

## Testing Creativity of Dance Students in the Peoples Republic of China

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### **Article:**

In the past decade there has been increasing concern over the losses that may accompany the benefits of dance training for young people (Abra, 1987/ 88; Brady, J., 1982; Gordon, S., 1983; Innes, 1988; Kirkland, G. with Lawrence, G., 1986; Schnitt, 1990; Stinson, Blumenfeld—Jones and Van Dyke, 1990). An investigation by Zhao Guo Wei (1989), educational psychologist at the Beijing Dance Institute, lends further support to these concerns.

Professor Zhao administered tests of creative thinking to 50 dance students from two professional schools, the Beijing Dance Institute and the Shanghai Dancing School. The curriculum at both schools includes dance training and academic study. All students were approximately age 16. The researcher administered the same tests to 50 "ordinary students" (not involved in dance training) at the Wanshousi Middle School; these students were approximately the same age as the dance students.

The creativity tests were based on the work of Guilford (cited in Sawrey and Telford, 1973), a pioneer in the study of creativity. Zhao's first test, a "Test of Thinking in Images," asked students to add to an egg—shaped circle to make pictures of various objects. The students were informed, "The more pictures you draw, the broader sources you borrow from, the better." The second test, to elicit abstract thinking, asked the subjects to read two stories and suggest titles for them: "The more titles you can think of, the more pertinent, graphic, and unique these titles are, the better." Students had 15 minutes to complete each test.

Zhao sorted the pictures drawn for Test 1 according to three characteristics of divergent thinking identified by Guilford: fluency (number of pictures drawn), flexibility (number of categories of pictures drawn), and originality (number of unique pictures drawn). As indicated in Table 1, the students from the dancing schools lagged far behind the others in all three measures (1). Table 2 gives more complete detail regarding the level of fluency of each group of students. Of the dance students, almost half (48%) drew 2-5 pictures, and none drew more than 18. In contrast, 24% of the non—dance students drew 19-28 pictures, and only 4% drew fewer than six pictures. Figure 1 gives examples of the drawings produced by each group. Zhao notes,

The pictures drawn by the non— dance students covered a wide range of subjects: astrology, geography, biology, chemistry, modern weaponry, sports, and even English language letters. Within the allotted 15 minutes, their thinking reached out to broad areas, while all the images dance students could think of were fruits, poultry, and containers.

Table 3 shows the results of the second test, which asked the students to create titles to the two stories. Fluency, flexibility, and originality were operationally defined comparably to their definitions in the first test (2). Zhao reports,

For the first story, most of the dance students wrote such titles as "A monkey going down the mountain," "A monkey looking for food," "A stupid monkey," "A greedy monkey," or "A gluttonous monkey." Only six, or 12% of the dance students, revealed their ability to abstract the point of the story, creating titles from Chinese proverbs like, "Changing one's mind when seeing something new," "Fickle in affection," and "Attending to one thing and losing sight of the other." For the second story, the non—dance students doubled the number of titles given by their dancing peers, though both groups submitted good ones like "Fight poison with poison," "Turning his trick against him," and "An unconscious confession." It is regrettable to say that the dancing school students gave up easily whenever asked to use their brains. Five of them did not try to think up a title for the first story, while ten gave up for the second story, as compared to only one of the non—dance students who failed to supply a title to the second story. Apparently the dancing school students are better at using their limbs than their brains.

Zhao suggests that the dance students might be inferior to their peers because

Early specialized training has narrowed the scope of their learning and restricted their mind in thinking. . . . Students in ordinary middle schools study geometry, algebra, physics, chemistry and biology in addition to literature and history. On seeing an oval, students of the Wanshou Middle School associated it with such things as the solar system, a submarine, a cell, a meteorite crater. Students in dancing school study primarily dance. They take a few language and history courses, to which they hardly pay any attention. They have minimal chance to contact the outside world and there is little demand on them for reading. As a result, both the dancing school as a whole and the students as a group do not treasure or thirst for knowledge.

Zhao believes that the dance students' imaginations are suppressed because of the teaching methodology of "spoonfeeding" and the heavy concentration of dance skills in the curriculum. She writes,

According to the psychology of learning, long—term rigid training curbs youngsters' imaginations and dims their interest in learning. Most likely, after years of dance training, their only ability that has been enhanced is the power to memorize dance movements.

She finds that the professional dance schools ignore contemporary theories of educational psychology, believing them to be irrelevant to learning in dance.

	Beijing and Shanghai Schools	Wan-shou-shi Middle School
Fluency (number of pictures drawn)	64	122
Flexibility (various kinds)	22	34
Originality (unique pictures)	30	58

**Table 1**  
Test of Thinking of Images

Number of pictures drawn	Dancing Schools		Wan-shou-shi Middle School	
	Number of students	percent	Number of students	percent
19 - 28	0	0	24	24%
17 - 18	3	6%	4	8%
10 - 16	6	12%	20	40%
6 - 9	17	34%	12	24%
2 - 5	24	48%	2	4%

**Table 2**  
Number of Pictures per Student

	First story		Second story	
	Beijing and Shanghai Dance Schools	Wan-shou-shi Middle School	Beijing and Shanghai Dance Schools	Wan-shou-shi Middle School
Fluency (number of title heads)	32	50	31	60
Flexibility (various kinds of titles)	6	9	9	14
Originality (unique and high level)	10	14	12	19

**Table 3**  
Test of Abstract Thinking

Zhao points out additional connections between students' creative thinking, their learning of dance and general knowledge, and the formulation of personality. She notes that students who drew more pictures and gave more titles were generally better dancers; some of them had won contests for their skill. Conversely, less fluent students on the tests were not as skillful in dance. Those who gave "good titles" to the stories tended to be outstanding in general knowledge courses, while those who could not give even a single title to any story were poor students "who could not write a composition longer than a hundred characters."

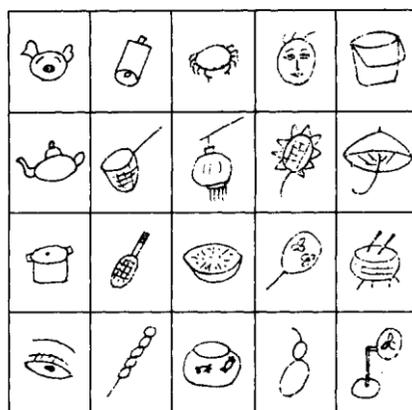
In a questionnaire appended to the creativity tests, students were asked such questions as, "Are you interested in observing people and things around you?"; "Are you used to imagination in your daily life?"; "Have you ever thought of producing dance pieces?"; "Are you interested in reading and learning?"; "How hard do you study?"; "Who is your idol? Who do you wish to learn from?" Zhao writes,

It is interesting to note that students who were good at creating pictures and titles delight in imagining things, cherish a desire to create, and have a model to learn from. They love dancing and are hardworking. Those students who failed to submit many pictures or good titles admitted that they

do not give play to their imagination and lack confidence and interest in learning, that they just drift along with no definite goals.

Zhao makes clear the significance of her findings when she notes that most people think dancers do not need to be creative, but only to be able to observe, memorize, and imitate. In reality, dancers must be creative in order to translate the ideas of the choreographer and present them on stage. She notes,

If the choreographer meets a dancer with good dance skill but no creative quality, he will find that no matter how good he may be in choreographing, and how good a theme he may have, all is in vain if the dancer is a duplicating machine and nothing more.



**Figure 1**  
Examples of Student Drawings

Zhao concludes her study with five proposals for cultivating creativity among dance students at professional training schools such as those in her study. The first is to allow students more time to engage in creative work. Among her specific suggestions are a course on dance composition and performance, such as the one described in the following:

In 1986, two teachers from the middle school affiliated with the Beijing Dance Institute experimented with the second graders, around age 12, on a new course. It started with the students performing simple movements to the accompaniment of music. In the second phase of the course, they were asked to do more complex and coordinating movements. The course eventually required them to create and produce simple dance pieces telling a story or communicating emotions. At the end of two semesters, these students surpassed their peers, who had not taken the course, in their adaptability, flexibility, and versatility.

She also suggests that one afternoon every week or two be devoted to creative work in which students can freely design individual or group pieces, under the guidance of faculty, until student creativity becomes stimulated. She recommends that student choreographed works be performed, and that student achievements in choreography and performance be noted through awards. For younger students, she suggests opportunities for cultivating their powers of observation:

Cultivation of the students' power of observation in the field of art is an important means of helping them to enjoy, feel, depict and create beauty. As art originates from life, students should be induced to discover and capture beauty in real life and to depict it physically and emotionally . . . . Just as a language teacher may ask students to write travel notes as composition, so the dance teacher may ask students to observe and demonstrate what they observed, for example, a playful monkey, a jumping

hare, a pacing elephant, a giraffe reaching for leaves of a branch, or a duck farmer herding his drove from a boat with a bamboo pole. Far from being just simple imitation of movements and postures, the practice helps students to perceive better, to learn to beautify things around them, and to express their emotions.

The second proposal Zhao offers is that the school provide students with opportunities for learning forms of art in addition to dance. She elaborates,

At our school, for almost thirty years, only the first graders are given two hours of elementary music theory a week. This is far from enough. Students should learn to play the piano; the elementary classes should be given a comprehensive music course, the intermediate classes, a music appreciation course, and the advanced classes, an analysis of dance- drama music . . . . Students should frequent art museums to stimulate their imaginations. They should also draw nourishment from operas, dramas, and the martial arts.

She further notes that, since literature is the basis for many dance-dramas, language arts teachers should recommend great literary works to the students and encourage them to think of them in relation to choreography.

The third proposal has to do with the scarcity of choreography which is developmentally appropriate for young dancers. Zhao notes that, in 1987, she conducted a study among 60 students preparing to be dance teachers. Among the questions was one asking students what kind of program they most liked to produce; only three of the respondents indicated they most wanted to produce programs designed for children or for teaching. At her school, Zhao believes that the performance/ recital course should include more work appropriate for children.

Fourth, Zhao proposes that teachers encourage students in the challenging process of artistic creation, noting that adolescents often underestimate the difficulty involved in creative work. She advocates that teachers help students when they encounter difficulties, caution them against complacency, and encourage them and help analyze their work whether they succeed or fail in their creative attempts.

Finally, she recommends that teachers cherish particularly creative students. Torrance (1962) has pointed out that creative students are often not well received in a class, because of their differences from other students. Zhao shares a story she recollects of the inventor Thomas Edison asking his teacher strange questions like, "Why does one plus one equal two?", since he could break a sweet into two pieces and stick two together to make one; he was expelled for undermining classroom order. She points out that "at a school where all students are to think and behave similarly and to give identical answers to questions, a creative student would undoubtedly be despised" rather than cherished.

I share with my colleague from China a concern for the predominating teaching methodology in dance, which trains students primarily to obediently follow directions, as well as the obsessive devotion to dance training for children and adolescents, who face other developmentally important tasks. I too would like to see dance education which prepares students to not just imitate movement of others, but to be creators of their own artistic work and whole human beings as well. This is important both for the psychological health of the students and the long term vitality of the art of dance. I applaud the courage of Professor Zhao and others within the field who reveal the limitations as well as the possibilities of dance training for young people; it can be difficult to be a critic within a field one loves.

However, I caution against judging the creativity of any individual or group based on tests which involve only verbal and visual measures. Guilford (1967) noted that an individual might be creative in one area and not

another. More recently, the work of Howard Gardner (1983) and his colleagues at Harvard's Project Zero has revealed seven different forms of intelligence: linguistic, mathematical, spatial, musical, bodily– kinesthetic, interpersonal, and intrapersonal. Gardner notes that the first two are ordinarily the only forms regarded as intelligence, and the ones primarily valued in school. His research includes development of appropriate measures for identifying other forms of intelligence. While this work is still in its early stages and publications about it may not yet be available in China, it raises important questions for me in relation to Zhao 's work. What would have been the results, for example, if the Chinese students had been tested for their kinesthetic intelligence or creativity? How, if at all, does kinesthetic intelligence differ from kinesthetic creativity? Is there a difference between the kind of intelligence (or creativity) needed to be a dancer and the kind needed to be a choreographer? While the study indicates that students who were more creative on the tests given were also better dancers and did better academically, might there be other causal relationships going on, such as students who achieve in one area developing increased self esteem, which boosts their achievement in other areas? Can creativity as measured by a test be increased through efforts of schools (such as those recommended by Zhao), or is it a fixed quantity such as that which is purportedly measured by intelligence tests? These are among the questions which remain to be answered through further research by Zhao and others who are interested in the effects of dance training on young people.

(based on an English-language manuscript by Zhao Guo Wei, and subsequent correspondence with Zhao)

### Notes:

1. It should be noted, however, that, even though the judgments of originality and, to a lesser extent, flexibility, were rather subjective, the researcher, who was the only judge, was aware of the identity of each group when making those judgments. In describing her process for evaluating flexibility, she classified pictures of a duck, chicken, and rabbit as all belonging to the same category, and apple, peach, and pear as all belonging to a single category. In assessing originality, she judged a drawing of a bowl as less unique than a human stick-figure or the number "10."
2. Again, Zhao was the only judge, and she was aware of the identity of the two groups. In judging flexibility, she gives the example of "A Hungry Monkey," "A Stupid Monkey," and "A Greedy Monkey" as all belonging to the same category.

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