooms stifle. Other teachers are rigid, rule-bound, and authoritarian. They stifle creativity by insisting on excessive conformity to arbitrary regulations, by giving high grades for neat, correct, unimaginative solutions to problems, executed and reported in exactly the prescribed manner, and by refusing to admire the mistakeful gropings of a child reaching toward the unknown. They stifle creativity by forbidding spontaneity and by rewarding mediocrity. They crush the joyfulness of young children by not hearing or not answering their questions. They are dry, sober, humorless keepers of the culture of their fathers."
In the article 'Can Organizations Be Creative, Too?'

C. W. Taylor also mentioned some of the anticreativity practices.\(^{147}\)

1. In studies at the elementary school it was found that among the youngsters, organizations are established and rules sanctioned to control certain kinds of behavior. If someone is producing too many unusual and unexpected ideas, he will get into trouble because he is too creative. He will be put under control by being chosen a chairperson or a recorder that is always busy with recording other people's ideas.\(^{148}\)

2. F. B. Jex reported that he had tested some high school science teachers who came back to get a master's degree in science. He decided to find out what they did the previous years as teachers. The findings surprised him. For the creative scores correlated negatively with ALL ten ratings by their supervisors. It was quite clear that the system may not want creative teachers.\(^{149}\)

3. Taylor reported that he had found some companies, by policy, rewarded unusual ideas submitted by the employees through the suggestion box. But it was also found that such persons who had submitted an above average number of ideas which were accepted and rewarded, would also get another form of reward: Slower Promotion Rate.\(^{150}\)
Taylor gave another surprising finding: in some corporation if a person had finished a research project and decided to publish it, writing an article for publication, in general, he would get a BELOW average rating on cooperation from his supervisor, maybe because of jealousy or some other thing, it is difficult to say.  

Summarizing these negative aspects of anticreativity climate, Taylor composed 12 Golden Rules on How to Kill Creativity, stated especially for classroom situation:

1. Assume there is only one academic type of talent.
2. As teachers, ignore scientific.research results about creative talents.
3. Teach the best and shoot the rest!
4. Keep doing what was done to your ideas -- and even do it more.
5. Be very human -- react quickly and negatively to new ideas.
6. If you don't understand it, OPPOSE it.
7. Keep the rule going: "The more creative the idea, the more likely in trouble."
8. Have a deadly negative incentive system for creative persons and ideas.
9. Fail to try opportunities (which is better than to try opportunities and maybe fail).
10. Organize creatives in (under your controls) - or organize them out!

11. Design all possible features into organizations that stifle or kill creativity.

12. Jealously guard and keep prerogatives only to yourself to plan, to think, and create.¹⁵²

Writing in a different style, both Lefrancois and Taylor exposed the various climates of anticreativity in the society. The 12 Golden Rules just mentioned, are the most common practices inhibiting creativity, and the OTHER teachers of Lefrancois are just doing them.

E. P. Torrance in a long article 'Education and Creativity' explicitly pointed out six principal forces that inhibit creative growth in our society:  a. Success-orientation;  b. Peer-orientation;  c. Sanctions against questioning and exploration;  d. Over-emphasis or misplaced emphasis on sex roles;  e. Divergency equated with 'abnormality';  f. Work-play dichotomy.¹⁵³

(a) Success-orientation:

The American culture, as Torrance stated, is considered to be one of the most success-oriented cultures in the world. The objectives of teaching is solely to prepare the citizens for success, not for frustrations or failures. Every failure is regarded as something very serious. And therefore, every frustration must be prevented, and education ought to be conducted
within 'safe limits.' This principle of teaching deprives the children of many chances of coping with difficulties, opportunities of solving problems and thinking by themselves.

S. R. Maddi, in his article 'The Strenuousness of the Creative Life,' suggested that the element of strenuousness be included in the definition of creativity. He stated that he liked the connotations of Bruner's approach which render creativity as HARD WORK rather than "fun and games." For Maddi, to function creatively is enormously taxing, even for the greatest geniuses. Thus he said:

"Once the concept of creativity is democratized sufficiently to be an actuality for everyone, if he will only "stay loose" and avoid restriction, it has ceased to mean anything of importance."154

It was stated by Parnes that much Spoon-Feeding is practiced in this country in terms of How-To-Do-It instructions - in school, at home, and at work - so that many people lack the opportunities for being creative, and consequently they are deprived of the golden chance of developing the ability to meet the new challenges, with pride and confidence.155

(b) Peer-orientation:

Torrance also reported that at about the time a child reaches the 4th grade, his need for consensual validation is intensified. He becomes afraid to be different from his peers, as well as act and think. His unusual ideas are suppressed. In an atmosphere where peer-pressure to conformity is ruling, creative growth is inhibited.
(c) Sanctions against questioning and exploration:

Theoretically children, as all know, are curious and have a right to ask questions, but in practice, they are not free to do so, especially in classrooms. There are many sanctions, already set up, to put the curious child in his place.

(d) Over-emphasis or misplaced emphasis on sex roles:

Because of the society's over-emphasis or misplaced stress on sex roles, both boys and girls' creativity development is inhibited. Creativity, as Torrance stated, by nature, demands both sensitivity and independence. Thus, being interests wide, creative boys sometimes appear to be more effeminate than their less creative peers; and creative girls, more masculine than theirs. But very often, they are so reluctant to look that way, that they have to deny themselves many creative activities.

(e) Divergency equated with 'abnormality':

Although nowadays, few people believe that divergency is an indication of 'madness' or 'abnormality,' yet somehow the belief that any divergency from behavioral norms is an indication of freak or immorality which must be corrected, exists.

From the studies Torrance and his associates did between 1959 and 1962 in Minnesota University, it was pointed out "that children are taught very early the harsh consequences of divergent behavior, ... the pressure of society to rid children of divergent characteristics are relentless."156
The same view was supported by Parnes who wrote the following words in his book 'Creative Behavior Guidebook':

"In everyday life, we tend to make people afraid of their ideas. Whenever they present really new thoughts, we laugh, make them feel stupid or ridiculous, call them troublemakers, tell them not to rock the boat, etc. Hence, they learn to refrain from offering the ideas they conceive."157

(f) Work-play dichotomy:

Many people still believe work is no fun, and play is not work. One is supposed to dislike work and enjoy play, and something must be wrong, if he DOESN'T. Torrance said that this seems to be the main reason why teachers are afraid to give children more opportunities to learn by creative activities. School is supposed to be work and work is no fun. Thus, many schools are still cherishing an austere and NO-FUN atmosphere, where creativity is stifled.

******************************
As a supplement to Torrence's list, Hallman's creativity inhibitors are also listed below for reference and comparison:

**Hallman:**
1. Pressure to conform
2. Authoritarian attitudes and environments
3. Rigid teacher personality
4. Ridicule and sarcasm
5. Over-emphasis on evaluation
6. Hostility toward divergent personalities
7. Excessive quests for certainty
8. Over-emphasis on success
9. Intolerance of play attitude

**Torrance:**
1. Success-orientation
2. Peer-orientation
3. Sanctions against questioning and exploration
4. Over-emphasis on sex roles
5. Divergency equated with "abnormality"
6. Work-play dichotomy

Figure 3
Carefully comparing Torrance's list with Hallman's, one may discover that to counteract the effects of these inhibitors and facilitate creativity in the classroom is largely dependent on the teacher, and he is very able, if wishes, to do away with creativity inhibitors, as these either come from or can be corrected by him. Hostility, Intolerance, Rigidity, Ridicule and Sassasm, Pressure to Conformity, Over-emphasis on Success and Evaluation and Authoritarian attitude are all the teacher's personal problems, as to creativity nurture, and can be prevented, if their anticreativity effects have been made known before. Besides, Peer-pressures to Conformity will also be easily eliminated in the classroom, if the teacher is a great defender of unusual or original ideas.

After the inhibiting forces of creativity have been discussed, it is only more than right to also discuss the facilitating ones.

R. N. Hader in his 'Do we really want creativity?' says that "if we really want the benefits of creativity, we ought to have the wisdom to teach it where it is found wanting, to encourage it where it shows signs of developing, and at the very least -- to tolerate it where it threatens to disrupt our comfortable status quo."159

Hader's words present a trilogy of what a teacher has to do if he really wants 'the benefits of creativity.'
a. To teach (or promote) creativity
b. To encourage creativity
c. To tolerate creativity.

To organize a creative climate, a teacher has to encourage creativity, sometimes maybe he need also to tolerate it, and lastly, use methods to teach (promote) it.

Parnes suggested two types of educational efforts to facilitate creative functioning and development:

(1) Deliberate training programs designed to remove internal blocks (or develop abilities) to optimum creative performance; and

(2) Provision for environmental conditions that eliminate external blocks to such performance.¹⁶⁰

Parnes believed that these two efforts can achieve something only if they work together. It is useless to get into a training program to learn creativity, if afterwards, environmental conditions are not provided for the person to function creatively; similarly, it is futile to create facilitating conditions for the individual, but the internal blocks of this person remain unremoved. In the first case, creativity is stifled, and in the latter, constructive creativity will never begin.

Torrance as an environmentalist, suggested 14 facilitating procedures for creativity. These are important conditions that constitute a creative climate:
1. Rewarding varied kinds of talents and creative achievements
2. Helping children recognize the value of their creative talents
3. Teaching children to use creative problem-solving processes
4. Developing creative acceptance of realistic limitations in a problem situation
5. Avoiding the equation of divergency with mental illness and delinquency
6. Modifying the misplaced emphasis on sex roles
7. Helping highly creative children become less objectionable
8. Developing school pride in creative achievement
9. Reducing the isolation of highly creative children
10. Providing sponsors or patrons for certain highly creative children
11. Developing values and purposes
12. Helping highly creative children learn to cope with anxieties and fears
13. Helping highly creative children to develop courage and to tolerate the anxieties of being in the small minority, of exploring the uncertain, etc.
14. Reducing the discontinuities that seem to be associated with entrance into kindergarten, the fourth-grade, and the seventh grade. 161

I. A. Taylor also composed a list of conditions in the environment which he claimed to be reported in the literature as
tending to induce creative behavior.

A report of the list seems beneficial for the reader to see and compare with the above Torrance's list, that was published ten years ago. Taylor's list:

1. Reduction of frustration-producing factors in the environment
2. Elimination of win-lose competition
3. Provisions for support
4. Encouragement of divergent thinking
5. Emphasis on problem solving and working through of conflict rather than on generating a harmonious atmosphere
6. General maintenance of an open environmental structure
7. Minimization of coercion
8. Minimization of enforcement of behavior norms
9. Elimination of environmental threats
10. Provision of encouragement
11. Aiding the persons to understand himself and his divergence
12. Allowing free communication
13. Acceptance of fantasy
14. Withholding of frustrations at unusual questions
15. Exposure to the risk-taking opinion of others
16. Group discussion and comparison of ideas
17. Homogeneous grouping of individuals for group interaction

18. Competent group leadership.\textsuperscript{162}

The main points they both agree with are

a. Respect for unusual questions and ideas;
b. Provision of encouragement and support;
c. Helping the creative individual understand himself, his divergence and his talents;
d. Allowing creative performance to occur without fear or threat of evaluation; and
e. Teaching the creative individual to cope with frustrations, and conflicts.

Torrance, however, alone mentioned that misplaced emphasis on sex roles be modified, school pride for creativity developed, and discontinuities caused by entrances into kindergarten, 4th grade and 7th grade, eliminated.

Taylor instead had three items stressing on group-creativity: group discussion and comparison of ideas; group interaction and competent leadership.

\textit{Sensory stimulation} is another variable reported in the literature as related to facilitating creativity. Taylor did a research on creative environment conditions and found that \textit{climate stimulation} is an important phenomenon in inducing openness and creativity in a person. He stated that comparing before
and after drawings and a creativity test (the Guilford Consequences Test) he found that following stimulation the subjects' drawings were more open, aesthetic and creative.\textsuperscript{163}

Taylor was not the first who mentioned climate stimulation. G. Murphy had already pointed out that sensory stimulation and enrichment could provide a push for creative growth.\textsuperscript{164} E. G. Schachtel wrote about the influence that sensory stimuli might exercise on the individuals in his book entitled 'Metamorphosis'.\textsuperscript{165}
The investigation made in exploring the inhibiting and facilitating factors of creativity, has already implicitly answered the question 'Can Creativity Be Developed?' But, how can this be done? Are there methods which can positively stimulate and develop creativity?

Kirst and Diekmeyer, co-authors of Creative Training: become creative in 30 minutes a day, has assured us that everybody can become creative. They pointed out that all it takes to bring out our creativity is a little push, a little assurance, and an eye for alternatives. These are abilities everybody can develop. By means of these, the many influences that hinder creativity: the comfortable cliches, the daily grind, and innumerable, almost unconscious prejudgments will be overcome. For Kirst and Diekmeyer, creativity signifies 'looking-ahead.' To be creative means coming to terms with new visions and different possibilities - with the future of the 'here-and-now.' To be creative demands a readiness to think of something novel in place of the safe, customary past.

D. J. Treffinger and J. C. Gowan in the article 'An Update Representative List of Methods and Educational Programs For Stimulating Creativity' reported 49 methods and ca. 165 related books or articles.

To disclose and discuss all of them here is out of the scope of this dissertation. Thus, only certain ones are selected here for discussion.
Techniques for Stimulating Creativity

1. Brain-Storming:

This technique was developed by A. F. Osborn and used originally in the production of creative solutions for various problems. Four basic rules are to be followed in brain-storming sessions:

a. Criticism is ruled out - Contrary judgment of ideas must be suspended. No one should evaluate anyone else's ideas.

b. Free Wheeling is welcomed - Unusual, remote, or wild ideas are sought. A complete freedom to express is encouraged.

c. Quantity of ideas is sought - Generate as many ideas as you can.

d. Combination and improvement are sought - In addition to the contribution of ideas, one has also to tell how ideas can be turned into better ideas, or how to combine them to make a new product.168

The aim of brain-storming sessions is to liberate a person from the usual inhibitions and blocks to his creative processes, by means of Deferred Judgement. Groups or individuals are asked to tell their ideas fast and with spontaneity until enough ideas are presented, and then, these are evaluated. Deferred Judgment is not 'judgment eliminated' but only 'postponed.' In his book "Creative Behavior Guidebook" Parnes told us that 12 out of 14
studies at a variety of institutions have shown that "more good ideas are produced by subjects when using deferred judgment than when following conventional-thinking procedures." 169

According to Stein, Brain-storming works best for problems for which there are a number of alternative solutions and least well for one or a limited number of answers. 170

T. J. Bouchard reported that Donald Taylor and his colleagues at Yale University did an experiment in which it was found that separate individuals alone could solve problems better than groups could brainstorming. In 1963 ca. Prof. M. Dunnette did a similar experiment and found the same results. 171

These results however, were usually mis-interpreted. As Bouchard had pointed out, they do not disprove the effectiveness of brainstorming as a group problem-solving method. What must be shown instead, is that group brainstorming is significantly better than the traditional procedures of critical group problem-solving.

Lefrancois held that brainstorming is a very practical method in a classroom situation. Besides facilitating creativity, it can be exploited to solve a great number of daily classroom problems, especially in this age of "participatory democracy." 172

26 Checklist:

This is a technique used together with deferred judgment in brainstorming sessions, for the purpose of stimulating responses. In general there are two kinds of checklist: specialized and
generalized. The generalized checklist, being more widely used, appears to be more useful. Parnes in his Instructional Program for Cultivating Creative Behavior, has extensively used the checklist method to stimulate ideas. The most used list is "Who, What, When, Where, Why and How."\(^{173}\)

The following is one of the best known lists stimulating creative thinking:

1. Put to other uses
2. Adapt
3. Modify
4. Magnify
5. Minify
6. Substitute
7. Rearrange
8. Reverse
9. Combine\(^{174}\)

3¥ **Morphological Analysis:**

This technique was originated by Dr. Fritz Zwicky, author of two books: *Morphological Astronomy*\(^ {175}\) (1957) and *Discovery, Invention, Research: Through the Morphological Approach* (1969).\(^ {176}\) The technique consists in breaking a problem down into its independent variables, which are then broken down again into sub-variables. If there are two variables, these can be visualized as constituting a square; if there are three variables, the solutions can be visualized in a cubic form, similar to the Guilford's Structure of Intellect, whose variables are Contents, Operations and Products.
Morphological Analysis can be used in many ways. Whiting gave an example of applying it to obtain 16 different combinations in a blue and red color scheme:

<table>
<thead>
<tr>
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<th>R.3</th>
<th>R.4</th>
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<tr>
<td>B.1</td>
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**Figure 4**

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<td>B.1</td>
<td>R1B1</td>
<td>R2B1</td>
<td>R3B1</td>
<td>R4B1</td>
</tr>
<tr>
<td>B.3</td>
<td>R1B3</td>
<td>R2B3</td>
<td>R3B3</td>
<td>R4B3</td>
</tr>
<tr>
<td>B.4</td>
<td>R1B4</td>
<td>R2B4</td>
<td>R3B4</td>
<td>R4B4</td>
</tr>
</tbody>
</table>

16 Combinations:  

- R1B1  
- R1B2  
- R1B3  
- R1B4  
- R2B1  
- R2B2  
- R2B3  
- R2B4  
- R3B1  
- R3B2  
- R3B3  
- R3B4  
- R4B1  
- R4B2  
- R4B3  
- R4B4  

-
J. E. Arnold elucidated this technique by solving a 3-variable problem, of which the three different aspects are

1. the type of vehicle
2. the type of power and
3. the medium in which the vehicle will be used.\textsuperscript{178}

### Possible Solutions in Cubic Form:

![Diagram of cubic form with types of vehicle, power, and medium.](image-url)
Some of these combinations are not practical solutions, but others might be of future use. a6b4c3 for instance, is a sling type vehicle, drawn by horses, going through oil; a4b6c5 is a rocket type and atomic powered machine, going through a tube, etc.

47 The CNB Method:

This group creative method was called by J. W. Haefele the Collective Notebook or CNB Method, which can be used in many ways, especially for factories.

First of all, a notebook is given to each man in the participating group. On the first pages there is presented a problem of major scope with some preparatory materials, including a variety of creative aids. The essential thing that each person of the group has to do is to record, in the notebook, any good ideas they may arrive at. Each person then summarizes: a. his best idea on the problem; b. his suggestions; and c. other novel ideas, aside the main problem. At the end of the month or a specified time, all the notebooks will be collected and evaluated. Those who have presented ideas of some value will be rewarded.

Haefele stated that the CNB allows personal application, to attack a big problem on one's own. His idea of procedure is: the preparatory work should be done first, and NOT SKIMPED, and then recording begun, day by day, and week by week.179

Parnes employed CNB method in his program. He didn't call it CNB, but a Pocket' Idea Notebook'.180
Lefrancois also developed a similar method called CBB or Collective Bulletin method, designed for use in a classroom.\textsuperscript{181}

It consists of posting a description of a problem, and of possible solutions on the bulletin board in a classroom. The students are encouraged to freely add their ideas or solutions to the board. This has the advantage of allowing every student to benefit from what other classmates have found about the problem.

\textbf{PakSA:}

This method was initiated by J. W. Taylor\textsuperscript{182} (1961) and refers to the PackCorp Scientific Approach in honor of the Packaging Corporation of America. This method, as Taylor says, is a modification and extension of other methods.

Nine steps are used is PakSA:

1. \textbf{Pick a Problem} - Define it and state the objective.
3. \textbf{Organize Knowledge} - Put the information into understandable form.
4. \textbf{Refine Knowledge} - Search for relationships and principles. Consider the similarities, differences, analogies, cause-and-effect, combinations, etc.
5. \textbf{Digest} - Put the subconscious to work. Relax.
6. \textbf{Produce ideas} - Concentrate on the problem until new ideas begin to emerge.
7. \textbf{Rework Ideas} - Check the ideas for flaws. Question and improve them, one by one.
8. **Put Ideas to Work** - Sell the ideas if accepted. Use them. Stress customer-interest. If your ideas involve new skills and methods, teach them.

9. **Repeat the Process** - Make it a natural habit of yours.

**Synectics:**

Synectics is a training program which utilizes metaphorical analogies in creative problem-solving. It was initiated by W. J. J. Gordon (1961).

Synectics was coined by Gordon from Greek words which mean "joining together" of apparently different and irrelevant elements. This program is also called "The Gordon Technique" or "Operational Creativity." Lefrancois sees this technique as a 'slight modification' of brainstorming. He pointed out that the major difference between these two is that the Osborn method presents the participants with a complete problem, while the Gordon technique presents with a mere abstraction. For instance, if 'can-opener' is the problem, the Gordon technique will give only 'opener,' being afraid that 'can' will narrow the problem down, and thus decrease the quantity of new ideas.

The **Operational mechanisms** of Synectics are the concrete psychological factors which sustain and push forward creative process. These are intended to provoke the proper psychological states and thus stimulate creativity.
The four psychological states are:

1. **Involvement and Detachment** - Involvement indicates comprehending and interacting with the components of the problem. Detachment refers to the feeling of the inventor who has to detach from and become distant, in order to take a real look of the problem.

2. **Deferment** - This refers to the ability to defer quick solutions to the problem. One should discipline himself against premature attempt at a solution.

3. **Speculation** - This refers to the ability to let the mind run free.

4. **Autonomy of object** - This refers the feeling that the solution has an entity and demands quality of its own.¹⁸⁷

But one thing to note here is that Gordon distinguishes psychological states from mechanisms. For Gordon, psychological states, such as empathy, involvement, play, detachment, and use of irrelevance are essential to the process but they are not operational. The operational mechanisms in problem-stating and problem-solving are the four Analogies. It is they that make the Synectics process work, namely:

a. Make the Strange Familiar and

b. Make the Familiar Strange.

The process of making the strange familiar must be accompanied with that of making familiar strange, or only superficial solutions will be the result. To make the familiar strange is to misshape, reshape, reverse or change the everyday ways of
looking and responding.

The four analogies - operational mechanisms - for making the familiar strange, each metaphorical in character, are:

(1) **Personal Analogy:** here psychological identification with important components of the problem is required.

(2) **Direct Analogy:** here searching for comparable processes in different fields is demanded.

(3) **Symbolic Analogy:** here use of poetic images and symbolism is necessary.

(4) **Fantasy Analogy:** here Synectics accepts Freud's theory of art, but applies it to technical invention and employs it operationally. It is noted that for Freud, creative work, and art in particular, is the fulfillment of a wish.\(^{188}\)

The whole Synectics process in problem-solving is composed of nine phases as follows:

1. The Problem as Given
2. Making the Strange Familiar
3. The Problem as Understood
4. Operational Mechanisms
5. The Familiar made Strange
6. Psychological States
7. States Integrated with Problem
8. Viewpoint or New Problem as Understood
9. Solution or Research Target.\(^{189}\)
It must be understood however, that the Synectics problemsolving process has been presented here, is in a clean-cut manner, but in reality, when the process is in progress, all the steps are unnoticed.

In summarizing this section of Creative Climate, one finds that the so called climate is not a walled green house, but a trilogy of action: a. Teach creativity; b. Encourage creativity; and c. Tolerate creativity.

Elimination of creativity inhibitors is the first step to take or the first battle to fight, and this ought to be a shared responsibility of all: teachers, parents, administrators, principals, supervisors, etc.

In the second place, environments facilitating creativity should be provided together with creativity training programs. The environments stimulating creativity should not be confined to classrooms, but also at home, in the factories, in the church, in the libraries, in the museums, etc. Creative environments without creative training programs are just like the soil without seeds, and no flower will grow. Both factors are required.

The techniques for promoting creativity are many, but no one is unquestionably beneficial to everybody. The teacher, or the parent, or the one who is in charge, has to decide with prudence.

Brainstorming is an excellent method for daily classroom uses. The teacher however must know how to effectively use it.
He is kindly invited to take a course in an education college if he doesn't.

The checklist technique can be employed in a variety of circumstances. But one important thing must be kept in mind that a good list should be prepared beforehand.

The CNB method may be a very good tool for collecting ideas, themes, melodies, devices, poetical images, names, items, articles, etc. Beethoven was using this method to jot down musical ideas without knowing it.

The Lefrancois's CBB method was designed for use in the classroom situation. No doubt, it can benefit many students using it, but the warning given by the originator ought not to be disregarded, so that the more vocal and uninhibited members of the group DO NOT MONOPOLIZE the proceedings.

Morphological Analysis is a quick problem-solving instrument, of which the uses are numerous. A facsimile may be made on 'The Allen Morphologizer.' Nevertheless, the number of variables and subvariables should not be too big for the analyst to handle.

PakSA and Synectics are methods made for finding solutions to problems. Detailed instructions and rules are set up for the individual or group to follow. This however could be a danger or trap, making many blind followers. Creativity methods should be used creatively.
PakSA method, based on creative process, is easy to understand and use.

Synectics, requiring the subjects' psychological involvement and making-the-familiar-strange process, and thus forcing new ideas and associations up for conscious consideration rather than waiting for them to arise fortuitously,\(^{193}\) seems to do better than other techniques. And the results of many experiments employing Synectics seem favor this conclusion.\(^{194}\)

Stein reported that Gordon had given a basic Synectics course to a freshman class in the Harvard University, and the students evaluated the program as a 'powerful' and 'successful' program in accomplishing what it set out to do; they also felt the course was 'liberating' and 'instructive' and distinctly the most profitable of their freshman courses; and on the rating scale, they ranked it 'Extraordinarily Valuable.'\(^{195}\)

Bouchard suggested a combined method of Synectics and Brainstorming: Brainstorming-plus-Sequencing-plus-Personal Analogy.\(^{196}\) Sequencing is Bouchard's new idea that each participant in a brainstorming session has his turn to present his suggestions or ideas, so as to avoid the monopolization of one participant or more in the session.

Stein believes that Bouchard's combined method has much to recommend it.\(^{197}\)
SUMMARY

Definitions

In this section, it has been said that the various definitions given to creativity by the scholars indicate their different approaches to the subject matter, and thus, I. A. Taylor's five systematic approaches (Psychoanalytic; Humanistic; Trait-factorial; Holistic; and Associationistic) are presented for understanding.

Owing to its complex and multidimensional nature, creativity cannot be defined in a narrow, rigid fashion. Viewing it from one single aspect, one will miss it or misunderstand it.

In general, creativity is defined as creative potential, process and product. The diagram presented on page 32 gives the reader a complete picture of creativity as defined. This is not intended to be an inventory of attributes of creativity, but to show the apparent interrelationship between the potential and the process, and this with the creative product.

It has to be noted that creativity is unpredictable by nature, and we can not pinpoint when it occurs and where it is going, what kind of procedure it must take, and what sort of product will be the result.

The diagram was designed for three purposes:

i. to give the reader a body of usable information about creativities, from potential, through process, to product;
ii. to present a ready-made (see through) comparison of the various creative phases; and

iii. to serve as checklist for both creative abilities and the possible qualities of a creative product.

**Creative Product**

In this section, the difficulties and problems of identification of creative product, such as assembling, comparison, objectivity of evaluation, appropriateness of methods, etc. were pointed out. Four studies, each with a different approach were presented and discussed. And in the conclusion, it was said that:

a. the basic primary method in creativity studies seems to be analysis of the creative products in terms of quality and quantity;

b. quantity alone is a poor criterion of creativity assessment;

c. the four types of bias that must be prevented are

1. criterion deficiency,
2. criterion contamination,
3. criterion scale unit bias, and
4. criterion distortion: and

d. a combined method or combination of methods seem to be necessary to objectively adjudicate the complex human function - creativity or the degree of creativeness.
Creative Person

In this section, the three kinds of creative persons' traits have been discussed.

Intellectual ___________________ Cognitive Capacities
Motivational ___________________ Personality Factors
Temperamental ___________________

Guilford found that in the intellectual domain there are six valid measures for creative persons: Evaluative Ability; Fluency; Flexibility; Originality; Redefinition and Elaboration. All of them have their places in the Structure of Intellect. Evaluative ability belongs to the operational category of Evaluation; Fluency, Flexibility, and Originality to Divergent Thinking; Redefinition to that of Convergent Thinking; and Elaboration to both Divergent Thinking and Convergent Thinking.

In the Motivational Traits Guilford placed curiosity, interest in thinking, readiness, sense of humor, and individuality. These will guide the creative person's interests and determine his source of pleasure.

In the Temperamental Traits Guilford mentioned self-sufficiency, self-confidence, introversive thinking and Impulsiveness. These characteristics are going to help the creative individual decide on his strategies for life.

For the sake of comparison and reference, the Welsh's list of the creative personality traits and the 19 ACL are also presented.
MacKinnon's enumerative list of the creative personality traits with the respective studies at IPAR has been reported to exhibit a body of information that has already been substantiated by scientific findings. And finally, also Dellas and Gaier's summary has been given for examination.

Creative Climate

In the beginning of the division, the two conditions fostering creativity, presented by Rogers: a. Psychological Safety and b. Psychological Freedom are discussed.

Then, C. W. Taylor tells the reader some of the anticiation climates in the society. The 12 Golden Rules were composed by him to denounce them.

Following up, Torrance's six creativity inhibitors and other 14 facilitators are exhibited for the reader to see under what circumstances creativity can be stifled or developed. The Hallman's list of nine creativity inhibitors and I. A. Taylor's of 18 creativity facilitators are also reported afterwards, simply to complete those of Torrance.

The words of Hader are quoted to remind the educator of the importance of teaching (promoting), encouraging and tolerating creativity. Parnes's urge of both provision of creative environments and deliberate programs for training creativity has also been made clear. In addition, Murphy, Schachtel and Taylor's proposed Sensory Stimulation is put forward as another important variable for facilitating creativity.
Taken together, the above-mentioned words have made it clear that besides provision of favorable conditions for creativity or environments facilitating creativeness, methods or programs are to be employed to stimulate and promote creativity. So, six out of 49 methods and programs have been chosen for discussion and examination. And it has been found that:

1. All these six methods: Brainstorming, Checklist, Morphological Analysis, CNB, PakSA and Synectics, are useful techniques.

2. The environments stimulating creativity should not be confined to schools.

3. The training of creative teachers is required, for creativity promoters should know their business.

4. Creativity Training programs or methods ought to be taught creatively, NEVER STEREOTYPED.

5. Combination of methods can be used, and sometimes even recommended as to adapt them to the subject's particular needs.
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CHAPTER III
CREATIVE TEACHING OF MUSICAL COMPOSITION

Introduction

In the previous chapter, the general nature of creativity has been discussed in terms of Creative Potential, Process, Product, and the Creative Person's traits, and it has been found that creativity as a multi-dimensional human function, complex and multifarious, has been studied by scholars from at least five aspects: Psychoanalytic, Trait-factorial, Humanistic, Holistic, and Associationistic. These various approaches have had creativity defined in quite many different ways, but in general, creativity was defined as Process, Product, Potential, or a system of activities.

All these findings in literature serve as a body of basic information for the educator to know, so as to competently teach creativity, for to teach something one does not know, is unreasonable, if not impossible.

It has been also learned that creativity can be taught, stimulated, and developed. The literature has also presented us the reason why this can be done. Precisely for this, six principal techniques training creativity were selected, and examined.
Now, in order to go a step further in exploring creative teaching of musical composition, the present researcher feels it necessary to ask and answer whether all that has been said about creativity in general has to be the same as about musical composition, which is also a creative behavior.

The steps intended to proceed the investigation are as follows:

First of all, what is meant by musical composition as creative behavior? What do composers themselves and music educators think about composition?

Secondly, can composition be taught, in the sense that has been discussed in Chapter XI?

Finally, how can Musical Composition be taught? What are the techniques?

(1) What is meant by Musical Composition as creative behavior?

It is commonly known that to compose is to create something new. Composition is Production. A composer is not a copyist, by definition. A beautiful copy of someone's music, even a perfect replica, a faultless reproduction, an authentic imitation, can never be called a composition. A good composition is a novel work, accepted as satisfying, useful, at least to a number of people.¹
Although a student's composition can not be compared with the masters'; it has its own values: the student's self-expression and actualization. Besides, the whole process of writing a composition, if analysed in all its components, is real creativity. It has to be considered as creative behavior for the following reasons:

1. In writing a composition, one's creative abilities are mobilized: fluency of thinking, especially expressional fluency; flexible thinking, both spontaneous and adaptive; originality, without which a valuable composition is unthinkable; and elaboration, which is the ability to implement the musical ideas.2

2. A creative process of PREPARATION, INCUBATION, ILLUMINATION, and VERIFICATION3 can be easily identified in the production of a composition: a. Preparation means the student's effort to use his abilities for some sort of creative commitment. He is now READY to work, concentrate, dispose; b. Incubation is the stage when he thinks, meditates, reflects, and toys with the ideas, and lets the subconscious take over; c. Illumination is the bright moment when his musical ideas become matured, all at once, or he suddenly sees the musical vision,4 or he gets his 'Aha' experience;5 d. Verification is the final stage when he needs to communicate his ideas to the outside world, by means of symbolism and performance.
3. A good composition contains the qualities of a creative product. In general, at least, the qualities of some originality and value can be found existing in any so called good composition, and very often, more creative qualities can be detected. For Murray, Barron and Rollo May a composition with the qualities of newness and value can be already qualified as a creative product.

4. The composers are considered as creative persons. The student composers, being involved in such a creative work as composing and doing what an adult composer is supposed to do, though often at a different level, are immersed in creativity in name and in fact. If these may not be called creative, who else may?

It has to be noted that in the literature it is found that the personality characteristics of young creatives bear similarity to those of creative adults, and thus, it seems tenable to conclude that these traits develop fairly early.

And now, in order to broaden the investigation on the topic, let's answer two more questions:

A. What do composers say about composition as creativity?

This question is not a question set up merely to satisfy one's curiosity, because knowing the answer, which came from the experts of the art of composition, enabling the teacher
to better penetrate the very core of his teaching problem and thus guide his classroom strategies, is something of importance.

The following ideas were taken from the literature and grouped under these headings:

1. The composers' life is a dualistic world.
2. Their creative work is dependent on their inner energy and hard work.
3. Their work, however, often is influenced by outside factors.
4. They derived their compositions out of a motive or theme, or from a musical vision of the whole.
5. In Musical Composition, phases of the Creative Process can be identified.
6. They are free to do their artistic work.
7. They continually strive to improve their work.
8. They need a favorable environment for artistic endeavor.
9. They stressed the importance of learning the compositional techniques.
10. The musical ear is the guide for musical choices.

************
1. The composers' dualistic life:

It is interesting that the composers are capable to live a double life: that of imagination and music, and the realistic one. Recalling his past experience of contact with the two worlds A. Copland said:

"It seems to me now, some 35 years later, that music and the life about me did not touch. Music was like the inside of a great building that shut out the street noises. They were the noises natural to a street; but it was good to have the quiet of the great building available, not as a haven or a hiding place, but as a different and more meaningful place."\(^{10}\)

In a letter addressed to Mme von Meck, Tchaikovsky (1878) wrote: "These who imagine that a creative artist can express his feelings at the moment when he is moved, make the greatest mistake. Emotion - sad or joyful - can only be expressed retrospectively, so to speak. In a word, an artist lives a double life: an everyday human life and an artistic life, and the two do not always go hand in hand."\(^{11}\)

R. Harris however described the composer's life as subjective and objective; and believed that the development of an emotional field of activity within himself and the capacity to perceive it within himself and around himself is the more important half of the creative musician's life-work. This is the subjective life of the composer, but he
must also know how to transform his emotional activities into intelligible notations - the objective artwork. Here are his words:

"The subjective process of perception and conception as well as the objective processes of technical notation, as practiced by living musicians, constitute the basis of artistic creation in music." 

For Copland and Tchaikovsky, a composer lives a double life - the human, daily life, and the artistic life, which is his emotions imagined or conceived retrospectively.

For Harris, the composer's world consists in both subjective activity, that of emotion and insight, and the objective, intellect and technique.

2. Composition - Result of the composer's inner force and hard work:

Joseph Haydn confessed that composition for him was not an easy and simple job. He was reported by Griesinger to have said:

"I was never a quick writer and always composed with care and diligence. ..."

Once I had captured an idea, I strove with all my might to develop and sustain it in conformity with the rule of art." 

Tchaikovsky (1878), in answering the question of method, had stated that his compositions could be divided into two groups:

a. Works which he worked on his own initiative; and
b. Works which he did to fulfill the wish of a friend or a publisher for a commission.

He admitted that generally the second category had worked out better, but both needed a will to keep them going. In order to do so, as he remarked, he was often "obliged to fight indolence and disinclination." He wrote:

"Sometimes, the victory is easily gained. At other times inspiration eludes us, and cannot be captured. I consider it, however, the DUTY of an artist not to be conquered by circumstances. He must not wait. Inspiration is a guest who does not care to visit those who are indolent."\(^14\)

Hindemith, in explaining the reason why very few masterworks display the congruence of musical vision and its materialization, has this statement:

"A tremendous effort is necessary in order to work toward it; not merely a technical effort, but a moral effort, too - the effort to subject all considerations of technique, style, and purpose to this one ideal: CONGRUENCE."\(^15\)

3. Composer's work is often subject to the influence of external factors:

These external influences are many: money, love, favorable environment, conditions stimulating creativity, etc.

Joan Peyser reported that Stravinsky had to continue working on the Symphony in C to pay the medical bills for his wife and daughter, both of whom were in a tuberculosis sanitarium near Paris, in spite of the doctors' advice of
a complete rest. They had discovered a lesion in his left lung, and urged him to join his family in the sanatorium.

But Stravinsky kept on working, because he needed the money.

The following is what he wrote on the event:

"I have never regarded poverty as attractive. I do not want to be buried in the rain, unattended as Mozart was. ...The very image of Bartok's poverty-stricken demise, to mention only one of my less fortunate colleagues, was enough to fire my ambition to earn every penny from a society that failed in its duty to Mozart."

All the great composers did not deny that they composed for monetary reward. In a letter of 1814, Beethoven wrote these words:

"The cursed concert which I was partly forced into by my bad (FINANCIAL) situation has set me back with the opera. The Cantata, too, that I wanted to perform there has robbed me of 5 or 6 days..."

Tchaikovsky also did not hesitate to admit to Mme von Meck that a composition which owed its existence to external influences usually proved to be much more successful, while one that originated entirely from his own initiative might turn out far less well.

In 1840, Schumann was given permission to marry Clara Wieck, daughter of his teacher of piano and composition, and he was so happy that he created one hundred and twenty-seven songs that year alone.

Max Graf said that all artistic creation is preceded by a condition that can be termed: productive mood.
In other words, the composers need environments which facilitate their creative input and output; and conditions stimulating creativity are necessary, even to the first-rate composers.

The following are some of the examples taken from Graf's book: Richard Wagner had to be surrounded by luxury to put himself in productive mood. When he began to write the 'Ring des Nibelungen,' Wagner wrote to Liszt that he was being taken hold by the luxury devil and he had furnished his house as pleasantly as possible - velvet curtains, silk covers, etc.

Brahms was also a great walker and wanderer like Beethoven. He too sought inspiration in the woods.

Hugo Wolf composed his original songs during his walks on the Poetzleinsdorfer Heide or at the bank of Gmundner Lake.

Debussy loved to work in his room decorated with precious objects: Japanese lacquered work, Greek statuettes, handsome bookbindings, bibelots, vases, rare canes, etc.

J. S. Bach required the harpsichord to warm up his musical imagination. J. Haydn instead, had to improvise at the piano to find themes and musical ideas for his compositions.

4. They compose out of a motive or theme, or a musical vision of the whole:
According to what Tarratus found in the literature, Mozart and Schubert are the archetypes of composers who composed out of 'vision of the whole' type of inspiration; Beethoven, Dvořák and Rubbra worked from a motive or theme.

From a written conversation (1822 or 1823), Beethoven said that he usually carried his thoughts about with him for a long time, before writing them down. These were his themes, his motives, ... which he was going to develop and elaborate in his compositions. With the following words he described how he did with his musical thoughts:

"I change many things, discard others, and try again and again until I am satisfied; then, in my head, I began to elaborate the work in its breadth, its narrowness, its depth, its height and, since I am aware of what I want to do, the underlying idea never deserts me. It rises, it grows, I hear and see the image in front of me from every angle, as if it had been cast."\(^{21}\)

R. Sessions's creative process was similar to that of Beethoven. He composed out of a theme or two ideas together. He pointed out that musical ideas never arise on soil that is not prepared for them. The composer's mind must be constantly ready for the activity of composition. He also believed that a musical idea is the one that sets a given work in movement, although sometimes it grows
slowly. And on his experience of composition he had this to say:

"In my own experience, the initial idea has most often been the one with which the piece actually opens. In some cases this idea has remained unaltered from the start; in others it has undergone a process of revision, sometimes quite considerable, before reaching its final form. In these latter cases the impulse behind the revision has never been other than that of enhancing the character of the idea; and, at least in a few cases, this has taken place not at the beginning of the work of composition, but after the piece as a whole had begun to take shape." \(^{22}\)

Richard Strauss also composed from motives. This is clear, according to what he wrote:

"It has been my own experience in creative activity that a motive or two to four measure melodic phrase occurs to me suddenly. I put it down on paper and immediately extend it to an eight, sixteen, or thirty two bar phrases, which naturally does not remain unaltered, but after a shorter or longer 'maturing' is gradually worked out into its definitive form which holds its own against even the most severe, blasé self-criticism." \(^{23}\)

There are other composers who claimed to compose with a 'vision of the whole' of their compositions. Wagner and Brahms are among this group. Hindemith believed that only those who can foresee their compositions as a whole are genuine creators.

A. M. Abell reported that Wagner had spoken how he composed his operas; and how he saw in his mind's eye
definite visions of the heros and heroines of his music dramas:

"I have clear mental pictures of them ... and while I am holding fast to those mental images, the music, the Leit-motives, themes, harmonies, rhythms, instrumentation - in short, the whole musical structure, occurs to me." 24

In a talk with Joachim, Brahms stated that he was inspired when he composed and felt vibrations that thrilled his whole being. He said:

"Straightway the ideas flow in upon me, directly from God, and not only do I see distinct themes in my mind's eye, but they are clothed in the right forms, harmonies and orchestration. Measure by measure, the finished product is revealed to me when I am in those rare, inspired moods, as they were to Tartini when he composed his greatest work - The Devil's Trill Sonata." 25

For Hindemith, the difference between the genius and the untalented composer lies in that the former has - and what is far beyond the reach of the latter - musical VISION. Hindemith described the musical vision as the impression of a very heavy flash of lightning in the night. "With a second's time we see a broad landscape not only in its general outlines but with every detail." And he believed that if the composition is not conceived the same way, or in other words, if the composer does not see it in its absolute entirety, with every relevant detail in its proper place, he is not a genuine creator. 26
5. The Creative Process of writing a composition:

The time limit for a creative process is indefinite: is different from composer to composer, and from work to work. Boulez said that he thought in long waves always. He said:

"Some of my new compositions I am now working on I thought of five years ago."27

Max Graf wrote that actual composition work is achieved in a regulated union of unconscious forming and critical thinking, of inspiration and work. In a composition process, as he stated, the following phases can be identified:

1. Free Fantasy: here is variety, color, a wealth of ideas - the subconscious;

2. Artistic, Logical Thinking: a surveying of the whole; organic growth of ideas - the conscious.

And in critical thinking the following steps are necessary: a. Condensing and Simplifying; b. Expanding of ideas and forms; c. Elaboration and Intensification; and d. Final Revision.28

In discussing the problem of Musical Inspiration, Hindemith called the reader's attention to the frame of musical time and musical space the musical action takes place. This is the locus of creative process.

Hindemith thought that the German word for IDEA can better express what a musical idea does: *Einfall*, that
comes from the verb *einfallen* - to drop in. The first stage is when the musical idea drops in the frame of musical time and musical space, something you don't know whence, how and why. One of the creative persons' abilities is to be aware of, respond to and retain the keenness of the first musical vision until its embodiment takes shape in its final definite form.29

On the topic of 'Methods of Work' V. D'Indy wrote:

"The creation of any work of art, plastic or phonetic, demands, if the artist is really anxious to express his thoughts sincerely, three distinct periods of work: the CONCEPTION, the PLANNING (or ordering), and the EXECUTION."

(a) Conception means two operations: the synthetic and the analytic. In the stage of conception the composer lays down the outline, the general plan of the work and the determination of its component elements - the themes or motives.

(b) The second stage is that in which the composer, making use of the elements already conceived, decides on the definite arrangement of his work as a whole and in its minuscule details.

(c) The third stage is 'Execution,' i.e. the actual writing, the instrumentation, if required, and the formal presentation of the work on paper.30
On the compositional process, both Abraham\textsuperscript{31} and Howes\textsuperscript{32} pointed out that usually in any process of composition there exists a stage of 'Unconscious Gestation' or 'Unconscious Cerebration.'

6. Composers must be free to create:

Art is free. Technical rules should bow to beauty. The composer should be free, too. A slave to conventions can accomplish little.

It is narrated that when Haydn—heard that Albrechtsberger wanted all consecutive fifths banished from strict part-writing he strongly reacted saying:

"What do you mean? Art is free, and must not be confined by technical fetters."

And in a letter to 'Tonkünstlersocietat, Vienna, 1779, he wrote:

"The free arts and the beautiful science of composition will not tolerate technical chains. The mind and soul must be free."\textsuperscript{33}

Tchaikovsky confessed that he only kept the traditional musical form but was free to do what he felt to develop his ideas. Thus, in answering the question whether he confined himself to established forms, he replied that the answer was positive and negative:

"Some compositions imply the use of traditional forms, but only as regards their general features, the sequence of the movements. The details permit of considerable freedom of treatment, if the development of the ideas requires it."\textsuperscript{34}
Giuseppe Verdi even challenged the meaningfulness of the rules of traditional harmony and counterpoint. In a letter addressed to Signor Filippi, March 4, 1869, Verdi wrote these words:

"... When I write something that doesn't conform to the rules, I do it because, in that case, the strict rule doesn't give what I need, and because I don't really believe all the rules that have been taught up to now are good." 35

Upholding freedom in composition, Debussy wrote under the name of Monsieur Croche these words:

"Discipline must be sought in freedom, and not within the formulas of an outworn philosophy only fit for the feebleminded. Give ear to no man's counsel... ." 36

Varese went to Paris and entered the Schola Cantorum in 1904, where he studied counterpoint, fugue, composition and conducting with Vincent d'Indy. Quickly he became dissatisfied with his teacher: "The reason I left him was because his idea of teaching was to form disciples. His vanity would not permit the least sign or originality, or even independent thinking, and I did not want to become a little d'Indy. ONE WAS ENOUGH." 37

A. E. Grety thought that if to break a rule is to enrich Theory by creating one more rule, one mustn't be afraid to do so. The following is what he said:

"Woe to the artist enslaved by rules who does not yield to the flight of his genius. There must be deviations from the rule in order to express almost everything."
If you can achieve what you want only by creating an unusual combination, don't be afraid of enriching Theory by one more rule.\textsuperscript{38}

R. Sessions, noting that in every generation some rules of music have been broken and this is a healthy sign of progress, says:

"Should he be free to follow his own way, regardless of what are considered to be the "rules" or "conventions" of his art? Of course, this has been the traditional procedure of the greatest composers of every generation. ...He is free to make the music which is his own, that which he wants to make. In so doing, he is enjoying the most intense musical experience that is open to him, and presumably he finds fulfillment in it."\textsuperscript{39}

7. Composers continually review their composition:

"The composer must speak to the world or not at all," said A. E. F. Dickinson\textsuperscript{40} (1932, 155). So, what he wants to say, he must express it well. That is why the composer is so careful in dealing with his compositions: listening, correcting, changing instrumentation or chords, rewriting, and listening again, and correcting again, and so forth. This kind of behavior is one of the creative person's traits: a great striving and need for excellence.\textsuperscript{41}

In the biographies of composers it is often found that they continually revised and re-elaborated their compositions; some even corrected their scores after publication.
J. S. Bach never ceased correcting finished compositions. Findings reveal that he even made corrections on printed compositions.\textsuperscript{42}

Mozart didn't make exception here. The six quartets dedicated to Haydn show many corrections in the score; in the score of G-minor Symphony Mozart changed the chord in the violas so as to avoid a concealed fifths.\textsuperscript{43}

Beethoven in a written conversation with Louis Schlosser (1822) wrote these words: "I change many things, discard others, and try again and again until I am satisfied.\textsuperscript{44}

Mendelssohn was one of the most careful composers in history. Once he wrote his friends that when a certain Dr. Frank came to see him, and wanting to show him his composition 'Italian Symphony,' he re-read the score and came across many errata that he got interested. He then, sat down and re-wrote not only the Andante but also the Minuet and the Finale as well, and with many necessary alterations.

Graf stated that Mendelssohn never was contented with the finale in its first form. Its modification delayed the publication of the score until after the composer's death. "The first performance of this symphony in its new form also took place only two years after Mendelssohn's death," said Graf.\textsuperscript{45}
The same was true with Brahms, Bruckner and Wagner. Brahms often made correction right before printing. Some of Bruckner's symphonies have two or more different editions because of his repetitive corrections made on the original scores. It was reported that Wagner made changes in the timbre of 'Parsifal,' even during the rehearsals of the orchestra in the Bayreith Theatre.

8. Composers agree on the importance of technique:

All composers need technical proficiency, for musical ideas by themselves can not create a composition of art. The composers must know how to deal with, select, manipulate, organize, develop, synthesize, contrast, balance and put into intelligible form, his musical thought.

G. Verdi said clearly that the young composers should be taught a long and thorough course of counterpoint in all its ramifications. He also advised them not to study the works of the moderns too soon. Here are his words:

"When a young man has gone through a severe course of training, when he has achieved his own style, then, if he sees fit, he can study these works, and he will no longer be in danger of turning into a mere imitator."

In a letter of 1880, Rimski-Korsakov strongly emphasized the necessity of a formal study and the development of a good technique, and advised the young composers that the formal study of harmony and counterpoint must not
be neglected. Thus he wrote:

"All of us, myself and Borodin and Balakirev, but especially Cui and Moussorgsky, neglected this. ... Owing to such deficiencies in technique Balakirev writes little; Borodin, with difficulty; Cui, sloppily; Moussorgsky, messily and often nonsensically; and all this constitutes the very regrettable specialty of the Russian school."48

Kreneck advocating 'study of counterpoint in college,' stated that the type of contemporary music which is genuinely progressive is based principally on a new concept of counterpoint and polyphony, and further more, contrapuntal training is what makes the composer the true master of his craft.49

Hindemith remarking on the necessity of technique in young composers, had the following to say:

"Do we not know how long an extraordinary musician like Mozart had to struggle till he was able to bend, press, and mold the tonal material into the shape he wanted it? As a boy of five he wrote little compositions, at nine he was as qualified a composer as many others of that period, at twelve he had thoroughly mastered the technique of his time; yet it took him about twenty more years of his short life to write himself free from all restraints, so as to reach that superior technique..."50

It seems obvious that Hindemith does not only say that the technique of composition is important but also its practice.
9. Composers need a quiet time and space for composition:

Stanwood Cobb said that the reason why there were no great composers before the year 1500 was because musical creativeness was impossible up to that time: musical notation was in its rudimentary period, polyphony and counterpoint in their embryonic stage, and instruments scarce and primitive. Here are Cobb's words on the matter:

"The blossoming forth of the great musical compositions of the last three centuries required not so much a new humanity as a new musical environment and climate in which musical genius could be evoked and could successfully operate."\(^5\)

The composer needs a WORKSHOP, where he feels safe, comfortable, and undisturbed, so as to be able to reflect and create.

Benjamin Britten said that he only wrote in his home in Aldeburgh - where he was wont to work.\(^5\)

It was said that Wagner had his study decorated in silks and satins, heavy with delicate perfumes, and amused himself in clothes to match. But most composers don't think it necessary to have their rooms unusually draped or perfumed. What they demand is only "a room, a desk, a piano, and above all - peace and quiet."\(^5\)

Beethoven stated that he generally obtained his musical ideas "while walking in the woods, in the stillness of night, and at early morning."\(^5\)
Brahms insisted on being left alone and undisturbed either in his room or on the walks he liked to take in the country.\textsuperscript{59}

Tchaikovsky writing to Mme von Meck, confided:

"During the actual time of creativity, COMPLETE quiet is absolutely necessary to the artist."\textsuperscript{56}

10. Composers regard the ear to be the guide for musical choices:

Michael Hurd considered a sharp keen ear as an indispensable ability for the composer, by which he exactly knows what he is writing on paper. He hears in mind what he represents by notations.\textsuperscript{57} Holding similar view, Sessions noted:

"In composition, the composer's ear creates the contexts; it HEARS FORWARD, as it were, in terms of the contexts."\textsuperscript{58}

This 'Hearing Forward,' Copland called 'the Sonorous Image,' which is "nothing more than an auditory concept that floats in the mind of the composer; a prethinking of the exact nature of the tones to be produced." This 'Sonorous Image' has always been a preoccupying concern of all musicians, because one cannot create a beautiful sonority or combination of sonority without first HEARING the imagined sound in the inner ear.\textsuperscript{59}
Fully agreeing with Copland, Hurd remarks:

"Ideally, then, the young composers must sharpen his mind to the point where it can translate notation into imagined sound, and turn imagined (or real) sounds into notation. Once this has been achieved there is nothing to hinder the free flow of his invention - it can pass from mind to paper with the utmost speed." 60

In relation to the above discussion, Sessions pointed out that 'intuition' in music simply means a result of the intensive and pertinent functioning of the aural imagination -- which is "the working of the composer's ear, fully reliable and sure of its direction as it must be, in the service of a clearly envisaged conception." 61

This being understood, one will not be surprised to hear that Brahms 62 and Wagner 63 claimed to have heard their composition in its entirety, because the functioning of their sonorous imagination had worked, to the utmost degree. Besides, as music is aural art, many composers compose by ear and technique; in other words, by aesthetic and theoretical value. Thus, Haydn advised that to judge a composition the composer has to "use his ear -- naturally, the cultured ear." 64

To sum up the above talk of 'inner ear,' let's say:

1. The composer has to train his aural faculty so as to free himself from any hindrance that may block his creative mind, and to speed up his actual
composition.

2. To judge good music, aural imagination - the cultured ear is necessary.

3. Optimal 'Hearing Forward' is possible to great composers.

B. What do the Music Educators say about Composition?

To answer this question properly and orderly, the present writer thinks that the following sub-questions should be answered first:

1. How do they define composition of music?
2. Why teach composition in school?
3. What is the appropriate age to begin composition?
4. What is the favorable environment?

And these answers combined, will tell what the music educators really think of composition.

1. How do they define composition of music?

Since materials and literature for answering the question are so vast and inexhaustible, only the following authors' books or articles are chosen for examination:

H. Lowery (1952)  
Russel N. Squire (1952)  
James L. Mursell (1953)  
P. Maxwell Davies (1963)
For H. Lowery a composition is a product of intuition. The composer deals in musical wholes and reaches his creative product in one bound rather than by careful reasoned steps. When at work, he balances one musical idea against another and evolves new ideas from the presented material. But his method is intuitive, the opposite of the scientist's analytical method.

Although analysis may help understand the whole by splitting difficulties into smaller parts, analysis alone will never lead to a full comprehension of an art-work as a whole. This can be done only through unanalysed perception of the whole creation, as this was also the way how the composer created his masterpieces - by intuition.

Squire instead saw composition as one of the outlets that music provides for creative Expression. This outlet through music transports man into 'a transcending realm where he can speak the unspeakable and give substance to what otherwise would be intuitive fantasy.' The definition he gave to composition is:
"The composer's work is the creation of an original and beautiful arrangement in which he expresses himself and his reactions to aspects of his environment and which he offers 'with fear and trembling' to the performer and the listener." 75

Mursell also spoke of composition as Creative Expression but he believed that by creative expression in music should be understood personal musical initiative - the complete and wholehearted identification of one's whole self with a musical activity, so that this can be felt by ourselves and recognized by other people as conveying our inmost insights, intentions and emotions. Thus, he said:

"Musical composition is the most striking and unmistakable instance of creative expression so understood. The composer is completely identified with his work, and in it his very self stands revealed. It is the supreme example of personal musical initiative." 76

Davies's description of composition was a practical one. In the convention met at the University of Bristol, April, 1962, he produced twenty-one compositions written by his students of age from 12 to 16, for the participant music educators to see and hear. In his paper, he told the audience how these students' creative work was born of sheer necessity. His experience made him say that the very first step to composition is improvisation. Composition, after all, is much slowed-down and chewed-over improvisation. At the conclusive paragraph he said:
"I hope that these few examples have shown you that children are capable of producing vital and arresting original music, if all creative drive is not hounded out of them ... or stifled by the teacher's own limitations. Musical composition, like painting and literature, is a natural means of expression which could play a beneficial part in the lives of individuals in our schools, and in the general life of the school community..."

In his book entitled 'Music Education' V. Horner dedicated a whole chapter to 'creating,' quoting a good number of studies and findings, related to musical creativity. In this review he draws the attention of the reader to distinguish creating from making music. According to dictionary definitions, he stated, creating implies the bringing into existence or the inventing or originating of something new.

According to the researchers reported by Horner in this chapter - Nye (1963), Agnew (1922), Cowell (1926), Benham (1929), Doig (1941, 1942), Gross and Seashore (1941), Mainwaring (1951), etc. the following points on the nature of composition have been found:

1. Purpose appears a significant factor in creativity which implies a background, musical skills, a variety of materials, and the opportunity, freedom and teacher-guidance conducive to creating.
2. Many composers possessed sonorous image at least as vivid as their perception of musical tone. It seems that many lived in a tonal world and consequently could hear the effects of their compositions.

3. Auditory imagery is an important element in composition of music, and this is strongest at the emergence of the musical idea.

4. Imagery plays a significant role in composition as well as knowledge and experience of the tools of music, concepts of tonal and rhythmical elements and of musical structure.

5. Both formal and informal training are important as a formation for composing.

6. Composing involves considerable hard work, and the development of good working habits facilitates creative effort.

7. Hard work combined with a knowledge of musical elements and musical structure are as important as the inspiration which originates the act of composing.

8. Student composers can be helped in their composition by giving them practice in writing imaginative ideas away from the musical instrument but this requires an ability to read and write music.
9. The development of imaged thought and the ability to think in musical terms and transpose them to manuscript or keyboard appear essential elements in the creative process.  

Composing for R. P. Gelineau is regarded only as one of the many creating experiences, which include:

- Composing Words to Familiar Tunes
- Composing Words to Familiar Poems
- **Composing Words and Music**
- Creating with Harmony
- Creating with Rhythm instruments
- Creating with Listening
- Creating with Body Movement
- Creating with Electronic Music
- Creating with Scales
- Creating with Sound, etc.

According to Gelineau, successful creating in any field is dependent upon the extent of knowledge one has acquired in that particular field, and thus, the more meaningful musical experiences with which a pupil has been provided, the better equipped he is to produce substantial creations of his own.
Whitlock defined creating as 'causing to come into existence' and 'producing by one's own thought and imagination.' He noted that children are imaginative and inventive and "works of art, selections of literature, architectural designs, musical compositions and other inventions are the product of thought and imagination of persons whose childhood nurtured and encouraged experimentation."

As to writing melodies he thought that there is no one CORRECT approach for getting young people to start composing. How they start is not important; THAT they start is most important. And on the mechanics of Notation he emphasized that the students must be able to write rhythms and melodies that they and their classmates create. With practice, he continued, the youngsters will be able to write their creations on manuscript paper.88

For Frederick J. Swanson composition is creating music, which means any activity where a student makes up, adds to, or alters a musical product by his own efforts and out of his own imagination. He remarked that to teach composition is not just to prepare students to become composers, but also a. to help a child identify himself with an on-going experience;

b. to make more meaningful what is learned as an item of knowledge, and give purpose to learning a skill;
c. to provide for individual differences in the students;

and

d. the last reason justifying teaching composition in school is that the ability to create is deserved to be fostered and encouraged in every part of the educational process. 89

On the topic of "Releasing Creativity of Students" J. Duncan seemed to define creativity as the ability to write a meaningful notation. He also stated that although generally it takes a composer to discover a composer, this does not mean that a non-composer teacher can not identify who creative students are and show interest in nurturing creativity, but it is desirable that creative students should study composition with a teacher-composer. 90

Summarizing the various statements of the nature of composition of music, the present writer has found that they can be briefed as follows:

1. Composition is a product of one's own imagination, intuition, and thinking.

2. As product, it must be new, original and beautiful.

3. In general, it is written in meaningful notation.

4. Composing is a creative outlet for one's expression, for his response to the environment, and for resolving his inward unrest.
5. As creative process, composing involves spontaneous inspiration, an urge or purpose to create, auditory imagery, and hard work.

6. The two basic abilities necessary for composing are aural imagination and musical craftsmanship.

2. Why teach composition in school?

The simplest answer is because to compose is to create, and creativity has already been commonly accepted to be of tremendous importance to the development of the child.

Here, V. Horner (1965, 165)\textsuperscript{91} again is quoted to have stated that a good number of music educators claimed creativity can contribute towards the development of the child very much, especially Normann (1962),\textsuperscript{92} Jones (1963),\textsuperscript{93} Mursell (1958),\textsuperscript{94} and Walsh (1956)\textsuperscript{95} who all expressed a belief in the importance of creativity in the musical curriculum as an aid to child development and to the discovery of musical values.

Horner also cited Tipton's (1950)\textsuperscript{96} description of creative expression "as an absorbing activity which involves a \textit{self-imposed compulsion} to discover, test, and interpret new associations of musical symbols."

Nye's (1963) statement was also reported, that the \textit{creative outlook} is transferable to other fields of endeavor, and thus, in this sense, creative activities in music are educationally significant.\textsuperscript{97}
L. F. Sunderman declared that 'creating' in a General Music Program has two specific objectives:

a. To discover creative talent and to provide opportunities for its outlet.

b. To correlate music with visual arts and creative writing.

The 'creating' activities he suggested are the following:

a. Composing melodies

b. Creating accompaniment using piano, auto-harp, bells and rhythm instruments.

c. Creating harmony through singing.

d. Interpretive dancing.

e. Dramatic performances.

f. Drawings.

g. Making instruments.

Henry Lasker in the opening chapter 'Creativity - Why and How?' of this book stressed that the objective of teaching composition should primarily be to "help produce healthy human beings, individuals who are culturally stimulated, intellectually appreciative, emotionally stable, and psychologically tolerant." Self-expression, creativity, invention and imagination, as he observed, are all gifts to be treasured, which every human being possesses. These gifts
however must be developed to open up new horizons, which may heighten every aspect of living.99

In conclusion of the above statements on the usefulness of teaching composition in school, a repetition of the four good reasons given by Swanson here, is only more than appropriate, for they sum up this section quite adequately:

Reason 1. Creating helps the child identify himself with the learning experience.

2. Creating sets and solidifies the learning results.

3. Creating offers the child opportunity for individual development.

4. The ability to create, being a rare, precious aspect of human endeavor, deserves to be encouraged and nurtured in every part of the educational process.100

3. What is the appropriate age to begin composition?

In the literature, it appears that the educators have not yet said definitively what is the appropriate age for starting composing, but they all seem to agree that this can be done at an early age.

Lasker believed that "exposure to a creative musical experience should begin early in life, especially in the earliest stages of a child's general education." The following words are his: "In the primary grades a child draws
Fox and Hopkin also were among those who were convinced that young children can create songs. Sometimes they compose words and melody together; sometimes, words first, melody later; and other times, melody first and words later.102

On the topic of 'Learning to compose simple Songs' Duncan stated that even though melody writing can be taught in the first grade, it is better to start with children in the upper half of the third grade because their world is somewhat larger. Then, he went on to remind the teacher to develop a wholesome atmosphere for creativity, THAT the children must feel free to make mistakes.103

Whitlock, in his Handbook for Music, remarked that to write a melody is fine. But for those without such experience, a melodic background must be constructed.104

Swanson appears to consider that the sixth grade is the proper time when the youngsters are ready to try out something of their own, since they have sung quite a bit, some have had piano lessons, some have begun to manipulate band or orchestra instruments, only if the teacher can give them the chance; and guides the initial steps.105

Thus, judging from the above facts and statements, one may conclude that creating may begin very early, even COMPOSING, provided the necessary 'tools' of composition have been learned.
4. What is the favorable environment for composition?

We all know that the four walls of school do not make an environment, which is something else and more.

Whitlock pointed out that all elements of attitude, space, time and resources combine to produce an environment in which significant creative activity is nurtured.

The attitude among the classmates and the teacher, Whitlock stressed, should be pleasant, relaxed, friendly and helpful. Good-natured, complaisant and good-humored guidance of the teacher help the pupils develop an easy, anxiety-free and relaxed approach to experimentation.

By space, it is meant that sufficient "elbow room" for the students is important, so that they do not feel "crowded", for space helps dispel tensions, anxieties, apprehensions and inhibitions.

By time, Whitlock meant that there must be

a. time for the establishment of a desirable attitude;

b. time for the students to interact with each other and with the teacher;

c. time for imagination to be encouraged;

d. time for creating experiences to occur; and

e. time for teaching and learning the needed techniques.
Resources here, mean all the past experiences of an individual. The teacher aids direct his attention to usable past experiences, suggests new experiences to build on the old, and assists and encourages him in developing novel and valuable ones.106

H. Lasker emphasized that a creative climate must be established for the teaching of musical composition. Here below are his practical advices:

1. Individual advising and counseling, during which so much can be accomplished in an atmosphere, free from tensions of the classroom, must be provided.

2. Students should be expected to work consistently and independently on their own composition at home or wherever they find convenient.

3. A healthy listening environment ought to be established, to enrich the students' cultural knowledge and stimulate their creative imagination.

4. Theory must be creatively taught so as to give the student a fundamental concept and secure understanding of the structure of music.

5. Help develop the capability of 'hearing mentally.'

6. In the very beginning of theory class, the students ought to be encouraged to compose, that the misunderstandings of misconcept of composition be eliminated.
7. In their early efforts students are urged to 'live dangerously,' so as not to be afraid to risk and explore in their composition.

8. After hearing each composition played at the piano, the peer-composers evaluate and criticize it constructively. Weaknesses are pointed out as well as strengths.

9. Throughout all this time, a climate of constructive criticism should be strongly encouraged. This is imperative.

10. The teacher must provide opportunity that these young composers can hear their work actually performed.

11. Creative writing must not be rushed or pressured, but consistently encouraged. The music educator here ought to be patient and work with dedication.
Can Composition be taught in the sense that has been discussed?

The answer is positive.

What is 'composing'? It is simply to create. It is to produce something new, out of one's own imagination and thinking. To write a composition is to think in musical terms and produce something unique and novel, at least for the composer himself, in meaningful notation.

In order to be able to do so, one has to be taught at least the fundamental "tools" of composition.

F. L Hussey said that he defies anyone who has learned nothing about music to compose a piece, of any length worthy of being called music, and that the best way to learn is to be taught.

In the present writer's opinion, Hussey made an excellent metaphor, describing a student learning how to compose as equal to a child learning how to swim. Here are his words:

"His pool, a very deep one, is the ocean of traditional techniques, rules or conventions. He cannot learn to swim without getting wet, but generally will stay near the surface, except for occasional dives. ... The student must be made to realize that he will gain much by swimming in this pool of knowledge, at the same time realizing that he is master of it and need not sink and be lost."108

So, that composition should be taught is quite obvious.

The technique of translating imagined sound into notation, the musical form, harmony, counterpoint, orchestration, etc. ought
to be taught to the beginning composers, according to their age and capability.

In addition to this however the teacher is able to do many other things to teach, to encourage, and to tolerate these composers' creativity, such as providing Sensory Stimulation, setting an environment facilitating creative thinking, training for original, flexible and fluent thinking, applying promoting creativity techniques, and individual advising and counseling. All these combined efforts will not only train future composers but also produce mentally healthy people.109

This possibility can be better understood in the following analysis of the creative process.

G. Wallas was the first to proclaim the process of forming a new thought to be of four stages: a. Preparation, b. Incubation, c. Illumination, and d. Verification; or in other words, as proposed by I. A. Taylor:

1. Exposure Phase
2. Predivergent Phase
3. Conversion Phase
4. Postdivergent Phase
5. Expression Phase110

Exposure Phase:

This period is one in which the environment is perceived, and sensory stimulation is provided for producing psychological openness and starting the creative process.111
Here deferred judgment technique, brain-storming principle, Morphological analysis, Forced Relationships Method, and other principles of perceptual organization may be utilized.

**Predivergent Phase:**

This period is that during which the person does the assimilation, which requires the greater psychological portion of his capabilities. This phase sees the person's interaction with data, unconscious incubation, induction and sometimes, also an experience of surprise at the information.  

Here the making-the-strange-familiar and making-familiar-strange technique (Synectics), as well as PakSA, can be employed.

**Conversion Phase:**

This is a moment of insight, perceptual transaction, Parnes's "aha" experience, Hindemith's musical vision, intuition or inspiration. This is the "Eureka" phase or moment of flash of novel ideas in which the composer has his vision, hears his composition in its entirety, or the familiar turns into unfamiliar, and the unfamiliar, familiar.

The time for this phase however cannot be predicted, being dependent the individual's own psychological and physiological factors, different from person to person.

The teacher here can only be a facilitator.

S. J. Parnes declared that the typical "aha" experience is the result of the new connection of elements residing inside one's mind and/or within his perceptual field, and that this new,
relevant, valuable, harmonious, satisfying, and pleasing connec-
tion often just happens, accidentally or serendipitously. Parnes
also announced that what research of the last twenty five years
has made increasingly clear is that there are many processes a
person can exploit to help augment the probability that the right
connection will take place. 113

Instead of using the word 'conversion' E. K. Von Fange used
'illimination' to describe the moment of sudden insight or under-
standing, that one may come across some time after having stopped
concentrating on a problem. And in the explanation of the phe-
nomenon, Von Fange stated that the following are the essential
ingredients of illumination:

1. One must have worked on the problem intensively, but without
success.

2. A time interval must elapse during which one's interests
become completely absorbed in another matter.

3. Then, either through chance moments of reflection or through
deliberate measures, one's own mind drifts of its own accord
back to the problem.

Von Fange suggested that spreading one's efforts on a
single problem over as long a time interval as is practical, may
become a fruitful tool for the individual to attack the problem
and find many new considerations and subtleties that enhance
the quality of his work. 114
Postdivergent Phase:

This period is the one in which the so called bright idea or ideas are being elaborated and organized, and given freedom to take form, through deduction and inference.\textsuperscript{115}

Here, the musical skills and techniques are indispensable. One of the basic principles of creativity by Dorothy Hickok and James A. Smith is "Knowledge, skills, and facts are required of each individual in order for him to be creative."\textsuperscript{116}

Expression Phase:

This period is one related to communication, implementation and actualization, and at the end of this phase the creator will come up with something unique and valuable, in its polished determinal form. This period of composition generally involves tension, and patient work.

Since this is a period of labor, genial guidance, patience and encouragement from the teacher are necessary.

Summary:

To sum up the reasons why Composition can be taught:

1. the tools of composing have to be learned, and the best way to learn is to be taught.

2. As creativity can be stimulated, guided and encouraged, so is composing as creative behavior.

3. The creative process of composition involves Exposure, Predivergency, Conversion, Postdivergency, and Expression.
The literature has made clear that there are many techniques man can use to help increase the quality, efficiency or greater likelihood for these individual units.
(3) How Can Composition be Taught?

Creatively: Composition should be taught creatively.

Owing to its comprehensive nature, a satisfactory answer cannot be given in one sentence or paragraph. An attempt then, will be made in tackling the following related topics:

1. The Nature of Creative Teaching
2. The basic principles of creative teaching of music
3. Written Composition versus Empirical Composition
4. Who are to teach musical composition?
5. A Proposal

The Nature of Creative Teaching

Teaching can be defined in many ways. According to Leonhard and House, teaching is defined as the organization and conduct of learning experiences. Gagné however used the word 'instruction' for the same thing. Thus he defined it: "Control of the external events in the learning situation is what is typically meant by the word 'instruction.'" The purpose of teaching or instruction is to facilitate learning. Strictly speaking, there will be no teaching unless learning does happen as a result. Creative learning, in general, is the result of creative teaching.
Creative teaching emphasizes the acquisition of intuition, insight, ideas, meaning, originality, fluent and flexible thinking, through creating, exploring and discovering.

The Cheyettes in the summary of their chapter on 'Developing the Innate Creativity of Children,' have this to say:

"Every music lesson should arouse curiosity, demand creativity, utilize skill, and grant satisfaction."119

Fox and Hopkins, commenting on creative music, stated that the new concept of music education is an outgrowth of the experimental philosophy, the organismic psychology, and the psychological concept of creativeness. For them, music should be approached as a rich experience promoting desire for expression in rhythm and melody, for something which the child can feel with his body and carry with his voice.120

Hickok and Smith in their paragraph on 'the Nature of creative teaching,' said that creativity being a quality deeply imbedded in the human personality, it can be developed by reinforcement when it does happen, but the principal job of the creative teacher is to keep certain physical, psychological, socioemotional, and intellectual conditions within the classroom so it will be free to rise to the surface and he/she can get it and develop it. They considered creativity as a quality, a characteristic and a way of learning. The following is what they said about creativity as a way of learning:
"Some research has shown that as a way of learning, creativity excels other ways of learning, accomplishing more and better learning in a given time period than more traditional methods of learning. Creative learning calls for creative teaching and creative teaching is a method of teaching that differs from other methods."\(^{121}\)

The Basic Principles of Creative Teaching of Music

There are several books and articles discussing this matter in length, but Hickok and Smith's treatment appears to excel for being concise and comprehensive. They have found eighteen in all, of which some will be reported here below for reflexion:

1. In creative teaching, something new, different or unique results. Here, it has to be mentioned that each person's experiences differ in form and perception from others' experience, and thus, each interpretation of his or her experience must be different or unique.

2. In creative teaching, divergent thinking processes are stressed. The composition of a melody or a song is an instance of divergent process in action. This is intended to develop qualities such as flexibility of thinking, originality, fluency of ideas, spontaneity, uniqueness, etc., and these are the basis of creative thinking.
3. In creative teaching, **motivational tensions** are a prerequisite to the creative process; the process serves as a tension relieving agent. Motivation is important for all kinds of learning, but this is especially true in promoting creativity. Although many children will compose with spontaneity, in creative teaching one must carefully plan the introduction to the lesson or project, so that, as stated by Smith, the mood of the children be set, and imagination fired.

4. In creative teaching, there comes a time when the **teacher withdraws** and the **children face the unknown** themselves. This means that at this moment the teacher and children change role. In building up motivational tensions, the teacher is the planner, the leader, the producer, but as soon as his role has been played, he has to retire, to retreat, so as to let the class take over and become the planners, leaders, guides and producers.

5. In creative teaching, conditions must be set which make **possible preconscious thinking**. Creative teachers help children form associations with past experiences and stimulate them to dig deep into their subconscious and to assemble past experiences into new patterns.
6. Creative teaching means that students are encouraged to develop and generate their own ideas. Unusual, different, original ideas, being often close to discovery and/or invention, ought to be encouraged.

7. In creative teaching, the process is as important as the product. The process of creative composing, for instance, takes place more often when it is practiced or repeated.

8. In creative teaching, certain conditions must be set to permit creativity to appear.

   a. Physical conditions:
      The classroom should be like a learning laboratory with all the necessary musical materials available that the children have opportunity to experiment, explore and develop music technique.

   b. Psychological conditions:
      Certain psychological conditions are also indispensable. Good rapport for example, must exist between the teacher and children, and among the children themselves; and there must also be an atmosphere in which the children feel comfortable in experimenting, manipulating, exploring and even making mistakes.
c. Intellectual conditions:
The children should be motivated to think, use their imagination and reasoning. The more they think, the richer they create.

d. Social and emotional conditions:
Sound social and emotional conditions must pervade in good relationship among the children. This will prevent aggression and violence from hindering creative and constructive activity.

9. In creative teaching, self-initiated learning is encouraged. Creative teaching begets self-initiated learning. A child becomes truly creative when he self-imposes to learn, create, experiment, solve problems, produce songs, dances, poems, and other products without the motivational suggestion from the teacher.

10. In creative teaching, methods are used which are unique to the development of creativity. Although these methods have already been mentioned in chapter two, they are repeated here for reference:
   a. Deferred judgment
   b. Creative ideation: adaptation; new uses; modification; magnification; minification; substitution; combination; rearrangement and reversing.
   c. Brainstorming\(^{122}\)
Written Composition versus Empirical Composition

According to V. Horner's review, Tipton described creative expression as an absorbing activity which involves a "self-imposed compulsion" to discover, test, and interpret new associations of musical symbols. As Musical creativity draws upon the child's imagination, initiative and ingenuity to discover ways to express his feelings and his meanings the experience of creating appears to be of primary importance, and not the perfection of a musical product.123

Having understood this, one is not overwhelmed to see that in many recent books or articles 'Empirical Composition' tends to be preferred to the written composition.

In the introduction to projects, Sound and Silence, Paynter and Aston remarked that the principal METHOD behind the creativities in their book is simply 'Empirical Composition.' What they really mean is to go directly to the musical materials - the various instruments or musical ideas - and to experiment with them by improvisation until a piece of music has been forged. This is the usual processes of composition in any art: selection and rejection, evaluating and confirming in details mentally...

To understand the method one has to try or closely examine some of the projects. Take project five for example: Pictures in Music. The assignment the empirical composer has to do is:
"Using any instruments you have (or vocal sounds if you think them suitable) work in groups of above five, each group creating a piece of music about one of the following ideas. Choose your title first and then try to find the kind of sounds which will be of most use to you."

(1) Dusk
(2) Winter
(3) Walking through a Fairground
(4) The River
(5) Sunrise in Woods
(6) The Moods of the Sea
(7) A Tower below the Waves
(8) Empty Streets
(9) Desert

Tape-record your music and on another occasion listen to these pieces alongside music by other composers on similar subjects. 124

Here in the assignment a pattern of composition can be clearly seen: Something has to be expressed:

Sound of the Dusk?
Sound of Winter?
Sound of the River?
- Go directly to the various instruments or musical ideas
- Search, experiment, select, explore, discover.
- Evaluate: reject? improve? elaborate?
- Put the music to intelligible notation (This is not required) and tape-record the music.
- Compare the final product with other music that carries a similar title.

Above the notation, the authors said:

"In recent years composers ... are evolving new systems, many of which use graphic symbols. Notation is not music. The sound comes first. If children want ... may be the moment to teach ... conventions; but guard against the danger of killing the music's spontaneity."125

M. Val Marsh is another one who believes in "Empirical Composition, which can be attested in her "Explore and Discover Music." Take her teaching of 'Composing with Original Instruments' for example, in which she planned the exploration of sound as follows:126

A. Using Environmental Sound in the Classroom

a. Explore Sound Through Literature:

Here the 'sound words' - SWISH, PLOP, WHEE, MEOW, CLICKETY-CLACK, FLIPPETY-FLOP, LIRRA-LIRRA-LING, etc. - are given much attention and used as means to an end.
b. Exploring Sound Through Songs:
Here the sound-words in songs are carefully studied
and imitated, e.g. "Clip-Clop" of Dobbin's hoofs
(Wood block, coconut shells, or inverted paper cups are used to imitate the CLIP-CLOP sound.)
c. Creating Pictures and Stories in Sound:
Here some sound effects are organized into a story or a show of film slides projected on a wall. Example: "It was midnight, just before the witching hour. A tick-tocking clock (which many of today's children have never heard!), whistling wind, and the chime in the tower striking twelve..."
d. Hearing Environmental Sounds in Composed Music:
Here in this project some descriptive music is played for appreciation, such as 'La Mer' by Debussy, 'The Moldau' by Smetana, 'The River' by Thomson, 'Three outdoor Scenes' by Ives, 'Pastoral' Symphony by Beethoven, etc.

B. Search for New Sounds in Music

a. Creating with "built-in" Sounds:
In this unit the children are helped to accompany familiar songs or music by orchestrated sounds, such as clapping, snapping of fingers, rubbing palms, slapping legs, tapping feet, stomping feet, tongue clicks, ssss, ssshhh, etc.
b. Composing with original instruments:

In this project the children are utilizing sound possibilities, to create their own sounds and perform together in organized ways.

Marsh believed that creativity is a process as well as a product: the creative process may be of greater importance than the product (e.g. written composition) created; creativity is promoted by a rich environment of ideas, experiences, materials, and equipment; and creative thought and action result from involvement of the learner in exploring ideas and processes.¹²⁷

Murray Schafer is also another one who believes in "Empirical Composition." Schaefer stated that his work in music education has been concentrated mostly into three fields:

1. Discovering the creative potential of children and guiding them to make music of their own.

2. Introducing students to the environmental sound and treating the world soundscape as a musical composition of which man is the principal composer, and making evaluation which would lead to its improvement.

3. Finding a NEXUS where all the arts may meet and develop together in harmony.¹²⁸
Eventually in the three projects: a. The Composer in the Classroom; b. Ear Cleaning; and c. The New Soundscape, Schafer, as music educator and composer, was stimulating his pupils to create with sounds, find them out and hear them, i.e. TO EMPIRICALLY COMPOSE WITH SOUNDS.

In one of the exercises in 'The New Soundscape,' Schafer planned to do the following with his class:

a. A class of instrumentalists is divided into groups.
b. Each group chooses a leader.
c. They go out to separate places to find five nice sounds of their own.
d. Then they come back and play them. If the sound they have found is not FINE enough the group will go out again till they find a satisfactory one.
e. After all the groups have found their FINE sounds and come back, 'empirical compositions' now begin to be improvised.
f. At this moment, many orchestral devices may be employed, such as solo and tutti, soft and loud, crescendo, diminuendo, quick-slow-quick, slow-quick-slow, etc.

In this project, a great variety of musical sounds can be achieved, and also a great deal of discovery.
Stan Bennett is another music educator, who teaches 'empirical composition.' His strategy for teaching it is 'improvisational approach,' as he named it. It is through improvisation that one begins to create music. To speak a language, as he stressed one needs to be immersed in that language - the medium; in learning to speak musically one must also be immersed in the medium - he needs to experience with sounds on some musical instrument. At the beginning he makes a lot of noise - he babbles musically. But as experience with that medium progressed, the confusing mass of data would begin to become organized, and gradually, the learner would understand what sounded good and what did not. Finally one day, he would produce his first musical phrase or sentence.

The following are some of the specific components of this improvisational approach he has proposed:

1. The students must have free access to a musical instrument for the purpose of improvisation.

2. Participation in this program, including use of the instrument, should be completely voluntary at all times.

3. The students have to be assured that they can create music.

4. A great deal of composing should be going on in the environment, especially by music teachers.

5. The students should be able to make recordings of their improvisations.
6. If a student finds difficulties in improvising and asks for help, the teacher and the student will listen to a tape of recordings, to note any musical idea(s) that the student might develop.

According to Bennett, discovering a "germinal idea" is often the first stage in musical composition.

7. The teacher should respond to the students' compositions with praise and encouragement, NEVER with CONDEMPTION, and by relating to the piece.

8. Reading and writing music might - better be postponed until the student is fairly proficient at improvising.

This empirical approach of learning to compose was presented, at the annual Convention of the American Psychological Association, Montreal, Quebec, August 29, 1973.

In other books, however, such as 'Teaching Creative Music in Secondary Schools' (Lasker, 1971), 'Music Teaching in the Junior High and Middle School' (Swanson, 1973), 'Teaching Music in Urban Schools' (Simmons, 1975), and others, written composition is taught creatively.

Lasker's Creative Method of teaching composition is simply to establish a creative climate, fight the misconception about music composition, start it early, and teach the essentials. The excellent examples he included in the book appear to confirm the success of the method.
Believing in the usefulness of the tools and mechanics of composition, Swanson is teaching written composition. Thus he said:

"The ability to create seldom just appears or happens. There has to be a felt need or urge to create, there must be sufficient skill and knowledge to furnish the tools and mechanics of creating, and there must be some training in how to go about the business of making up, inventing, adding to, and altering. Also very important is the attitude that creating is permissible, acceptable, and desirable."134

Swanson's lessons in teaching composition are essentially:

1. Making up a harmony part
2. Making up an obligato or descant
3. Adding up an instrumental harmonic accompaniment
4. Creating a rhythmic accompaniment
5. Making up bodily movements
6. Making up a story-plot or dramatic sequence
7. Setting a poem to music or making up instrumental-vocal solo.135

Duncan's teaching procedures are:

a. Teach how to compose simple songs -
   1. create melodies by solmization; and
   2. create melodies by rhythmic-chordal method.

b. Encourage practicing:
   - compose a vocal or instrumental ostinato
   - compose a descant to a familiar tune
- compose a simple march
- compose a waltz or simple variations on a well-known tune.  

Although R. S. Coulter's dissertation does not deal directly with creative teaching of musical composition, his ideas on teaching of music theory, important to high school teachers of theory, are worthy of mention, and thus, included here for later reference.

In the Dissertation Abstract, Coulter (1975, XXXVI-(5) 2475-A) stressed that the study of music theory should be designed as follows:

1. To offer the student means to valid evaluation on music produced by others; and
2. To help the student actually create music of his own. Here are his words:

"Music theory, to the author, is a compendium of procedures and practices by past and present composers, and study of such a compendium should be designed to provide the student with tools upon which not only to form valid judgments as to the worth of music produced by others but also to aid him in actually producing music of his own."

Then, he marked that one of the most valuable tools in the learning process of theory involves the creation of original compositions by the student.
To sum up:

It appears that both written and empirical methods of composition are of value, in developing creativity of children. The empirical seems more suitable for the younger, and by no means, unimportant to higher classes; the written method fits higher grades better, but can also be started early if environments are favorable.
Who are to teach Musical Composition?

Theoretically, a teacher-composer is the best choice for the job. Reason 1: It takes a composer to discover a composer.

Reason 2: An experienced composer is not only able to teach the technique - the means of production but also "the attitudes", which in the final analysis may be more important.¹³⁸

Reason 3: An experienced composer is certainly in a better position to evaluate, criticize and judge the product created by his students, because of his past experiences, and the discipline he acquired during the training periods.

Without denying the above, Lasker however thought a little differently:

"These teachers need not necessarily be specialists in composition. All that is expected of them is:

1. A love for music
2. An academic background involving the knowledge of the simple elements of music
3. An elementary exposure to applied music in any form
4. An empathy toward and an understanding of youngsters. (Possibly this should have priority)"¹³⁹
Hickok and Smith also thought that a classroom teacher and/or a common music teacher can aid a child learn to compose.\textsuperscript{140} Although teaching the 'tools' of composition needs a specialist, they believe, there is MUCH to composition beside the technical skill.\textsuperscript{141}

Schafer also had new ideas about this matter. According to Schafer, for teaching traditional music, professionals are necessary. NO COMPROMISE HERE - just to use his own words. But to experiment, explore, create, discover, he thought, virginity of intellect has its advantages. Thus he expressed:

"It may be possible, therefore, or even desirable, when searching for recruits for the teaching of music in the "PRESENT TENSE" to accept precisely those people who, possessing a love for the subject, do not possess the qualifications demanded of the traditional teacher. Their unprejudiced innocence may be useful in making discoveries of new techniques and approaches."\textsuperscript{142}

**A Proposal**

In summary of the four previous discussions, to creatively teach musical composition means to know:

What to teach;

What creative teaching means;

What are the basic principles;

What is meant by Composition in the traditional sense, and what are the essential technique teaching it?

What is the new trend, and how to do it? and finally

Who are those who are qualified to do the job?
and to do it accordingly.

Unfortunately, all the answers found here, mostly came from theoretical books, and research has said too little in this regard. So, why shouldn't one go out to the practical situation and find out something for himself?

Thus, a proposal of a survey has been put forward for consideration.

The objectives of this survey were to search for:

1. How composition is taught in secondary schools?
2. Are there any problems or difficulties in learning composition-writing?
3. What kind of creative technique of teaching is employed?
4. What the children think of Composition? and of their teacher?
5. What kind of composition they usually do and in what quantity?
6. Is there an environment promoting and stimulating this kind of creative endeavor?
Footnotes - Chapter III


13S. Morgenstern, 69.

14S. Morgenstern, 255.

15P. Hindemith, 63.

17. S. Morgenstern, 86.


23. S. Morgenstern, 339.


29. P. Hindemith, 62.


33. S. Morgenstern, 69.

34. S. Morgenstern, 256.

35. S. Morgenstern, 192.
36. J. Peyser, 144.

37. J. Peyser, 146.

38. S. Morgenstern, 73.

39. R. Sessions, 92-93.


42. M. Graf, 442.

43. M. Graf, 443.

44. S. Morgenstern, 87.


47. S. Morgenstern, 278.

48. S. Morgenstern, 278.


50. P. Hindemith, 181.


53. M. Hurd, 27.

54. S. Morgenstern, 87.


56. S. Morgenstern, 254.
57M. Hurd, 34.
58R. Sessions, 110.
59A. Copland, 21; 22.
60M. Hurd, 34.
61R. Sessions, 110.
62A. M. Abell, 5-6.
63A. M. Abell, 139.
64S. Morgenstern, 69.
74H. Lowery, 28-30.
75R. N. Squire, 29-30.
76. L. Mursell, 275.


78. Horner, 165-172.


88. R. P. Gelineau, 303-313.

89. B. Whitlock, 180; 182.

90. J. Swanson, 145-146.

91. J. Duncan, 154-155.


97V. Horner, 165.


100F. J. Swanson, 146.

101H. Lasker, 1.


103J. Duncan, 155-156.

104J. B. Whitlock, 180.

105F. J. Swanson, 147-148.


107H. Lasker, 49-57.

108F. L. Hussey, "Can Music Composition be Taught?" (M. A. Thesis, The Ohio State University, 1957), 45; 49.

109H. Lasker, 1.


111I. A. Taylor, 1975b, 311.

112I. A. Taylor, 1975b, 311.

113S. J. Parnes, 1975, 226.

115 I. A. Taylor, 1975b, 312.

116 Dorothy Hickok and James A. Smith, Creative Teaching of Music in the Elementary School (Boston: Allyn and Bacon, 1974), 11.


120 L. M. Fox and L. T. Hopkins, 44.

121 D. Hickok and J. A. Smith, 7-9.


123 V. Horner, 165.


125 J. Paynter and P. Aston, 14.


127 M. V. Marsh, 3.


131 H. Lasker, 8-57.

133J. Duncan, 154-162.

134P. J. Swanson, 147.

135P. J. Swanson, 148-149.

136J. Duncan, 155-162.


139H. Lasker, xi.

140D. Hickok and J. A. Smith, 5; 16.

141D. Hickok and J. A. Smith, 143.

142R. M. Schafer, 243-244.
CHAPTER IV
A QUESTIONNAIRE SURVEY

Introduction

Research should consider the problem in which that research is engaged. Thus, a survey of the conditions of music composition teaching was conducted. The empirical information obtained from this survey and the ideas derived from the review of literature in the previous chapters can then be synthesized into a set of constructs which, when put together, offer deeper understanding, broader meaning, and wider application.\(^1\)

Since a universal survey of this kind was not feasible, a limited one was designed and conducted.

The main objectives of this project, as stated in the previous chapter, are:

1. To secure evidence concerning the existing situation of music composition teaching in High Schools;
2. To identify the problems in teaching and challenges in writing musical compositions, so as to be able to provide remedies; and
3. To determine how to construct a framework of principles for Creative Teaching of this subject.\(^2\)
Survey

The survey project was designed during February and April, 1977. After it was revised and rewritten, the questionnaire was presented to the music education Supervisor for validation.

Six high schools from the Columbus area were randomly selected for inclusion in the study. These schools were within a ten mile radius of the State Capitol. The random selection yielded schools from Hilliard, Upper Arlington, Grandview Heights, Grove City, Whitehall, and Columbus.

To ensure answers directly from the random sample selected, the following procedures were followed:

a. The present investigator himself, accompanied by a letter of introduction (Appendix B), went to see the principals of the High Schools chosen, and interviewed the Theory/Composition teacher.

b. The teacher of each school supervised the survey. Seven reminders (Appendix C) to Survey Invigilators were given to the teacher, so that the filling out of these surveys forms by the students would be spontaneous and independent.

c. The survey forms were collected by the writer as soon as the responses had been completed.

The Questionnaire

The questionnaire consisted of fifteen multiple choice questions, eight of which were open-minded, with a special space for comments and suggestions. In constructing the questionnaire,
Good's criteria were followed, particularly the following:

1. It must be short enough so as not to take much time.

2. It must be of sufficient interest and have enough face appeal.

3. The responses to the questionnaire must be valid, and the entire body of data taken as a whole must answer the basic question for which the questionnaire was designed. Additionally, the Scates and Yeomans's validity criteria for a good questionnaire were also observed:

1. All questions were on the subject.

2. The wording of each question was clear and unambiguous.

3. Of the 106 respondents, the average percentage of responses for each item was as high as 85.

4. The responses also showed a reasonable range of variation.

5. Most questions were based on or derived from

   a. Chapters 2 and 4

   TEACHING CREATIVE MUSIC IN SECONDARY SCHOOLS

   Author: Henry Lasker

   b. The Introduction; and

   The Introduction to the Projects

   SOUND AND SILENCE

   Authors: J. Paynter and P. Aston
6. All questions were examined and validated by Music Education specialists:
   a. Chairman, Music Education Department, The Ohio State University; and
   b. Music Education Supervisor, Columbus Public Schools, Board of Education.

The survey questions were composed of four major categories:

   a. Concerning the students' creative initiative and attitude: items four, seven, twelve, thirteen and fourteen.
   b. Concerning the students' general knowledge of Musical Composition: items two, five and fifteen.
   c. Concerning the creative environments in the school: items one, three, nine and ten.
   d. Concerning the teacher of music composition and his teaching: items six, eight and eleven.

These items were designed to give an adequate description of the actual situation of music composition teaching in High Schools.

Questions and Responses

First of all, the reader has to be informed that the number of the responses for each item varied from item to item. The main reasons for this were:
a. The questions that asked about the content of Theory/Composition Course, and the teacher's teaching could not be answered by those who never had the course.
b. The questions that asked how many kinds of compositions the students had written, and challenges of writing music could have more than one response.

The following graph shows the variation of the numbers of the responses that each item received (Figure 7).

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Figure 7 A Graph of the Survey Response Number Variation.
The fifteen items following are in the order as they appeared in the survey form.

(1) Item one asked what kind of music composition or course is available in High Schools. There are three choices: a. Open to all; b. Accessible only to the gifted; and c. No such course is being offered. (Table 1)

There were 106 responses in all: 67 percent made the first choice; only one percent, the second; and 32 percent, the third.

To be precise, the third group included 20 who had neither composition course in High School nor before; eight persons who had had music composition in Junior High or Elementary School; and six who had only "pure" music theory in Senior High School.

Table 1

Music Composition
Class in High School

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open to all</td>
<td>71</td>
<td>66.98</td>
</tr>
<tr>
<td>Open to gifted</td>
<td>1</td>
<td>0.94</td>
</tr>
<tr>
<td>Not offered</td>
<td>34</td>
<td>32.07</td>
</tr>
</tbody>
</table>

N = 106 (NB: N is for the number of the Respondents)
(2) Item two asked what kind of musical Composition is being taught in High School. Six choices are set for the question:
a. is a list of the conventional compositions; b., c., d., and e. are all creative activities, in other words, the empirical composition, which many recent music method books strongly recommended for classroom use (Table 2).

For instance, in 'The Creative Music Program' of his book, Robert B. Smith introduced creating songs and other melodies, creating accompaniments, creating in several musical forms, creating music in Carl Orff's way, etc. 5

Bert Konowitz employed improvisation as the Class Method, placing heavy emphasis on encouraging the student to express his feelings through IMPROVISING -- the spontaneous act of organizing, varying, creating, and performing. His method was built around three creativity sources: Voice, Instruments, and Keyboard. 6

Both M. V. Marsh 7 and R. M. Schafer 8 stressed the importance of creating with environmental sounds. In the chapter of 'Unorganized and Organized Sound' Marsh showed how one could creatively teach composing with ORIGINAL instruments.

Paynter & Aston have several projects of creating with sounds, such as:
- Short Sounds and Long Sounds
- Sounds on Tape
D. Kaplan published an article entitled 'The Joy of Noise,' showing a compositional method using word-sounds. The technique seems simple and easy: "Choose a single word and write a composition for three or four voices. Use the word itself for NOTATION; indicate dynamics and relationships among parts through the graphics."  

The above-mentioned authors' techniques are only some of the so called 'Empirical Compositions.' They emphasize the creative process rather than the product.

In conclusion of his article, Kaplan noted that working with sounds in these different ways can aid the students in achieving a good number of objectives. They learn about traditional techniques through the use of contemporary methods of composition, create exercises that involve complex sound textures, learn about standard notation, and use these techniques to compose works for performance or for use with other media.

Similar compositional techniques are many. But, 78 percent of the responses show that only traditional methods of composing are known to these students. It appears that the new ideas have not yet reached their teachers, or they have not yet accepted them. (Table 2).
Table 2

The Types of Music Composition in Secondary Schools

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>53</td>
<td>55.2</td>
</tr>
<tr>
<td>Creating with sound</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Creating with instruments</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Improvisation</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Electronic Music</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Other a. Arrangement*</td>
<td>2</td>
<td>2.08</td>
</tr>
<tr>
<td>b. 4-part harmony*</td>
<td>20</td>
<td>20.83</td>
</tr>
</tbody>
</table>

N=96
*Arrangement and 4-part harmony belong to "traditional"
(3) Item three inquired how often the theory/composition class met in the High School.

Seventy nine percent of the respondents responded that they met five or more periods per week; only thirteen percent replied, twice a week (See Table 3).

Table 3
Time Schedule
For Musical Composition

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once or twice a week</td>
<td>10</td>
<td>13.51</td>
</tr>
<tr>
<td>Once every 14 days</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Once a month</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Several times a year</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Thrice a week or daily</td>
<td>59</td>
<td>79.72</td>
</tr>
</tbody>
</table>

N = 74
(4) Item 4 was designed to investigate the students' creative initiative: How often do you compose at home? Only seven percent responded they composed once a week or more at home; twenty seven percent never composed; also twenty seven replied that they would compose only when the teacher asked them to do so, not otherwise. Thirty nine, however, believed that they composed sometimes (Table 4).

Table 4

<table>
<thead>
<tr>
<th>How often do you compose at home?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Once a week or more</td>
</tr>
<tr>
<td>Sometimes</td>
</tr>
<tr>
<td>When teacher tells</td>
</tr>
<tr>
<td>Never</td>
</tr>
</tbody>
</table>

N = 82
(5) Item five asked what kind of approach has been taught to begin a composition.

Forty two percent replied Harmony Approach, and thirty eight percent, some combination of Singing, Rhythm and Harmony Approaches. Twelve percent replied that their teacher never taught any compositional technique at all (Table 5).

Table 5
Composition Approaches Taught by the Teacher

<table>
<thead>
<tr>
<th>Approach</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singing</td>
<td>1</td>
<td>1.23</td>
</tr>
<tr>
<td>Rhythm</td>
<td>3</td>
<td>3.70</td>
</tr>
<tr>
<td>Harmony</td>
<td>34</td>
<td>41.97</td>
</tr>
<tr>
<td>Some combination of the above</td>
<td>31</td>
<td>38.27</td>
</tr>
<tr>
<td>Never taught any</td>
<td>10</td>
<td>12.34</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

N = 81
(6) Item six was intended to see whether a teacher composer had some influence on the students' music writing. The question asked if the music composition teacher is also a composer.

Thirty nine percent answered "Yes, definitely," or "Yes, I guess so." Sixty one percent answered "No," or "I don't know."

It should be noted that of the 33 students who answered "Yes," 21 percent responded that they never composed in their life; out of the 51 students who answered "No," or "I don't know," 39 percent agreed that they had composed nothing in their whole life (Table 6).

Table 6
Is the teacher of Composition also a Composer?

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, definitely</td>
<td>4</td>
<td>4.76</td>
</tr>
<tr>
<td>Yes, I guess so.</td>
<td>29</td>
<td>34.52</td>
</tr>
<tr>
<td>No, I don't think so</td>
<td>34</td>
<td>40.47</td>
</tr>
<tr>
<td>I don't know</td>
<td>17</td>
<td>20.23</td>
</tr>
</tbody>
</table>

N = 84
(7) Item seven asked the students how many compositions they had done in all their life.

Out of the 106 respondents, 53 percent never did any kind of musical composition; twelve percent stated that they had done only ONE; fifteen percent, only TWO; twenty percent, more than TWO but less than TEN; and only 9 percent did more than ten compositions (Table 7).

Table 7

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not sure</td>
<td>6</td>
<td>5.66%</td>
</tr>
<tr>
<td>None</td>
<td>56</td>
<td>52.83%</td>
</tr>
<tr>
<td>Just one</td>
<td>13</td>
<td>12.26%</td>
</tr>
<tr>
<td>Between 3 and 10</td>
<td>21</td>
<td>19.81%</td>
</tr>
<tr>
<td>More than 10</td>
<td>10</td>
<td>9.43%</td>
</tr>
</tbody>
</table>

N = 106
Item eight inquired how the assigned compositions were corrected and/or evaluated.

Thirty percent agreed that the teacher pointed out both weaknesses and strengths of their compositions. Thirty four percent responded that the teacher marked their mistakes out and made some comment on the manuscript paper. Eighteen percent replied that only mistakes were pointed out or only a grade was given to their compositions. Eight percent had individual counseling for their musical composition. Six percent specified that their teacher did not evaluate their assignments at all (Table 8).

Table 8

How Assignment was Corrected and/or evaluated

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weakness and strength pointed out</td>
<td>26</td>
<td>30.23</td>
</tr>
<tr>
<td>Mistakes alone</td>
<td>11</td>
<td>12.79</td>
</tr>
<tr>
<td>Mistakes marked with comment</td>
<td>29</td>
<td>33.72</td>
</tr>
<tr>
<td>Individual Counseling</td>
<td>7</td>
<td>8.13</td>
</tr>
<tr>
<td>By grading only</td>
<td>5</td>
<td>5.81</td>
</tr>
<tr>
<td>Other: Not evaluated</td>
<td>5</td>
<td>5.81</td>
</tr>
<tr>
<td>No assignment</td>
<td>3</td>
<td>3.48</td>
</tr>
</tbody>
</table>

N = 86
(9) Item nine was devised to ask the students' opinion on the creative atmosphere of their High Schools.

Forty seven percent responded that creative activities in High School are insufficient; fifty two percent instead believed that creativity in their school was respected and encouraged, or stimulated and active (Table 9).

Table 9
Creative Atmosphere in High School

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity is stifled</td>
<td>7</td>
<td>7.77</td>
</tr>
<tr>
<td>Creativity is not respected</td>
<td>6</td>
<td>6.66</td>
</tr>
<tr>
<td>Creative activities are insufficient</td>
<td>30</td>
<td>33.33</td>
</tr>
<tr>
<td>Creativity is respected and encouraged</td>
<td>40</td>
<td>44.44</td>
</tr>
<tr>
<td>Creativity is stimulated and active</td>
<td>7</td>
<td>8.88</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>N = 90</td>
</tr>
</tbody>
</table>
(10) Item ten inspected what the teacher of music composition would do with his students' creative works.

Fifty one percent said that their compositions could possibly have a chance of being performed in the school if these were well done.

Twenty three thought that their compositions, even well done and highly evaluated by the teacher himself, would never have a chance of being performed in the school.

Twenty five percent nevertheless agreed that their teacher would try his best to have their good compositions performed to other students (Table 10).

**Table 10**

<table>
<thead>
<tr>
<th>Good Composition: Chance to be performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
</tr>
<tr>
<td>Never</td>
</tr>
<tr>
<td>Maybe</td>
</tr>
<tr>
<td>A good grade only</td>
</tr>
<tr>
<td>Teacher tries his best</td>
</tr>
<tr>
<td>Number of Respondents</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>45</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>22</td>
</tr>
</tbody>
</table>

\[ N = 88 \]
Item 11 was structured to see what the teacher had done to improve the students' creative writing.

Thirty two percent responded that their teacher provided them with more stimulating listening.

Fifty one percent agreed that their teacher was encouraging and persuading. Only 16 percent considered that their teacher was indifferent or too busy to do anything positive in this regard. (Table 11).

Table 11

Teacher's Industry to promote creative work

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing Listening</td>
<td>28</td>
<td>31.81</td>
</tr>
<tr>
<td>Encouraging and Persuading</td>
<td>45</td>
<td>51.13</td>
</tr>
<tr>
<td>By reward</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Willing but too busy</td>
<td>6</td>
<td>6.81</td>
</tr>
<tr>
<td>Indifferent</td>
<td>8</td>
<td>9.09</td>
</tr>
</tbody>
</table>

N = 88
Item twelve was contrived to scrutinize the students' opinion on having Musical Composition in High School.

Sixty three percent believed that this class was useful for developing creativity. Thirty five percent responded, very useful. Only 2 percent considered it unnecessary (Table 12).

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very useful for developing creativity</td>
<td>32</td>
<td>34.78</td>
</tr>
<tr>
<td>Useful</td>
<td>58</td>
<td>63.04</td>
</tr>
<tr>
<td>Unnecessary</td>
<td>2</td>
<td>2.17</td>
</tr>
<tr>
<td>Should be abolished</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

N = 92
(13) Item thirteen asked when was the first time each student composed some kind of music.

Forty percent replied that they had begun to compose in Senior High School; twenty-five percent responded that they had started in Junior High; and nine percent confessed that the first time they had composed music was in Elementary School. Twenty-six percent, however, responded that they had never done any. Here, it must be pointed out that all those who filled out "None" or "Zero," in item seven, 10 percent had not checked the blank ( ) I never did. for this item (Table 13).

Table 13

The First Time Student Composed

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Elementary School</td>
<td>10</td>
<td>9.52</td>
</tr>
<tr>
<td>In Junior High</td>
<td>26</td>
<td>24.76</td>
</tr>
<tr>
<td>In Senior High</td>
<td>42</td>
<td>40.00</td>
</tr>
<tr>
<td>I never did</td>
<td>27</td>
<td>25.71</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

N = 105
Item fourteen appears to be the same as item two, but it IS not. Here the students were asked about their own compositions. In the last choice - Other (Specify) - several students filled out 'Pop Music,' 'Folk Music,' or 'Improvising.'

Twenty seven percent replied that they had written hymns or/and anthems: twenty one percent had written solo or/and ensemble instrumental music; twenty percent had made arrangements; and nineteen percent had composed piano and/or organ music.

The total responses for this item exceed the number of the total of the respondents, because participants had composed more than one kind of music (Table 14).

Table 14

The various kinds of Compositions the students had ever written

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art-Songs</td>
<td>14</td>
<td>13.20</td>
</tr>
<tr>
<td>Hymns or Anthems</td>
<td>29</td>
<td>27.35</td>
</tr>
<tr>
<td>Piano and/or Organ Music</td>
<td>20</td>
<td>18.86</td>
</tr>
<tr>
<td>Solo or ensemble instrumental</td>
<td>22</td>
<td>20.75</td>
</tr>
<tr>
<td>Band or Orchestra Music</td>
<td>4</td>
<td>3.77</td>
</tr>
<tr>
<td>Arrangements</td>
<td>21</td>
<td>19.81</td>
</tr>
<tr>
<td>Electronic Music</td>
<td>2</td>
<td>1.88</td>
</tr>
<tr>
<td>Other: Pop Music or Folk Music</td>
<td>7</td>
<td>6.60</td>
</tr>
<tr>
<td>Improvising</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>27</td>
<td>25.47</td>
</tr>
</tbody>
</table>

N = 106  (NB: Total of Responses = 147)
(15) This last item asked what kind of difficulty the students had sensed while writing music.

Forty seven percent responded that they had found it hard to catch original musical ideas; forty five percent admitted that it was difficult for them to put ideas into musical notation; twenty eight percent considered organization of musical materials in a composition to be difficult; and thirty percent replied that they had had psychological difficulties, i.e. fear or uneasiness (See Table 15).

Table 15

The difficulties encountered in writing a Musical Composition

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Ideas</td>
<td>37</td>
<td>46.83</td>
</tr>
<tr>
<td>Put ideas into Notation</td>
<td>36</td>
<td>45.56</td>
</tr>
<tr>
<td>Organization of Materials</td>
<td>22</td>
<td>27.84</td>
</tr>
<tr>
<td>Fear</td>
<td>16</td>
<td>20.25</td>
</tr>
<tr>
<td>Uncomfortable Feeling</td>
<td>8</td>
<td>10.12</td>
</tr>
<tr>
<td>Other: No difficulty</td>
<td>3</td>
<td>3.79</td>
</tr>
<tr>
<td>No time</td>
<td>1</td>
<td>1.26</td>
</tr>
</tbody>
</table>

N = 79  (NB: Total of Responses = 123)
RESPONDENTS' COMMENTS

As stated before, a little space for criticisms, comments, and suggestions was reserved on the survey-form. Eventually, fifty respondents included comments in their survey forms. Their remarks are divided into eleven groups, categorized by similarity and ranked in order of frequency.

1. Seventeen percent wrote that there should be a Music Composition Course offered in the school system, stressing the creative aspect and not just the strict rules of composition. The following are some of these remarks:

- This questionnaire demonstrates the need for composition classes in our school.
- We don't have any organized composition course at all. I wish we did.
- I feel a general composition class would receive a very good response in my High School.
- Special composition classes should be taught, but it's hard to find time and proper instruction.
- There should be more. Composition will increase a student's understanding of Theory.
- We should have advanced Theory to put together what we've learned in Theory I. Creativity should be encouraged more, instead of just tolerated, or promoted in one, single demigod of a person.
2. Thirteen percent of the respondents' remarks urged that Theory and Composition Course be encouraged so that more students might participate.

- Teaching of Musical Composition needs to be more encouraged to the whole School Body.

- I think it's a good course, but it's a course either not offered or a small course. I wish there was more mandatory individual help with composing original pieces.

- My music teacher was very interested in teaching the students Theory, Composition, and Music History. He was very good, but there isn't much support in keeping these classes and they were to be cancelled but fortunately they were saved.

3. Thirteen percent of the commentors complained that they didn't learn much about composition. Here are some of these complaints:

- My complaint was that we did some actual composing, but all we did was arranging.

- Cover a little bit of other instruments instead of just one because it is easier for composing and orchestration.

4. Thirteen percent stated that their Theory class is not involved with composing music.

- We have Theory but not a music composition class.

- The class at this school is a Theory and Appreciation
class rather than a composition course.

- It is a Theory class. Four part harmony was taught. No compositions were required.

- We never had to write a composition in Theory.

5. Another 13 percent stressed that music composition course is very useful, worthwhile, and important.

- I think the course is very helpful. But, there should be a program to get more students interested in them.

- I think it is very useful, and anyone planning a career in music should take it.

- I think it is very important to all people who want to do anything with music.

- I think composition class should be encouraged in all secondary schools. It is a worthwhile effective use of your time.

6. Ten percent of the comments are praises for the teacher of music composition. Some of these are quoted below:

- Very personal, excellent variation and teaching, open discussions, could class involvement, generally good, only thing wrong is student apathy, could use more "course appeal."

- Good course. Glad I took it.

- I do feel I've learned a lot, morally as well as academically. The teachers in the music department are outstanding and that's more important. Their
attitudes inspire the students, and we appreciate it.
- ...due to limited time we couldn't really go in depth, but the teacher did give us a solid foundation of knowledge.

7. Eight percent expressed their desire of having two different music composition classes offered: one for advanced and one for beginning students.
- Should be encouraged to take music theory. With possibly an easier course for someone not as skilled.
- I think the class should be broken into two groups: one for beginners and one for advanced students.
- There needs to be more advanced training to help people learn to bring their ideas together and put them on paper somehow.

8. Six percent felt that the actual situation regarding teaching of musical composition was just fine.
- I am in a small class and I think that more can be learned this way.
- I think that is fine right now just the way it is.

9. Another six percent believed that music should be better taught in Elementary Schools and encouraged in High School. For this unit two comments are cited:
- There should be more opportunities. It should be greatly encouraged in primary schools.
- There should be more opportunities. It should be greatly encouraged in primary schools.

- I think a composition class would be useful. It would force me to write compositions. It should also start at a lower level - elementary schools.

10. Four percent complained that their teachers' teaching was slow and many contemporary ideas were not taught. One of them wrote: "Too slow. Not taught many contemporary ideas." Another expressed his ideas in this way: "Teachers should be much more enthusiastic and receptive to new ideas, instead of believing that 'Bach is BEST.'"

11. Miscellaneous comments:
   a. One student stated that music composition is good and beneficial only if correctly taught, and he thus continued: "One should realize, however, that a choral, or band director, on a high school level probably does not have a sufficient level knowledge to teach the touchy concepts of composition."

   b. One student complained that his teacher praised high students and helped low students, but forget the in-between people.

   c. One student did not like the last name of the present writer. Thus, he encircled the two-letter name NG and wrote: P. S. CHANGE YOUR NAME
SUMMARY

In this chapter, it has been reported that this survey was prepared, validated, and conducted in six high schools of Columbus, Ohio and its vicinity; and to the students in Music Theory I at the Ohio State University, School of Music, who had previously graduated from their high schools only nine months or so.

The items of the questionnaire have been discussed with the corresponding responses, and followed by the list of the comments that 47 percent of the respondents had made regarding the present teaching of composition in secondary schools.

Concerning the students' creative initiative and attitude, it was found that:

Of these surveyed students, only 7 percent seemed to have composed out of their own initiative and with persistence; fifty-four either never composed or did it only when the music teacher asked them to do so; only 9 percent did more than ten compositions in all their life; and 26 percent never composed any kind of music at all.

With respect to the students' knowledge of composition it was found that:

Seventy-eight percent of the respondents appeared not to know the new ideas of contemporary compositions and their compositional approaches are limited to Harmony, Rhythm, and Singing.
With regard to the environment, it was found:

Generally speaking, a composition class, in most high schools, is a small one or not offered. Thirteen percent of the comments show that, in some schools, Theory Course has nothing to do with teaching of musical composition.

Forty-seven percent of the respondents believed that creative activities in High School are insufficient, fifty-two, however, thought otherwise.

As to the teacher of music composition and his teaching, it was found that:

Fifty-one percent of the respondents thought that their teachers were encouraging them to create with music; thirty-two percent notified that they positively did want to improve the students' writing by provision of good stimulating listening; twenty-five percent agreed that their teachers would try their best to have the students' good compositions performed; and ten percent of the comments praised the teachers for their outstanding teaching of Theory and Composition.

The majority of respondents denied that their music composition teacher was also a composer, the remaining being positive.

Only a small number of students replied that they had individual advising and counseling for their compositions.
Some anticreative behaviors were on the part of the music composition teacher were also discovered:

a. The teacher was indifferent to the students' creative work.

b. He was too busy to do anything positive, promoting creativity.

c. The compositions assigned were only given a grade, and nothing else; or not evaluated at all.

d. He pointed out the mistakes alone, to the students' compositions.

e. Conformity to the traditional and conventions was stressed.

It must be noted, nevertheless, the number doing all these were only in a minority.

As to difficulties in writing music, the survey found that:

1. The students did not get musical ideas easily. In other words, they had not learned methods to help generate musical ideas.

2. A great percentage of the respondents found it difficult to put ideas into notation. This tells us that the craft of composition has not been taught enough or the Theory I Course, not encouraged efficiently to the students. This is also a sign that in the mind of many students music composition consists in merely writing functional music.
3. The survey also found that some of the students still have the misconception about composing: e.g.
   a. To compose is very difficult;
   b. Only geniuses can write music;
   c. Music Composition cannot be taught; and
   d. Only college students of music can write music.
These misconceptions are the causes accounting for fear and uneasiness, when one is set to write music.

4. A fourth group considered it difficult to organize the materials for a composition. This difficulty belongs to the people who are weak in musical analysis. They need some practical training in hearing music as a whole.
Footnotes - Chapter IV


3C. V. Good, 221.


9John Paynter and Peter Aston, Sound and Silence (London: Cambridge U.P., 1970), 96; 134; 157; and 259.


11Don Kaplan, 44.
CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

Purposes

1. Main Purpose

The main purpose of this research was to construct a framework of practical principles for Creative Teaching of Musical Composition in Secondary Schools. In order to fulfill this objective, the present writer investigated the general nature of creativity from its five aspects: Process, Product, Potential, the Creative Persons' Traits, and Creative Climate. This investigation was followed by a second one, which dealt with the nature of Creative Teaching of Musical Composition itself. Both composers and music educators' opinions on the subject matter were searched and examined.

These two studies were supplemented by a questionnaire survey, which was deliberated and conducted to obtain information about the existing situation of music composition teaching in the secondary schools.
2. Sub-purposes

Chapter II was designed to examine the five facets of creativity. The questions investigated were:

a. How do scholars define creativity?

b. What are creative products?

What are the criteria by which a creative product may be identified?

c. What is the Creative Process?

d. Who is the Creative Person?

What are the traits of creative persons?

e. What is a Creative Climate?

f. Can creativity be developed?

What can be done to stimulate creativity?

Chapter III studied the nature of Creative Teaching of Musical Composition. The purpose for which this chapter was written was to explore the following:

- What is meant by Musical Composition as creative behavior?

What do composers and music educators think about composition?

- Can Musical Composition as creativity be taught?

- How can Musical Composition be taught?

The purpose of the questionnaire survey in Chapter IV was to find out the real situation of music composition in secondary schools: the creative environment, the student's attitude and general knowledge of musical composition and the teaching of the teacher.
Methods and Procedures

Construction of this survey was prepared by reviewing the related literature, the two previous studies being included, and determining the subject-content to investigate, the sample to question, the design of questions to use, and the method for data collection and analysis.

In the construction phase, a first draft of fifteen-item-questionnaire was made and submitted to the chairman of Music Education Department, the Ohio State University.

With his counseling, the first questionnaire was reviewed, improved, and re-written.

The second draft was then presented to the Music Education Supervisor, Board of Education, Columbus Public Schools, and his permission to administer the survey to the public schools was granted.

In the administration phase, this investigator, in person, went around to see each principal of the selected schools and contacted the Theory/Composition teachers, who supervised the actual survey. They were given instruction that the questionnaire be answered by the students independently and spontaneously.
Findings

I. The General Nature of Creativity

1. Creativity was defined by the literature as Potentials:
   
   Ability to see (or to be aware) and to respond;

   Ability of Divergent Thinking - fluency, flexibility, originality, sensitivity, redefinition, elaboration;

   Ability to bring something new into birth;

   Ability to bring something new into existence;

   Power to create new content by transferring relations and generating new 'correlates';

   Disposition to make and recognize valuable innovations;

   Ability to produce in a given situation, compositions, ... which are essentially new or novel and previously unknown to the producer (Supra, 18-19).

2. Criteria, for which creative products are identified, are: Novelty; Value; Generation; Originality; High Motivation; Persistence; Considerable Time; Reformulation; Newness; Uniqueness; Tenability; Usefulness; Satisfaction; Aptness; Validity; Need Fulfilment; Elegance; Relevancy; Hedonics; Complexity; and Condensation (Supra, 21-24).

3. Although many scholars defined Creativity as Process invariably, they differ somehow in description of the elements involved in such process:
A. Three-faceted Description of Creative Process:

Spearman: Apprehension of Experience; Eduction of Relations; and Eduction of Correlates.

Kris: Inspiration; Elaboration; and Communication.

Mooney: Things do not yet belong, come to belong; Things which have not yet become, come to become; and Things which are not yet existent, come to be.

May: Encounter; Intensity of the encounter; and the encounter of the individual with his world.

Bruner: Acquisition; Transformation; and Evaluation.

Torrance: Sensing gaps or disturbing elements; Forming ideas or hypothesis concerning them; and Communicating the results.

Guilford: Contents; Operations; and Products.

Osborn: Fact-finding; Idea-finding; and Solution-finding.

Selye: Truth; Surprise; and Generalization.

B. Four-faceted Description of Creative Process:

Wallas: Preparation; Incubation; Illumination; and Verification.

Koestler: Displacement of attention; Discovery of hidden Analogies; Bringing into consciousness; and Uncovering of what has always been there.
C. Five-faceted Description of Creative Process:

I. A. Taylor: Exposure Phase
Pre-Divergent Phase
Conversion Phase
Post-Divergent Phase
Expression Phase

(Supra, 25-30)

4. Based on reflection upon the four studies: Harmon's (Supra, 35); Pelz's (Supra, 36); Taylor et al.'s (Supra, 36); and MacKinnon's (Supra, 37-38), seven basic criteria for assessing a creative product or creative products were discovered: a. The analysis of creative products, in terms of quality and quantity, appears to be the most obvious and basic method in creativity study.

b. Quantification of a person's creative products usually presents practical problems, and the researcher should solve them before he plans an assessment.

c. The number obtained by totaling one's products should never be used as the only criterion.

d. Evaluation, by nature, is subjective. It nevertheless may become accurate if done collectively and objectively.
e. An appropriate criteria-definition should be pre-established as an adjudication basis, according to which judgments will be beaconed.

f. In setting a criterion-definition, Brogden and Taylor's (1950) four types of bias must be avoided: i.e. criterion deficiency; criterion contamination; criterion scale unit bias; and criteria distortion.

g. Combination of methods is necessary in the creativity assessment research, because of the multi-dimensional nature of the subject-matter.

5. The Cognitive Capacities of the Creative Person are

- Above average intelligence
- Ability to produce unusual and adaptive ideas
- Good retention and ready availability of life experiences
- Ideational Fluency
- Power of synthesizing remote and disparate ideas
- Discriminative Observation
- Cognitive flexibility (Supra, 52)

6. The Personality Traits of the Creative Person are

- Relative absence of impulse and imagery control by repression
- Openness to both internal and external stimuli
- Strong Ego-strength
- Intuitiveness
- Spirit of independence
- Greater self-actualization (Psychological Freedom)
- Strong Aesthetic and Theoretical sense
- Self-assertiveness (Supra, 52-54)
7. The necessary conditions fostering constructive creativity are Psychological Safety and Freedom.

8. Anticreative Climate is generated by creativity inhibitors:
   a. Torrance's list
      - Success-orientation
      - Peer-orientation
      - Sanctions against questioning and exploration
      - Over-emphasis on sex roles
      - Divergency equated with 'Abnormality'
      - Work-Play dichotomy (Supra, 63-66)
   b. Hallman's list
      - Pressure to conform
      - Authoritarian attitudes and environments
      - Rigid teacher personality
      - Ridicule and Sarcasm
      - Over-emphasis on evaluation
      - Hostility toward divergent personalities
      - Excessive quests for certainty
      - Over-emphasis on success
      - Intolerance of play attitude (Supra, 66)

9. To facilitate creative functioning and development,
   first: deliberate training programs should be designed to remove internal blocks to optimal creative performance;
   secondly: environmental conditions that eliminate external blocks to such performance must be provided (Supra, 69).

10. There are genuine techniques for stimulating creativity, such as Brain-storming, Check-list, Morphological Analysis, The CNB, PINB, CCB Methods, the PakSA, The Synectics, etc., and they should be learned and used creatively (Supra, 74-84).
II. Creative Teaching of Musical Composition

Part ONE Nature of Musical Composition

1. Musical Composition, analysed in all its components, is real creativity, because the composer's creative abilities are mobilized; a creative process of Preparation-Incubation-Illumination-Verification, Inspiration-Elaboration-Communication, Sensory Input-Manipulation-Evaluation, or any other description, can be identified in Musical Composition; the qualities found in a good composition fit the criteria for which a product is considered creative; and the student composers bear similar personality traits of creative persons (Supra, 108-109).

2. The majority of composers seemed to have agreed on the following points about Musical Composition:
   1) The composers' life is a dualistic world.
   2) Their creative work is dependent on their inner energy and hard work.
   3) Their work, however, often is influenced by outside factors.
   4) They derived their compositions out of a motive or theme, or from a musical vision of the whole.
   5) In Musical Composition, phases of the Creative Process can be identified, such as:
a. Free Fantasy - the Subconscious, and Artistic and Logical Thinking - the Conscious.

b. Conception; Planning (or Ordering); and Execution.

c. Inspiration; Creative Imagination; and Realization.

6) They are free to do their artistic work.

7) They continually strive to improve their work.

8) They stressed the importance of learning the compositional techniques.

9) They need a favorable environment for artistic endeavor.

10) The musical ear is the guide for musical choices

(Supra, 111-130).

3. Musical Composition was defined by music educators as:

- the product of intuition;

- one of the outlets for creative expression;

- Creative Expression of a personal musical initiative, by which the creator is completely identified with his work, and in which his very self stands revealed;

- Creating Experience;

- the product of thought and imagination of persons whose childhood nurtured and encouraged experimentation;

- any activity where a student makes up, adds to, or alters a musical product by his own efforts and out of his own imagination; or

- the ability to write a meaningful notation

(Supra, 131-141).
4. About the nature of Musical Composition, music educators found the following:

1) Purpose appears a significant factor in creativity which implies a background, musical skills, a variety of materials, and the opportunity, freedom and teacher-guidance conducive to creating.

2) Many composers possessed sonorous image at least as vivid as their perception of musical one.

3) Auditory imagery is an important element in Musical Composition, and this is strongest at the emergence of the musical idea.

4) Imagery plays a significant role in composition as well as knowledge and experience, of the tools of music, concepts of tonal and rhythmical elements and of musical structure.

5) Formal and Informal training are important, as a foundation for composing.

6) Musical Composition involves considerable hard work, and the development of good working habits facilitates creative effort.

7) Strenuous work combined with a knowledge of musical elements and musical structure is as important as the inspiration which originates the act of composing.

8) Student composers can be helped in their composition by giving them practice in writing imaginative ideas.
away from the musical instrument but this requires sufficient ability to read and write music.

9) Two essential elements in the creative process seem to be development of imaged thought and the ability to think in musical terms and transform them into meaningful notation (Supra, 133-134).

5. The reason music educators gave for teaching Musical Composition in school appear to be included in the following:

- Creativity has much to contribute toward the development of the child.
- Creative Expression is an absorbing activity involving a self-imposed compulsion to discover, test, and to interpret new associations of musical symbols.
- Creative activities in music are educationally significant, for the creative outlook is transferable to other fields of endeavor.
- To discover creative talent and to provide opportunity for its outlet.
- To correlate music with visual arts and creative writing.
- To help produce healthy human beings, individuals who are culturally stimulated, intellectually appreciative, emotionally stable, and psychologically tolerant.
- Creating helps the child identify himself with the learning experience; sets and solidifies the learning results; and offers him opportunity of individual development (Supra, 138-140).

6. Creating music can begin very early, even Musical Composition in its strict sense, provided the necessary tools have been properly taught and learned.

7. A favorable environment for teaching music composition is produced by a combination of four elements, and they are attitude, space, time, and resources.

- the attitude among the classmates and the teacher must be pleasant, relaxed, friendly, and helpful.
- There should be enough space - "elbow room" in the classroom for all the students, for the "crowded" feeling generates tension, anxiety, and inhibitions.
- There must be time for the establishment of a desirable attitude; time for the students to interact with each other; time for imagination to be encouraged; time for creating experiences to take place; and time for teaching and learning the needed techniques.
- Resources mean all the past experiences of the student. The teacher aids direct his attention to usable past experiences, suggests new ones to build on the old, and
assists and stimulates him in developing novel and valuable experiences (Supra, 142-143).

8. A Creative Climate for teaching Musical Composition also means the following:

1) Individual advising and counseling;
2) The students have a convenient place for consistent and independent work on their composition;
3) A healthy listening environment is provided;
4) Music theory is creatively taught;
5) From the first day of school in September, the students in Theory I are encouraged to compose;
6) They are helped to develop a sense of hearing mentally;
7) Concerning the Students' compositions, constructive criticism should be encouraged;
8) The students should be given opportunity to hear their compositions actually performed;
9) They must also be released from fear to make mistakes, that a healthy attitude toward real musical accomplishment be formed (Supra, 143-144).

II. Can Musical Composition be Taught?

1. To think in musical terms and produce something new and unique in meaningful notation, one has to be taught the fundamentals of composition.

2. As creativity can be stimulated, guided, and encouraged, so is Musical Composition.
3. The creative process of Musical Composition involves a. Exposure b. Pre-divergency, c. Conversion, d. Post-divergency, and e. Expression. The literature has made clear that there are many techniques man can use to help increase the quality, efficiency, or greater likelihood for these individual units to occur (Supra, 146-149).

III. How Can Musical Composition be Taught?

Answer: CREATIVELY.

1. Creative teaching emphasizes the acquisition of intuition, insight, originality, and divergent thinking, through creating, exploring, and discovering.

2. The principal job of the creative teacher is to keep certain physical, psychological, socioemotional, and intellectual conditions (Supra, 155-156) within the classroom so that creativity will be free to rise to the surface and he/she can get it and develop it.

3. In creative teaching the teacher must carefully plan the introduction to the lesson or project, so that the mood of the students be set and imagination fired.

4. Creative teaching means that students are encouraged to express, create and develop their own ideas.

5. In creative teaching, the Creative Process is as important as the Creative Product.
6. In creative teaching, self-initiated learning and creating have to be encouraged.

7. In creative teaching, methods or techniques which are unique in the development of creativity must be utilized.

8. It appears that both empirical and written composition are of equal value in developing the children's creativity.

9. A composer teacher is more desirable for teaching Musical Composition because of his experiences and knowledge in respect of the subject. This, however, does not exclude exceptions (Supra, 151-169).

III. Questionnaire-Survey

1. About the students' creative initiative and attitude, it was found as follows:

Of these surveyed students, only 7 percent seemed to have composed out of their own initiative and with persistence; fifty four percent either never composed or did it only when the music teacher asked them to do so; only 9 percent did more than ten compositions in all their life; and twenty six never composed any kind of music at all.

2. As to the students' general knowledge of Musical Composition, 78 percent of the respondents appeared not to know the new ideas of contemporary compositions and their compositional approaches are limited to Harmony, Rhythm, and Singing.
3. In regard to the creative environment, it was found that, in general, a composition class, in most High Schools, is a small one or not offered; thirteen percent of the comments show that, in some school, Theory Course has nothing to do with teaching Musical Composition; forty seven percent of the respondents believed that creative activities in High School are insufficient, fifty two percent, however, thought otherwise, i.e. creativity is respected, encouraged, and active.

4. Concerning the teacher of Musical Composition and his teaching, the following was found:
Fifty one percent of the respondents replied that their teachers were encouraging them to create with music; thirty two percent notified that they did want to improve the students' writing by provision of good stimulating listening; twenty five percent agreed that their teachers would try their best to have their students' good compositions performed; and 10 percent of the comments praised the teachers for their outstanding teaching of Theory and Composition.
Eight percent of the respondents only, replied that they had individual counseling for their compositions; and 60 percent did not think that their teacher was also a composer, the remaining being positive.
5. Some anticreativity behaviors on the part of the music theory/composition teachers were shown in the responses:

1) Teachers were indifferent to the students' creative work or achievement.

2) Some teachers were too busy to do anything positive, promoting creativity.

3) Some simply graded the assignments, or did not read them at all.

4) Some only found fault with the students' compositional mistakes.

5) Some stressed the traditional and conventions, and pressed to conform.

6. As to difficulties of writing music, the students agreed on having troubles with a. catching original ideas; b. putting musical ideas into notation; and c. organizing materials for a musical composition. Some students, however, pointed out psychological factors inhibiting their creative endeavor: fear or uncomfortable feeling.

7. The remarks they made on the survey forms, mainly conveyed the following ideas:

a. Musical Composition, for its importance and value, should be offered in a school system.

b. It should be promoted to more students and with better results.
c. Specialists are needed for the teaching of musical composition.

d. Theory/Composition Course must be conducted better, and satisfy the needs of the students.

e. Music should be more efficiently taught at the elementary level, and greatly encouraged in High School.
CONCLUSIONS AND IMPLICATIONS

In consideration of the foregoing findings and the purposes and limitations of the investigation, the following conclusions and implications are formulated:

Creative Teaching and Musical Composition is, in itself, a creative behavior. To do it justice, it seems necessary to apply what has been found of value, in respect of creativity.

1. In creative teaching, a Creative Climate has to be built up. The creative teacher should strive to establish conditions of psychological safety and freedom:
   a. Unconditional acceptance of the child;
      Acceptance of his fantasy;
   b. Abstaining from evaluation of the child;
      Withholding of frustrations at unusual questions;
   c. Empathical understanding;
      Respect for unusual questions and ideas;
   d. Allowing free communication;
   e. Teaching the creative individual to cope with frustrations and conflicts;
   f. Provision of encouragement and support;
g. Minimization of coercion;

h. Minimization of enforcement of behavior norms;

i. Elimination of environmental threats.

2. He should also **eliminate** the following **creativity inhibitors**:

   a. Pressure to conform;

   b. Authoritarian and rigid teacher personality;

   c. Ridicule and Sarcasm;

   d. Hostility toward divergent personalities;

   e. Success-orientation;

   f. Peer-orientation;

   g. Sanctions against questioning and exploration;

   h. Work-play dichotomy; and

   i. Over-emphasis on sex roles.

3. The creative teacher should also **cultivate** the **Cognitive Capacities** that are likely most frequently associated with the creative persons, in his students:

   1. Effective use of intelligence;

   2. Fluency and Flexibility of thinking;

   3. Spirit of observation;

   4. Use of past life experiences and construction of the new ones; and

   5. Love of knowledge.
4. He should also learn to tolerate some of the creative students' "unpleasant" personality traits, such as:
   1. Independence in attitude and social behavior;
   2. Indifference to social disapproval;
   3. Unusual curiosity;
   4. Impulsiveness;
   5. Need for adventure;
   6. Less concern for social norm; and

5. A Creative Climate serves to remove external blocks to creative performance, creativity-promoting methods or techniques, however, are to be used to take away those internal of the student, and enable him to achieve better results in his artistic endeavor.

The following techniques are applicable in Musical Composition (See Appendix D):
- Brainstorming
- Check-List
- Morphological Analysis
- The CNB Method
- PakSA
- Synectics
6. As Musical Composition is creativity, the creative teacher can do more than simply teach the basic rules of composing. He can apply creativity promoting methods to stimulate the children's creativeness, to aid generate more and unusual musical ideas, to increase likelihood for the Conversion Phase, intuition, inspiration, illumination, the musical vision, or the EUREKA experience to take place, and to better efficiency and quality for each stage of the Creative Process.

7. Empirical Composition, which uses contemporary, avant-garde, and experimental music idioms, and draws upon the children's imagination, initiative, and ingenuity to discover and explore ways to express their feelings, as well as Written Composition does, should be strongly encouraged in all Theory/Composition Courses of Secondary Schools.

8. Music Theory Course has to be taught creatively. It would lose its meaning if were taught as a subject for itself.

9. The criteria, for which creative products are identified, should be the qualities the creative teacher look for in the students' assignments:
   - Originality
   - Uniqueness
   - Aptness
- Tenability
- Elegance
- Condensation
- Hedonics
- Value
- Usefulness
- Satisfaction
- Need Fulfilment
RECOMMENDATIONS

The following recommendations for future research are formulated on the basis of the findings and limitations of the present dissertation:

1. Further study of Applicability of the existing creativity stimulating methods or techniques to Creative Teaching of Musical Composition.


3. Additional research which tests the music teachers' and music students' general knowledge of Musical Composition, in terms of Creative Process, Creative Product, Creativity Stimulating Techniques, and Materials of composition.

4. A study which explores the material of this dissertation and utilizes it in compiling a textbook for teaching Musical Composition in High School.

5. A Symposium is highly recommended for a general study of Creative Teaching of Musical Composition in Secondary Schools.
APPENDICES
APPENDIX A

CREATIVE TEACHING OF MUSICAL COMPOSITION
in Secondary Schools

A COMMUNITY SURVEY

Instructions: Please complete the following questionnaire by checking the appropriate response, or by filling in the blank with the required information.

1. Have you had a musical composition class in High School?
   a. ( ) Yes. Any student may have it, if desires.
   b. ( ) Musical Composition is offered, but only to the gifted.
   c. ( ) No.

2. What kind of composition do/did you have?
   a. ( ) Writing a hymn, an art-song, or a piece of instrumental music, etc.
   b. ( ) Creating with sound.
   c. ( ) Creating with various instruments.
   d. ( ) Improvisation.
   e. ( ) Electronic Music.
   f. ( ) Other (Specify) _________________________

3. How often have/had you had the composition class?
   a. ( ) One or two periods a week.
   b. ( ) One period every two weeks.
   c. ( ) Once a month.
   d. ( ) Several times a year.
   e. ( ) Other (Specify) _________________________

4. How often do you compose at home?
   a. ( ) Once a week or more.
   b. ( ) Sometimes.
   c. ( ) Only when the teacher tells me to do so.
   d. ( ) Never

5. What approach did the teacher teach you to use for beginning a composition?
   a. ( ) Singing Approach.
   b. ( ) Rhythm Approach.
   c. ( ) Harmony Approach.
   d. ( ) A combination of the above.
   e. ( ) The teacher never taught any technique at all.
   f. ( ) Other ( Specify) _________________________
6. Is you teacher of musical composition in high school also a composer?
   a. ( ) Yes, definitely. He has some compositions already published.
   b. ( ) Yes, I guess so.
   c. ( ) No, I don't think so.
   d. ( ) I don't know.

7. How many musical compositions have you ever composed in your life?
   ........(number)

8. How were the assigned compositions corrected and/or evaluated?
   a. ( ) Both weaknesses and strengths of the composition were pointed out by the teacher, in the classroom.
   b. ( ) Mistakes alone were pointed out.
   c. ( ) On the manuscript paper of the composition mistakes were marked out with some comment.
   d. ( ) By individual counseling.
   e. ( ) By simply giving a grade.
   f. ( ) Other (Specify).................................

9. Judging from the attitudes of your music teachers what do you think of the creative atmosphere in your high school?
   a. ( ) Creativity is stifled.
   b. ( ) Creativity is not respected.
   c. ( ) Creative activities are insufficient.
   d. ( ) Creativity is respected and encouraged.
   e. ( ) Creativity is stimulated and active.
   f. ( ) Other (Specify)__________________________

10. If your composition is good, will it have a chance to be performed in the school?
    a. ( ) Never.
    b. ( ) Maybe.
    c. ( ) The teacher of composition will certainly give it a good grade, and that is all.
    d. ( ) The teacher of composition will try his best to have it performed.

11. What did/does your music composition teacher do to promote the students' creative music writing?
    a. ( ) By providing greater opportunity to listen to other good compositions.
    b. ( ) By simple encouragement and persuasion.
    c. ( ) By some kind of reward.
    d. ( ) He is/was willing but too busy to do anything.
    e. ( ) He is/was indifferent.
12. According to your opinion, regular composition class
   a. ( ) is very useful for developing creativity.
   b. ( ) is useful for developing creativity.
   c. ( ) is not necessary.
   d. ( ) should be abolished.

13. When was the first time you composed some kind of music?
   a. ( ) In Elementary School.
   b. ( ) In Junior High.
   c. ( ) In Senior High.
   d. ( ) I never did.
   e. ( ) Other (Specify) __________________________

14. What kind of composition have you composed in High School?
   a. ( ) Artsongs.
   b. ( ) Hymns or Anthems.
   c. ( ) Piano and/or Organ Music.
   d. ( ) Solo or ensemble instrumental music.
   e. ( ) Band or Orchestra Music.
   f. ( ) Arrangements.
   g. ( ) Electronic Music.
   h. ( ) Other (Specify) __________________________

15. Check the problem(s) you have encountered in writing a musical composition:
   a. ( ) It is difficult to catch original ideas.
   b. ( ) It is hard to put the ideas to musical notation.
   c. ( ) I have found it difficult to organize my composition.
   d. ( ) I am afraid to write a musical composition.
   e. ( ) I just feel uncomfortable.
   f. ( ) Other (Specify) __________________________

Please use the space below to make suggestions, comments, or criticisms regarding the present teaching of musical composition in the secondary schools.

I sincerely thank you for your time and effort.

T. NG
April, 1977
O.S.U.
Dear Sir:

The holder of this letter is a Ph.D. candidate at the Ohio State University, doing a research on the general nature of Creative Teaching of Musical Composition in Secondary Schools. A questionnaire has been designed to investigate the music composition classes or courses in the high schools.

Your High School has been chosen to contribute. Students will be asked to respond to the survey questions. It will take only fifteen minutes or so.

I request that you grant me this opportunity, and permit me to contact the teacher(s) of theory and composition in your school.

The responses will not be identified by name, address or any form but rather will be collected into a set of statistical data.

Thank you for your time and cooperation.

Sincerely yours,

Thomas NG T.F.
APPENDIX C

Some reminders for the supervisor of the survey:

1. About fifteen minutes will be given to answer the questions.

2. The supervisor ought not to explain any question.

3. He has to remind the students, however, that the survey is all about the teaching of musical composition in High School.

4. All the questions should be answered independently, honestly, spontaneously and quietly.

5. No name or signature should be given.

6. If possible, only pencils are used.

7. All the sheets answered or unanswered must be returned.

I sincerely thank you for your cooperation.

Thomas NG
Some of the techniques stimulating creativity are

Brainstorming,

Check-List,

Morphological Analysis,

The Collective Note-Book Method (or Pocket Idea Note-Book Method),

The PakSA, and

The Synectics.

They should be learned, practiced, and used creatively.

In the following some examples are show how to apply these techniques, so as to help generate ideas.

(1) **Brainstorming:**

The four principles of this method are to be observed.

1) Judgment deferred -- New musical ideas are gathered without any inhibition.

2) Free Wheeling Welcome -- Unusual, novel, wild, queer, etc., all kinds of melodies or harmony are sought. Complete freedom is encouraged.

3) Quantity sought -- Create as many melodies as you can. Sing, play, and write them down.
4) Cross-Fertilization -- THEN, careful selection, combination, or improvement is sought. Musical Ear is always the guide for making decisions.

(2) Check-List:

The student may use any check list he likes. He may even prepare a check list of his own, appropriate to the creative endeavor he is going to take.

To illustrate application, Osborn's (1963) Check-List is used:

1. **Put to other uses** --- Create a melody of your own, or find one from the Gregorian chants, Folk songs, Hymns, etc., and use it for a musical composition of your choice.

2. **Adapt** --- Now, arrange it in key, rhythm, and meter.

3. **Modify** --- Modify it by variation techniques.

4. **Magnify** --- Write it in augmentation.

5. **Minify** --- Put it in diminution.

6. **Substitute** --- Turn it into Minor, or viceversa; Change it into another key.

7. **Rearrange** --- Rearrange its harmony or the instrumentation.

8. **Reverse** --- Use it in inversion or retrograde.

9. **Combine** --- Combine the above in a logical order.
(3) **Morphological Analysis:**

The following example has applied the method for a serial composition.

1. Invent a Tone-row - (O);
2. Invert it - (I);
3. Reverse it - (R);
4. Reverse the (I) and we obtain an (RI);
5. Arrange these four Tone-rows in order, opposite their respective transposed rows, and we have:

\[
\begin{align*}
0 & \text{ TO } \\
I & \text{ TI } \\
R & \text{ TR } \\
RI & \text{ TRI }
\end{align*}
\]

From the above, the following sixteen combinations are obtained:

\[
\begin{align*}
O & \text{ TO } I & \text{ TO } R & \text{ TO } RI & \text{ TO } \\
O & \text{ TI } I & \text{ TI } R & \text{ TI } RI & TI \\
O & \text{ TR } I & \text{ TR } R & \text{ TR } RI & TR \\
O & \text{ TRI } I & \text{ TRI } R & \text{ TRI } RI & TRI
\end{align*}
\]

At this point, the student composer just selects a combination he likes, for melodic progression or two-part harmony.

(4) **The Pocket Idea-Note-Book Method:**

The student composer simply carries a note-book with him and writes down worthy ideas that may occur to him at strange times.
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A. BOOKS


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